World Education Encyclopedia

A survey of educational systems worldwide

second edition

Volume 2
I–R

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Rebecca Marlow-Ferguson, editor

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A Survey of Educational Systems Worldwide

2nd Edition

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ICELAND

BASIC DATA

Official Country Name:	Republic of Iceland
Region:	Europe
Population:	276,365
Language(s):	Icelandic
Literacy Rate:	99.9%
Academic Year:	September-May
Number of Primary Schools:	193
Foreign Students in National Universities:	185
Libraries:	194
Educational Enrollment:	Primary: 29,342 Secondary: 30,463 Higher: 7,908
Educational Enrollment Rate:	Primary: 98% Secondary: 104% Higher: 38%
Female Enrollment Rate:	Primary: 98% Secondary: 102% Higher: 45%

HISTORY & BACKGROUND

Iceland, one of the world's first independent, democratic nations, is the second largest island in Europe (39,769 square miles). Located 180 miles south of the Arctic Circle, Iceland's nearest neighbor is Greenland to the west (180 miles), followed by Scotland to the south east (495 miles), and Norway to the east (590 miles). Iceland is largely a classless society composed of the descendents of farmers and warriors who fled the tyranny of Scandinavia many centuries ago. The strength of the people, mirrored by the powerful landscape, is evident in the thriving independent culture. Visitors to Iceland typically find the people to be courteous and friendly, are surprised by the cold yet temperate climate (mild winters and cool summers), and are struck by the breathtaking natural beauty of the country. Despite physical isolation, Iceland has maintained its place in European civilization.

Iceland has a rich literary tradition and unusually high standards of education, with 15 percent of the national budget devoted to education. Illiteracy is unknown in the small island country. Icelanders are generally very open to new ideas and trends, and they have rapidly developed, implemented, and embraced new technology throughout their society. Approximately 82 percent of Icelanders between the ages of 17 and 75 have access to the Internet at home, school, or work. With artists frequently deriving inspiration from the extraordinary terrain and the ancestral culture, the arts are flourishing in Iceland. Painting in particular has thrived since the end of the nineteenth century. Nearly every district has its own museum reflecting the local cultural history, while magnificent galleries and museums grace the capitol. Literature has always played a prominent role in Icelandic culture. Manuscript illumination, woodcarving, and folk music have been associated with periods of heightened interest. There are numerous theater companies in Iceland, and Reykjavik is home to a symphony orchestra, an opera house, and a ballet company. The National Theater of Iceland celebrated its fiftieth anniversary in the year 2000. Icelandic nightlife is famous for its vibrancy, with night clubs, cafes, and cinemas in all major towns.

The Evangelical Lutheran Church is the official state church, but freedom of religion exists for all other congregations. Although the state provides financial support

to the church, it extends considerable freedom. The bishop is elected by pastors and members of the theological faculty at the University of Iceland; and the one diocese is divided into districts, which are further subdivided into parishes. An elected church congress serves as an advisory board to the church. Roughly 90-94 percent of Icelanders are Protestants (73 percent Evangelical Lutheran) and 1 percent are Catholic.

With an excellent health care system available to all citizens at no cost, the life expectancy in Iceland is among the highest in the world (76.5 years for males and 81.5 years for females) and infant mortality is among the lowest in the world (5.5 per 1,000 live births). The healthcare system receives 40.5 percent of the national budget and the nation operates one of the most expensive healthcare systems in the world. Welfare services include unemployment insurance, old age and disability pensions, family and childbearing allowances, and sickness benefits. The medical and welfare systems are jointly financed through taxation by the national and local government.

Geologically, Iceland is a very young country and the process of its formation is still in progress. Iceland's interior consists mostly of uninhabited mountains and high plateaus. Much of the uninhabited regions, encompassing more than 80 percent of the island, are covered with permanent snow and ice (glaciers) or volcanic surface, preventing many agricultural activities. The settlements are limited to a narrow coastal belt, valleys, and lowland plains in the south and southwest. With a population of approximately 272,000 people, Iceland is one of the smaller nations in the world, yet it is the least densely populated of all European nations. More than 60 percent of the country's population resides in or near the capital city of Reykjavik (''Bay of Smokes'' named for the geothermal stream), situated in the southwestern region of the island. Since WWII Iceland has maintained a high standard of living that is comparable to other Nordic countries. The strong Icelandic economy is based on the use of renewable natural resources and a highly educated and skilled labor force. Unemployment is nearly nonexistent in contemporary Iceland. Over the course of the twentieth century, Iceland, which is situated on major shipping and air lanes of the North Atlantic Ocean, has effectively transformed itself from a subsistence economy to an exchange economy. The cost of living is very high because so many purchases from cars to paper are imported. Households require two or more incomes, with most women working outside the home and many men holding two jobs.

The principal employers are fishing, industry, agriculture, and health services. Icelanders as a group are very committed to their work regardless of the specific form. Whether employment involves intellectually challenging desk work, farming, or fishing, for the Icelander there seems to be an intrinsic association between one's work life and both one's personal contentment and the meaning ultimately attached to one's life. A common belief in Icelandic society is that an individual who is not very busy and actively involved in his or her work is not living life fully. Casual conversations over a meal frequently involve discussions about work. All Icelandic youth are expected to work as soon as possible, particularly during the summer months when school is out of session.

Although Irish monks were the first people to inhabit Iceland in the eighth century, it was not until the period extending from 870 to 930 A.D. that Iceland was systematically settled by both Norsemen from Scandanavia and Celts from the British Isles. The monks are believed to have left shortly after the arrival of the pagan Norsemen. Because the ruling class was Nordic, both the language and the culture have been predominantly Scandinavian from the beginning. There are, however, traces of Celtic influence in the literature and in the names of people and places. Immigration from other parts of the world has been minimal since the time of the first settlement.

Iceland's present day parliament, Althing, is the oldest existing national assembly in the world. When established in 930 A.D., the power of the Althing was distributed among four local courts and a supreme court. In 1000 A.D., Christianity was peacefully adopted at the Althing, which met for two weeks each summer and attracted a significant portion of the population. The first bishopric, or center for learning, was established at Skalholt in south Iceland in 1056, and a second was developed at Holar in the north in 1106. These first schools were devoted primarily to educating men for the priesthood, but many others who were prominent in secular affairs were taught as well.

During the late twelfth and the early thirteenth century, dramatic Icelandic tales of early settlement, the colonization of Greenland, romance, disputes, and the development of Iceland were translated into a rich literary tradition dominated by Sagas. These fact-based works, which provided the early settlers with a source of entertainment as well as cultural heritage, represent some of the classics of world medieval literature and continue to be widely read and treasured by Icelanders. A common custom on farms was for families to sit with handiwork (weaving, tool making, carving, spinning, or knitting) while participating in shared reading, storytelling, and verse making. A study by Weingand conducted in 1989 revealed that 86 percent of well-educated Icelanders, 71 percent of the general population, and 53 percent of students reported recalling oral reading of sagas and folktales in the home during childhood.

The enlightened period of peace, or the ''Golden Age,'' lasted 200 years until internal feuds resulting in civil war led to submission to the king of Norway and a new monarchical code in 1271. The infamous *Sturlung* Age, which followed the era of peace, was marked by political treachery and violence. During this time, the eruption of Mt. Hekla brought physical destruction, widespread epidemics, and death. At the end of the fourteenth century, Iceland was brought under Danish rule and conflicts between church and state culminated in the Reformation of 1550 with Lutheranism declared the country's official religion. The next three centuries were troubled by Danish profiteering, international pirates, a series of natural disasters, and famines.

Denmark's hold on Iceland was significantly reduced in 1874 when a constitution was drafted granting Iceland permission to handle domestic affairs. In 1918 Iceland became an independent state under the Danish king. After the occupation of Denmark and Iceland's declaration of sovereignty, the island's vulnerability was responded to by British and U.S. troops. On June 17, 1944, the Republic of Iceland was formally declared at Thingvellir.

Iceland joined the United Nations in 1946 and it is a charter member of the North Atlantic Treaty Organization (NATO). In the post WWII era, Iceland has based its foreign policy on peaceful international cooperation and has participated in Western defense efforts. Iceland does not maintain armed forces. However, the United States, which has assumed responsibility for Iceland's defense, maintains a naval air station at the Keflavik International Airport.

Icelandic, the national language, has changed very little from the original tongue of the Norse settlers. A strong movement for linguistic purism gained strength in the nineteenth century and has persisted unabated. English, Danish, and German are also widely spoken and understood. A governmental agency, the Icelandic Language Committee, was established in 1965 and officiates over all language issues. New Icelandic terms are introduced in each discipline and foreign influence on the vocabulary is actively resisted.

Literacy has been universal in Iceland since the end of the eighteenth century. In 1700, less than half of the population of Iceland could read. However, literacy was accomplished in the eighteenth century as children were taught to read by their families or clergy in their homes. This practice of family members frequently teaching children to read continues in present day Iceland.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Iceland is a republic with a parliamentary democracy and a president elected for a four-year term by popular vote. The president functions as head of state but remains apolitical except when the two political parties fail to solve governmental crises. The *Althing* is a legislative body of 63 members elected by popular vote for a term of four years. With authority over finances, the Althing exercises considerable power over the executive branch of the government. The Althing also elects members of key committees and councils within state institutions. Local government is exercised by 162 separate municipalities.

Education in Iceland has historically been public with very few private institutions. Iceland's modern school system dates back to the late nineteenth century and the early twentieth century. In 1880, an education act required that all children be taught reading, writing, arithmetic, and Christianity according to the Lutheran confession. The act stipulated that parents were responsible for teaching their children with supervision provided by the pastors of the Lutheran Church.

The first major education act, a bill establishing the basic objectives and policies to serve as the foundation of educational practices, was passed by the Althing in 1907. With the act, education became compulsory and free of charge for all children between the ages of 10 and 14. In addition, a regional and administrative structure was introduced whereby rural areas, towns, and villages were subdivided into educational districts. Each district was to have a primary school paid for and run by the local authorities with supplementary government funds available based on need. The central Education Office was ultimately responsible for supervising all types of public education, the provision of textbooks and equipment, appointing inspectors, and the administration of final exams. A commissioner of Education was assigned the role of directing and supervising public education for the whole country.

The 1946 education acts divided the school system into four levels (primary, lower-secondary, upper-secondary, and higher), established an entrance exam for upper-secondary education, and introduced a double-track vocational and academic system designed to divert a large number of students into the vocational fields. In 1955, the State assumed full responsibility for the industrial-vocational schools in order to secure the future of this form of education.

In the late 1960s controversy surrounding educational reform became heated and led to the Education Act of 1973, the Primary School Act and the School Systems Act both of 1974, and other reforms during the 1970s. This legislation formed the basis of the contemporary educational system. In addition to providing all citizens the right to free compulsory (primary and lower-secondary), upper-secondary, and higher education, the various laws

extended the compulsory education to grade 9, provided for municipalities to develop preschool classes for 5- to 6-year-olds, and enabled the establishment of an experimental comprehensive high school designed to balance the status of the two tracks (general academic and vocational) within one school.

Legislation adopted in 1995 and 1996 requires all compulsory and upper-secondary schools adopt methods for systematically evaluating the following components of educational practice: instruction and administrative practices, internal communication, and external relations. These methods of self-evaluation are examined by the Ministry in five-year cycles. Further, new legislation concerning compulsory schools placed the responsibility of operation with the local municipalities.

Educational discourse in the context of reform movements throughout the past few decades has revolved around topics such as active learning, mixed-ability grouping, hands-on math and science, thematic studies, projects and topic work, group work, peer tutoring, moral and social education programs, the whole language approach, and team teaching. Reform discussions have focused on school-based curriculum development, constructivist teaching and learning, performance-based assessment, teaching for multiple intelligences, learning styles, problem-based learning, life skills programs, inclusion, quality control and school self-evaluation, and information technology.

In 1996 the Ministry published a policy document regarding the role of information technology in education. Among the plans outlined was an extensive integration of information technology into instruction at all educational levels. All students are to have access to computers and high quality software.

Further, in 1998 the Ministry announced an ambitious education initiative with new school policy for compulsory and upper-secondary schools designed to provide Icelandic students with an education that is comparable to the best systems worldwide. The policy represents a concerted effort to create an efficient and flexible system that enables focused attention directed toward meeting the needs of individual students, and increased choices for students, while fostering academic discipline, good working skills, healthy competition, and enhanced student initiative and responsibility.

EDUCATIONAL SYSTEM—OVERVIEW

Consistent with an overall philosophy of education based on tolerance, Christian values, and democratic-cooperation, perhaps the most fundamental principle embedded in the history of the Icelandic education system is that equal access to education should be granted to all irrespective of sex, economic status, area of residence, religion, physical handicap, cultural or social background. In recent years, carefully considered and articulated general aims of the education system in Iceland have been to encourage and preserve Icelandic culture, history, and language and to ensure that the Icelandic education compares favorably to the education provided by the leading nations in the world. Clear objectives have been specified to focus programs toward achieving these broad goals with the Ministry receiving widespread political and popular support for their efforts.

School attendance is obligatory for all children between the ages of 6 and 16 in Iceland. Those desiring to continue their education beyond the compulsory period attend various specialized schools or upper-secondary schools. Students can enroll in four-year secondary schools at age 16, with graduation entitling the student to admission to a university. There are also a number of technical, vocational, and specialized schools. Approximately 74 percent of the Icelanders under the age of 29 participate in Iceland's formal education system. This includes more than 42,000 young people of compulsory education age (6-16).

The language of instruction is Icelandic, and all educational institutions are publicly funded. Although the majority of schools are fully supported by the State, 6 percent are private grant-aided institutions (operated by nongovernment agencies but receiving a portion of their finance through the public sector). Students with special education needs are most typically integrated into the main stream classrooms, with only .3 percent of the special needs students educated in separate schools.

Preprimary education in Iceland is available on a fee basis and focuses on the developmental and educational needs of children between the ages of 1 and 5. More than 80 percent of children between the ages of 3 and 5 are enrolled in pre-compulsory education.

Children are admitted to compulsory education at age 6, with students usually attending their local school. Parents are permitted to transport their children to a more distant district. In the rural areas, children frequently attend boarding schools. Tuition and textbooks are free of charge at the compulsory level. Students in compulsory education are not grouped according to ability and no formal division is made between primary and lower-secondary education. However, students at the primary level have one teacher; whereas, lower-secondary school students have different teachers for each subject area.

The Ministry of Education, Science, and Culture oversees the curriculum and publishes a National Curriculum Guide. Core subjects include Icelandic (grammar and literature), mathematics, foreign languages, natural

science, social science, religious study, arts and crafts, and physical education, with compulsory swimming practice. The curriculum guide also contains recommendations pertaining to assessment, progression, and examinations. Teachers select their own methods of classroom assessment and may adopt preferred instructional methods. The National Centre for Educational Materials publishes and distributes teaching and learning materials to assist compulsory education teachers. The school year runs for 170 days from early September through the end of May, with schools open 5 days per week.

Students who complete compulsory schooling have access to upper-secondary education, regardless of their achievement. Students pay an enrollment fee and may have to purchase books; however, there is no charge for tuition. The most prominent forerunner of the Icelandic upper-secondary schools is the Latin school devoted initially to training boys for the ministry. These schools eventually became more general as young people were trained for university education and civil service. Schools with a strong vocational mission and a classical academic curriculum were transformed into general education institutions. Upper-secondary education is of two forms in Iceland: general academic and vocational or specialized. The length of training varies from 6 months to 4 years depending on the course of study.

The upper-secondary school curriculum is set forth by the Ministry of Education, Science, and Culture in the National Curriculum Guide. All courses leading to matriculation include Icelandic, foreign languages, social studies, mathematics, computer science, and physical education. Academic education further includes compulsory specialist subjects and student electives. Vocational courses of study consist of the general core in addition to vocational theory and practice classes. Most of the upper-secondary schools award unit credits for individual courses and are flexible in terms of the amount of time students spend on given courses. Upper-secondary general and vocational assessment is based on two yearly examinations and, frequently, coursework. Students who fail to pass an examination are given three opportunities to try again.

Upper-secondary educational assessment had been the domain of the local school; however, national examinations in the general academic track were instituted. General academic training culminates in a General Certificate, which is a prerequisite to entering the higher education system in Iceland. Students completing vocational training are awarded a Journeyman's Certificate. Many schools offer both general academic and vocational training.

Higher education is offered at three universities in Iceland and 11 non-university institutions offering specialized training in areas such as the arts, agriculture, technology, preschool education, and physical education. Admission is dependent upon a matriculation certificate from an Icelandic upper-secondary school or an equivalent from an abroad institution. Instruction at most universities and colleges is conducted in Icelandic with many textbooks frequently written in foreign languages. Because the majority of the schools are financed by the state, tuition is free and students rarely have to pay fees.

PREPRIMARY & PRIMARY EDUCATION

Preschools are housed in buildings that are physically well-suited for their activities and are always situated in a location that allows for ample outdoor play space (30-40 square meters per child). Indoors, the law requires 7 square meters of space per child. With only one exception, preschool education is co-educational throughout Iceland. Very few preschools will accept children under the age of one, with most children not enrolling until age two. Children attend preschools for 4 to 9 hours daily. In municipalities where there are an insufficient number of spaces available to accommodate the need, preference is given to children of single parents and students. Children are typically divided into separate groups based on age; yet in the smaller communities children of various ages are kept together in a single group.

Icelandic law concerning the conduct of preschool education emphasizes several aims. These aims are provided in abbreviated form below:

1) To provide children with a safe and healthy environment in which to play and grow.
2) To give children the opportunity to participate in and enjoy group games and activities under the direction of a preschool teacher.
3) To encourage the optimal development of each child through cooperation with parents and sensitivity to each child's unique nature, with special emphasis on providing the emotional and physical support children need to enjoy childhood.
4) To encourage tolerance and open-mindedness while providing equal developmental and educational opportunities to all children.
5) To support Christian ethical development and provide the necessary foundation for children to become independent, conscious, active, and responsible citizens of an ever-changing democratic society.
6) To foster the children's creative and expressive abilities in ways that fortify their self-image, sense of security, and ability to solve problems in a non-aggressive manner.

The Ministry issues a preschool program defining the educational and pedagogic role of preschools with

policy pertaining to how it should be implemented. The contemporary program is based on a child-centered philosophy emphasizing individuality and childhood as being a distinct stage of life with special qualities. A strong emphasis is placed on play, as it is believed to provide the best medium for fostering learning and socio-emotional development in preschoolers. Several specific educational areas are addressed in the preschool education program: caring and daily routine, play and playing conditions, speech and speech stimulation, visual creativity and expression, music, sound, and movement, nature, and society. Individual schools make decisions regarding the relative emphasis placed on each of these areas and decide how and when to integrate the different educational components. Preschool age children with special needs are accommodated with needed assistance and/or specialized training that is monitored regularly for results.

Preschools are not required by law to formally assess the progress of the individual children. In cases of suspected deviation from normal development, the preschool staff or specialists do, however, conduct appropriate assessments. The directors of preschools evaluate their programs regularly and the Ministry is responsible for conducting comprehensive assessments.

Icelandic law governing compulsory education renders school attendance obligatory for all children between the ages of 6 to 16. The law sets the length of the academic year, the minimum number of lessons to be given weekly, and identifies required subjects. The law further makes it the duty of parents to register their children and see to it that they attend regularly. The law makes it the domain of the state and local municipalities to insure that education is implemented in accordance with the dictates of the Ministry.

Primary education (grades 1-7) and lower-secondary education (grades 8-10) are considered part of the same general level of education. However, primary teachers instruct one class in most academic subjects; whereas in lower-secondary school, teachers usually teach one or more subjects to several different classes. There are no entrance requirements. Local school districts cover the costs of school construction, teaching, and other personnel-related instructional expenses, as well as the costs of daily operation. In addition, they provide specialist services including pedagogic counseling, counseling related to particular academic subjects, educational counseling, and school psychology services. On the other hand, the state monitors adherence to educational law and National Curriculum Guidelines by evaluating individual schools while also supplying educational materials including textbooks.

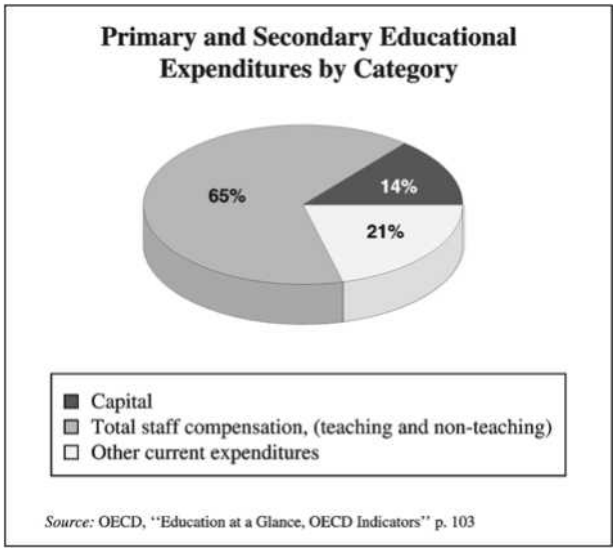
Compulsory school in Iceland is divided into 10 grades, many schools housing all ten grades, some schools with grades one though seven, and others with grades eight through ten. The total number of Icelandic compulsory schools is slightly more than 200, and the size of schools varies from from 700 to 800 pupils in the largest schools located in and around the capital city to fewer than 10 students in some remote rural districts. Nearly 50 percent of all compulsory schools in Iceland have fewer than 100 pupils. All compulsory schools enroll both boys and girls. Home-room or advisory teachers offer pupils advice on their studies, with special school counselors employed mainly at the larger schools.

National Curriculum Guidelines developed by the Ministry set parameters with respect to the organization, execution, and evaluation of education within the compulsory schools. The staff at each school must write a school working guide or administrative plan based on the Guidelines with sensitivity to the unique features and circumstances of the institution. The plan, which includes an annual calendar, must detail the organization of teaching, the content and objectives of education provided, student assessment procedures, assessment of school-related work, extra-curricular activities, and various other aspects of school operation.

The Ministry issues guidelines regarding the hours of instruction required for each grade as well as the proportion of total teaching time to be devoted to individual subjects. The number of lessons increases lightly during the 2001-2002 academic year with 30 weekly lessons slated for grades 1 through 4, 35 lessons per week for children in grades 5 through 7, and finally, 37 lessons provided for students in grades 8 through 10. At the conclusion of 10 years of compulsory education, students' time will have been partitioned in the following way: Icelandic, 18 percent; mathematics, 15 percent; arts, crafts, and home economics, 20 percent; modern languages, 9 percent; natural sciences, 6 percent; social studies, 7 percent; religious studies, 3 percent; physical education, 10 percent; and electives and miscellaneous studies, 12 percent. Danish is studied from the sixth through the tenth grades, with English studied during grades 7 through 10.

Children are expected to cover the same material in approximately the same amount of time and the students are not separated into instructional groups based on ability. However, students who experience difficulty are provided with remedial help. Teachers are free to select the methods that they find best suited for their students, the instructional goals, and the teaching conditions. Teachers generally strive to use as much variety as possible in their instruction. Children with special needs are assisted by a remedial teacher within the regular classroom environment or they are brought to another small room for one-on-one help by the remedial teacher. Many schools also have special departments for students with severe learning disabilities.

Examinations and other forms of assessment are designed and administered by individual teachers and schools. Methods for reporting student progress varies considerably across schools. Many compulsory schools assign numerical or letter grades, while others use oral or written comments. All schools issue some form of student progress report at regular intervals throughout the academic year. When students complete compulsory education, they take a nationally coordinated exam in Icelandic, mathematics, English, and Danish. Grades ranging from 1-10 are assigned by the Institute of Educational Research, which is also responsible for designing the test. The results provide information related to the student's relative standing in their group and are used to assist students in choosing a course of study in upper-secondary school. Beginning in 1995, nationally coordinated exams in Icelandic and mathematics have been administered to children in grades 4 and 7. Similar to the requirement for preschools, each compulsory school must undertake extensive periodic self-evaluations that consider teaching, administration, and internal and external communication. Every five years the schools' methods of assessment are evaluated by an external agent and the Ministry regularly evaluates compulsory schools to ensure compliance with the law.



SECONDARY EDUCATION

In Iceland, upper-secondary education is governed by law that was enacted in 1996, with certain provisions having taken effect in stages and becoming fully implemented (2000-2001 school year). The law defines the framework for upper-secondary education outlining aims as well as the role of the state and local municipalities. Further, in accordance with the law, the Ministry issues National Curriculum Guidelines describing the content and objectives of each program of study. Although upper-secondary education is not obligatory, everyone who completes compulsory education has a right to pursue this level of education. Between 87 and 89 percent of students completing compulsory education enroll in upper-secondary programs, but the dropout rate is rather high. All upper-secondary schools are co-educational and free of charge. However, students must pay enrollment fees, cover textbooks, and provide partial costs for materials if in a vocational program. The law allows for different entrance requirements to the different programs depending on the demands of the courses of study. Students not meeting the minimal requirements for a desired program are offered the opportunity to receive remedial training in the core courses.

There are approximately 40 upper-secondary schools varying in size from fewer than 50 to more than 1,500. Four different types of upper-secondary schools are operated in Iceland:

1) general academic schools that offer four-year academic programs concluding with the matriculation examination that is required for entrance into the higher education programs;
2) industrial-vocational school offering theoretical and practical programs of study in skilled and some non-skilled trades;
3) comprehensive schools that provide programs of study comparable to those offered in the general academic and vocational-industrial schools in addition to other specialized vocational training programs; and
4) vocational schools that offer programs of study designed for specialized employment.

The law stipulates that four general types of programs should be offered at the upper-secondary level. These include vocational programs, fine arts programs, a general academic program that leads to matriculation, as well as a shorter general academic program. Students in vocational programs are given the opportunity to complete additional course work if they are interested in university studies.

General academic education is organized into three subject areas: general subjects that all students are required to enroll in (approximately two-thirds of the curriculum), specialized subjects that fit with the aims of particular programs, and electives. There are three different academic programs leading to matriculation (foreign languages, natural sciences, and social sciences) with possibilities for more focused study within each of these broader programs. A shorter academic program is designed for students who are undecided about what particular course of study to pursue and for those who need

additional preparation prior to committing to the longer academic track or a vocational program.

Although the length of vocational programs varies, most are four years with students choosing training in various skilled trades, agriculture, the travel industry, fisheries, food production, health, or commerce. A number of the vocational programs, in addition to those for skilled trades, award legal certification for certain types of employment. For example, certification is provided for nurses' aides and sea captains. The law of 1996 requires vocational councils composed of representatives from employers and employees in each vocation along with one representative from the Ministry to convene regularly for the purpose of defining knowledge and ability needs of each vocation and to make curricular recommendations.

The academic year is divided into autumn and spring terms with students attending 32 to 40 forty-minute lessons per week. Most upper-secondary schools operate under a unit-credit system that allows students to regulate the amount of time it takes to complete their programs. In this type of system each subject is divided into a number of defined course units lasting for one semester.

The objectives of upper-secondary level education, outlined by law, encourage the overall development of students to equip them for active participation in a democratic society, preparing students for employment and further study, and fostering several personal qualities including responsibility, broad-mindedness, initiative, self-confidence, tolerance, discipline, independence, critical thinking, appreciation for cultural values, and the desire to seek lifelong learning. The National Curriculum Guidelines prescribe the framework for individual courses of study including the content, duration, and assessment requirements. As with education at lower levels, students with special needs are provided appropriate instruction and training in the mainstream classrooms to the fullest extent possible.

Regardless of the type of school, upper-secondary schools typically have examinations at the conclusion of each semester, with grades on other course assignments figured into the final grades. For the skilled trades, there are the journeyman's and nationally coordinated subject area exams. Upper-secondary schools are required by law to write School Working Guides describing program offerings, teaching methods employed, and the role of the administration. They must also conduct regularly sequenced self-evaluations addressing teaching, administration, and communication.

HIGHER EDUCATION

Contemporary higher education in Iceland dates back to 1847 with the formation of the Theological Seminary. In 1876 the Seminary was followed by the Medical School and then in 1908 the School of Law. These three institutions merged in 1911 with the foundation of the University of Iceland in Reykjavik. The contemporary higher education system encompasses three universities with research responsibilities and more than one program of study in addition to 11 specialized technical, vocational, and art colleges. With the exception of the University of Iceland, fewer than 1,000 students are enrolled at all other higher education institutions. The University of Iceland with an enrollment of 5,900 students (59 percent female), remains the principal institution and it hosts nine faculties (economics and business administration, dentistry, engineering, humanities, law, medicine, natural sciences, social sciences, and theology). Many of the faculties are subdivided into departments. For example, the Faculty of Social Sciences offers majors in ethnology, library and information science, political science, psychology, social anthropology, and sociology. The University of Iceland is a rapidly expanding and diversified institution with a total of more than 50 degree programs. The National and University Library, with 15 branches on and off campus, contains approximately 700,000 volumes with regular subscriptions maintained for 2,600 foreign journals.

The University of Iceland does not have restrictions on admission for those who have passed the matriculation exam. However, in the Faculty of Medicine, the Departments of Medicine, Pharmacy, Nursing, and Dentistry operate under a system wherein the number of students permitted to continue their studies beyond the first semester is limited and based on their performance on an examination. Further, the Department of Pharmacy and the Faculty of Science require students to have matriculated from upper-secondary programs emphasizing math, physics, or natural science.

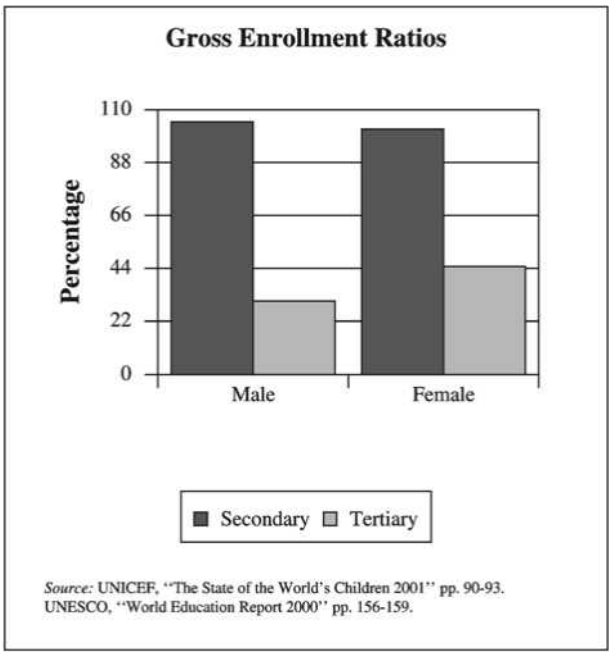
The University of Akureyri has four departments: Health Science, Management Study, Fishery Studies, and Education. The University College of Education is primarily responsible for the education of teachers at the compulsory school level. This institution also offers a Master of Education Degree with specialization in curriculum studies, special education, educational administration, and educational theory.

Colleges in Iceland offer technical and vocational courses in addition to training in the arts. Most colleges specialize in a single field of study with some colleges belonging formally to the upper-secondary school level while actually operating higher education programs. Courses of study are offered in several areas: physical education, social pedagogy, preschool education, drama, music, fine and applied arts and design, computer studies, management, civil and electrical engineering technology,

laboratory and radiology technology, and agricultural science.

Icelandic is the primary language of instruction in higher education, although textbooks are frequently in English, a widely understood language in the country. Operating under a semester system, the academic year begins in September and lasts until May. There are no tuition fees at state-run Icelandic institutions, students only pay registration fees. The few private institutions do charge tuition. Icelandic students attending institutions of higher learning are eligible for state loans. The total loan amount is based on the student's income, with repayment deferred until two years after completion of one's studies. Grants are offered for post-graduate research-oriented studies at universities in Iceland and are based on proposals submitted jointly by a student and a professor.

Higher education assessment in Iceland is typically in the form of oral or written examinations in addition to other course-related assignments. Moreover, university degrees are only conferred with successful completion of a final thesis or research project.



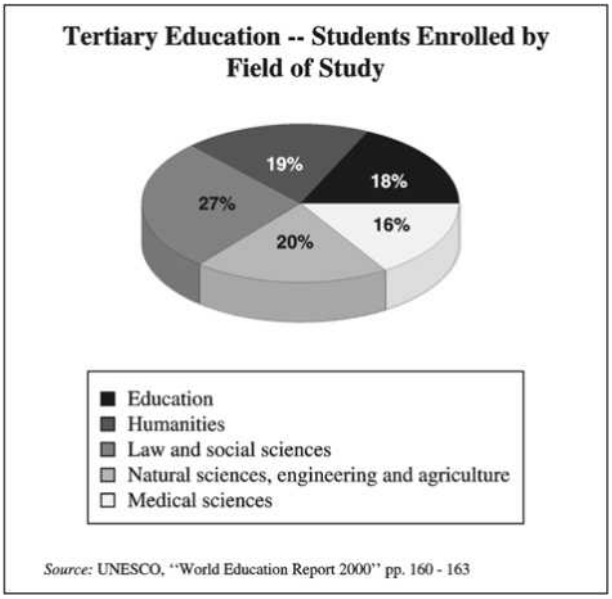
Source: UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

A diploma or certificate is awarded for 2 to 3 years of postsecondary study in drama, fine and applied arts and design, music, computer studies, management, and civil and electrical engineering. A BA degree is granted to students who have completed 3 to 4 years of study in humanities, theology, and social sciences and have finished a final thesis or research project. The BS degree is awarded to students who have completed 3 to 4 years of study in economics, business administration, natural sciences, health subjects, fishery studies, agricultural sciences, and engineering. A BE degree is earned after 3 years of course work designed to prepare students to teach at the preschool, compulsory, or upper-secondary level or for 3 years of study in the area of social pedagogy. A *BphilIsl* degree (*Baccalaureatus Philologiae Islandicae*) is granted upon completion of the program in Icelandic for foreign students. A *Candidatus* degree is offered only at the University of Iceland and qualifies the recipient for a particular profession or office. This type of degree is essentially an academic/professional degree offered in the fields of theology, medicine, pharmacy, law, business administration, engineering, and dentistry.

The University of Iceland offers a number of post-graduate degree programs. One year post-bachelor degree programs lead to certificates in education, social work, journalism, and mass communication. The MS degree is awarded following successful completion of two years of post-graduate study and a thesis research project in the faculties of medicine, economics and business administration, engineering, and natural sciences. Similarly, the MA degree is awarded after two years of post-graduate study in the Humanities and the Social Sciences in conjunction with a thesis research project. The MEd degree is awarded at the University College of Education following two-years of post-graduate study and completion of a thesis research project. Doctoral level training is only offered at the University of Iceland. There are two types of doctoral programs: a doctor of philosophy degree in Icelandic literature, language, and history and one that is not based on a predefined course of studies, but instead involves independent research by a candidate. As a rule, admission to doctoral programs requires completion of a professional degree (candidatus) or a master's degree.

Although there is no general legislation governing higher education, each institution is directly responsible to the Ministry of Education, Science, and Culture. The law pertaining to the operation of each institution defines its mission as related to education and research, the internal structure, and administrative roles. Within the framework outlined by the state, each university or college designs and updates the aims, scope, and length of programs offered as well as the content of courses.

Students in Iceland have a long history of traveling abroad to study, with 20 percent of higher education students (mostly post-graduate) studying overseas at any given time. The number of foreign exchange students enrolled in Icelandic universities and colleges has increased throughout the last several years. In response to their presence, the number of short intensive Icelandic courses has expanded along with services designed to enrich the daily lives of foreign students. For example, excursions and lectures pertaining to the country and Icelandic society are regularly available.



ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Icelandic parliament is responsible for education in Iceland, developing the basic objectives and administrative framework. More specifically, all forms of education fall under the jurisdiction of the Ministry of Education, Science, and Culture. Directed by a Secretary General, the Ministry is divided into three offices: 1) the Office of the Minister and Secretary General, which encompasses four departments (Administration, Financial Affairs, International Relations, and Legal Affairs), 2) the Office of Educational Research and Development, and 3) the Office of Cultural Affairs. Each of the offices is supervised by a Director General. The Ministry is directly responsible for insuring that legislation is implemented, planning system changes, and issuing educationally-based regulations. For example, the Ministry issues National Curriculum Guidelines for compulsory and upper-secondary schools that offer detailed educational objectives with specific information pertaining to how they should be met. However, responsibility for compulsory education shifted from the State to authorities within the local municipalities. While upper-secondary schools are managed by school boards with representation from the Ministry, the local authority, teachers, and students, higher education institutions are the sole responsibility of the Ministry. In general, supervision of education occurs at the local level with final responsibility residing with the Ministry. Eight regional authorities share responsibility for primary education; each authority, headed by a superintendent, appoints an education council of three to five members for four year terms. The eight educational regions are further subdivided into districts with local school boards responsible for running primary schools.

Between 1968 and 1995 an experimental Lab-school operated in conjunction with the University College of Education. The teachers experimented with various teaching methods and arrangements. Many of them were active in teacher education, and were promoters of topics such as educational drama, team teaching, integrated curriculum, the Scottish storyline approach, media-studies, hands-on science, new math, creative writing and inquiry-based reading instruction.

For more than a decade, two funds have assigned grants to developmental projects at the compulsory school level. Each year between 40 and 60 projects are provided support. The projects differ in size and scope, but most are small scale projects dealing with curriculum development in a limited area, small surveys, special education efforts, particular teaching projects, the compilation of curriculum materials or experimentation with teaching methods or assessment procedures.

Ingvar Sigurgeirsson, an Icelandic educational researcher, attempted to identify the extent to which innovative teaching methods have been adopted in schools throughout the country. Head teachers and deputy heads in 200 Icelandic schools (96.6 percent of all compulsory schools in 1994) were interviewed. Respondents in 28 schools (14 percent) emphasized that alternative (to the traditional model) teaching methods were frequently applied (thematic studies, topic work, work with various resources) in their classrooms. The remainder continued use of the traditional form of teaching. Despite this, pedagogical research has expanded dramatically and there has been considerable growth related to teaching ideas and models. In particular, research has focused on cooperative learning, ''effective school'' and ''effective teaching'' research, developments in authentic and constructivist learning, and the assessment and promotion of teacher research.

NONFORMAL EDUCATION

An Adult Education Act was introduced in the Althing in 1979 as an effort to organize and coordinate the various educational programs available for adults in Iceland. The Reykjavik School of Adult Education was founded in 1939 and is operated by the city. A variety of afternoon and evening courses are offered. Similar schools run by local authorities have been established throughout the country. In addition, there are private adult education schools devoted to adult education in foreign languages, fine arts, and music.

A few compulsory school and upper-secondary institutions have courses open to mature students. These

schools have evening classes with programs comparable to those offered during the day in traditional schools and designed to meet the needs of adults with daytime commitments. Upper-secondary schools generally have educational counseling available to assist students in the selection of programs of study, design of a plan of study, and with academic and personal problems.

Distance education has a relatively strong presence in Iceland. A number of college courses and a few college programs are offered using only network communication. For example, the College of Education at the University of Iceland offers a B.Ed. distance education program. Available data gathered from both lecturers and students suggest some discrepancy in their views regarding the efficacy of the program. The majority of the lecturers felt that all of the aims of the curriculum were equally well-served in the distance program and the traditional program. However, students expressed a need for face-to-face courses as a supplement to the distance learning. A few secondary schools in Iceland have likewise adopted distance learning programs. For example, one program evolved in a rural school based on widespread adult interest in evening courses. When the interest spread beyond commuting distance, correspondence courses and a distance learning program were instituted to fulfill the need.

The Adult Education Center is located in Reykjavik with annexes in other locations throughout the country. Students range in age from 17 to 67 years and the center provides short courses for people who do not have access to other educational opportunities. The courses provide training for independent or semi-independent living to people possessing widely varying physical and psychological handicaps with the goal of enhancing their quality of life. The curriculum is divided into basic living skills training, reading, writing, arithmetic, computer skills, physical exercise, swimming, home economics, arts and crafts, music, and drama. The format of education is very flexible and the each student has his or her own curriculum that is constantly evaluated and modified. As is characteristic of other forms of education in Iceland, there is a strong emphasis on values and needs of the individual.

TEACHING PROFESSION

All teachers in Iceland are civil servants with the nature and length of training varying as a function of the educational level. Although preschool teachers are generalists and compulsory education teachers are specialists in one or more subject areas, at both levels, teachers must complete a three-year bachelor of education course of study. Upper-secondary teachers finish a four-year BA or BS degree in addition to 30 credits in pedagogy and didactics.

Teachers in Iceland's preschools complete a 3-year course of study that is two-thirds academic or theoretical and one-third practical at either the Icelandic College for Preschool Teachers or at the University of Akureyri. In-service training for preschool teachers is not officially mandated by law, yet preschool personnel frequently supplement their education after working for 3 or more years in a preschool setting.

Compulsory education teachers complete a three-year course at a teacher training college, and as with preschool teaching, participation in in-service training is not mandatory. However, collective bargaining agreements enable teachers to attend training sessions.

Legislation requires upper-secondary general academic school teachers complete at least four-years of university-level education. A minimum of two years needs to be devoted to a major subject and one year to the study of education and instructional methodology. Teachers of vocational subjects must be qualified in their field or be a master craftsman with a minimum of two years experience working in the trade in addition to one year of study in education and instructional methodology. Teachers are paid by the state but hired locally. In-service training courses are held annually for upper-secondary school teachers.

Teacher education in Iceland has a history extending more than a century and leading to the founding of the Iceland University of Education. Legislation in 1997 resulted in the merging of three other colleges with the former University College of Education (founded in 1907). These three colleges were the Icelandic College of Early Childhood Education, The College for Developmental Therapists, and the College of Physical Education at Laugarvatn. There are two departments at the Iceland University of Education (the Department of Undergraduate Studies with five divisions and the Department of Graduate Studies).

The postgraduate program offers courses ranging from 15 to 60 units for professionals in education and social work. Study at this level is largely in the form of distance education, with a few periods of residency required. Students either complete their training with a diploma in Education (15-30 units) or with a Med degree (60 units). A full year of study is 30 units. Graduate students specialize in administration, curriculum and instruction, educational theory, special education or educational technology. Approximately 200 students are enrolled in graduate programs.

Icelandic teachers show considerable interest in keeping up with current developments in the education field. Most seminars, workshops, and in-service courses are well attended as are education conferences. A relatively large Institute of Continuing Education also operates within the University. The main purpose of the

Institute is to provide education for professionals in education and social work. In addition, the Institute occasionally provides training for other groups and fosters research and development projects. There is a strong emphasis on distance learning and use of information technology within the Institute.

The Iceland University College of Education has approximately 170 faculty members and other permanent staff. All assistant, associate, and full professors teach and maintain a program of research. The University of Iceland has a Department of Education within the Faculty of Social Sciences. This Department offers a Teaching Certification Program designed to train lower-secondary and upper-secondary school teachers. The program is for four years (129 units) and involves specialized study in a particular discipline (BA/BS) along with one year of instructional methodology. An average of 50 students graduate from the program each year.

The University of Akureyri is the youngest of the three Universities offering teacher training. The Faculty of Education began operation in the Fall of 1993 with a BEd program for compulsory school teaching. A Preschool Program and a Teaching Certification Program are offered as well. The Compulsory School Program has a special focus on science and training teachers for small rural schools. In 1998 the Ministry of Education, Science, and Culture released a report of an extensive external assessment of the Teacher Certification Program at the University of Iceland, the programs offered at the University College of Education, and both the Compulsory School Program and the Teaching Certification Program at The University of Akureyi. The review team, chaired by Dr. Benjamin Levin, Dean of the Continuing Education Division at the University of Manitoba, concluded that all three programs were making ambitious efforts to meet the needs of teachers in training. They commended the Icelandic institutions' use of information technology in teacher education training, concluding that efforts went well in comparison to similar institutions in other nations.

The team also identified areas needing more focused attention. For example, they recommended more long-range planning or a vision. Future aspirations seemed to be contingent upon the actions of others such as the Ministry, and the review team felt that the faculty at each institution should develop a public document outlining their plans for initial and continued training, graduate programs, and research. Other recommendations included greater coordination among the three institutions related to curriculum development, continuing education efforts, and access to and delivery of distance education, increased availability of computer facilities, the need for more active collection of student data, and improving conditions for research.

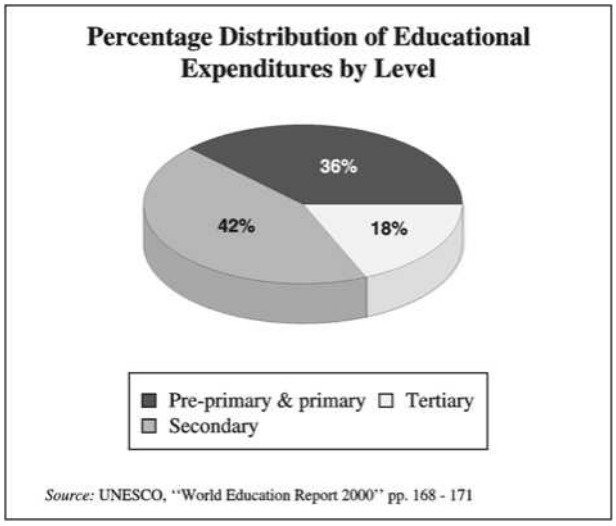
Teachers in Iceland have historically been relatively poorly paid by international standards. However, there is evidence that this trend is reversing. According to a wage contract, upper-secondary teachers with a BA or BS will receive a starting salary of US$2,083 rising to $2,380 by 2004. According to the previous contract, the minimum starting wage was US$1,309. Teachers with 10 to 15 years of experience will receive raises of US$773. The agreement also included fewer compulsory overtime hours. Although the status of teaching as an occupation has been rather low in the past, there is evidence to suggest that this is changing. One recent study of the vocational plans of Icelandic teenagers revealed that becoming a primary school teacher ranked in third place.

SUMMARY

Compulsory education in Iceland is targeted for all children between the ages of 6 and 16, with those desiring to continue their education beyond the compulsory period pursuing programs of study of various forms in upper-secondary schools. A matriculation certificate from an Icelandic general academic upper-secondary school or an equivalent from an abroad institution is necessary for admission to a higher education institution. There are also a number of technical, vocational, and specialized upper-secondary schools that prepare students to enter the workforce upon completion of required class work and supervised practical experiences. Higher education is offered at three universities in Iceland and several colleges provide training in the arts, agriculture, technology, preschool education, and physical education.

The majority of Icelandic schools at all levels are fully supported by the State (over 90 percent), yet private schools have become more common. Students with special education needs are usually taught in inclusive-type classrooms, with less than 1 percent of the special needs population educated in separate schools. More than 80 percent of Icelandic children between the ages of 3 and 5 are enrolled in fee-based pre-compulsory education.

The Ministry of Education, Science, and Culture generally oversees the curriculum and publishes a National Curriculum Guide for all levels of compulsory education and for both vocational and academic upper-secondary education. The curriculum guides also contain recommendations pertaining to teaching and assessment; however, teachers actually choose their own methods of classroom assessment and may adopt preferred instructional methods. No general legislation governs higher education in Iceland, but each institution is held accountable to the Ministry. Laws define the mission of each institution with respect to education and research, the internal structure, and administrative roles. However, each university or college is granted relative autonomy



to develop and update the aims, scope, and length of programs.

Icelanders have an admirable respect for and interest in their past as well as a contemporary perspective that embodies enthusiasm for current trends and technology and careful planning for the future. Public education in Iceland combines a long history of devotion to learning, cultural values (tolerance, open-mindedness, responsibility to others), emphasis on the unique educational and socio-emotional needs of individual students, and appreciation for contemporary pedagogical knowledge.

Various cultural factors have unfortunately impeded the process of modernization of the educational system in the country over the last few decades. For example, the system has been one that has been highly regulated by a national government that has swayed considerably in terms of support for educational reform based on differing political party agendas. Another problem has been that language barriers have limited teachers' access to primary educational literature. Efforts to evaluate strengths and weaknesses of the education system at all levels have been less than systematic. Further, Icelandic teachers have been underpaid and the profession has tended not to be one associated with high status.

Nevertheless, several recent trends suggest that the future will bring a respectable system to compete with the best educational systems in the world. These trends include the following: 1) unified effort on the part of the state and the public to more effectively replace traditional teaching practices with contemporary ones by developing specific methods for translating accepted theory into practice, 2) transfer of many educational operations from the state to the local level, 3) more focused effort to gather data on school effectiveness, teaching competence, and teacher training, 4) higher pay for teachers and higher status associated with the profession, and finally 5) enhanced interest and use of technology in the classroom.

Iceland has experienced profound cultural shifts over the course of the last century from gaining independence to radical changes in the economy. Compared to transformations that occurred relative to these other realms, modifications to the educational system have been far less dramatic. However, with the consciousness shared by the government, industry, businesses, and the public, it seems inevitable that Icelanders will work to put their ideas into practice.

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—Priscilla Coleman

INDIA

BASIC DATA

Official Country Name:	Republic of India
Region:	East & South Asia
Population:	1,014,003,817
Language(s):	English, Hindi, Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Malayalam, Kannada, Oriya, Punjabi, Assamese, Kashmiri, Sindhi, Sanskrit, Hindustani
Literacy Rate:	52%
Number of Primary Schools:	598,354
Compulsory Schooling:	8 years
Public Expenditure on Education:	3.2%
Educational Enrollment:	Primary: 110,390,406 Secondary: 68,872,393 Higher: 6,060,418
Educational Enrollment Rate:	Primary: 100% Secondary: 49% Higher: 7%
Teachers:	Primary: 1,789,733
Student-Teacher Ratio:	Primary: 47:1 Secondary: 33:1
Female Enrollment Rate:	Primary: 90% Secondary: 39% Higher: 5%

HISTORY & BACKGROUND

Historical Evolution: Education always evolves out of historical and cultural contexts. India's current educational system is a product of centuries-old dualities that characterize the genius and decadence of an ancient but wounded civilization. Speaking to the UNESCO World Conference on Higher Education, India's Minister of Resource Development and Science and Technology, Murli Manohar Joshi, asserted the centrality of education to the Indian heritage. ''Pursuit of integral knowledge and liberation, which has been a constant endeavor of Indian culture, is also the central objective of education,'' Joshi told the conference (1998). Joshi further addressed the connection between education and the preservation of culture:

> Education is also visualized as an evolutionary force so that each individual is enabled to evolve from purely material consciousness towards superior planes of intellectual and spiritual consciousness. Education is also perceived as a bridge between the past, present, and the future and as a means by which the best of the heritage is transmitted to the new generations for its further progression. (Joshi 1998)

India has the world's oldest and largest education system. Its antiquity and diversity are reflected in the roots of cultural norms and institutions that go back to a distant and venerable past. It is believed that the world's first university was established in Takshila in 700 B.C. It was a center for higher learning that attracted about 10,500 students who studied nearly 60 subjects.

The ruins of Nalanda University, southeast of Patna, reflect India's prestigious status for the 10,000 pupils and 2,000 teachers who came there from all over the world between the fourth and twelfth centuries. Hieun-Tsang, the famed Chinese traveler-scholar, studied and taught at Nalanda. His writings offer a vivid and authentic account of India's political and social realities that prevailed around the fifth century. Nalanda saw the rise and fall of empires that built several shrines and monasteries. King Harshwardhan endowed a college of fine arts. Both Nagarjuna and Dinnaga—a Mahayana philosopher and the founder of the school of logic, respectively—taught here.

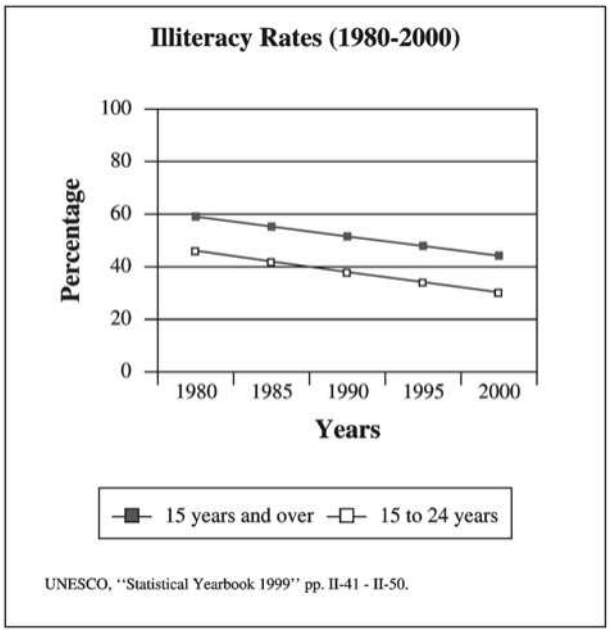
If Takshila and Nalanda are any testimony, educational standards and knowledge development had reached an epitome of excellence that subsequently vanquished in the wake of social and political changes. Caste, religion, gender, and class have always determined the content, context, and delivery of educational goals and programs. As attitudes toward these things change, so does education.

Population: India is home to roughly one-fifth of the global population and is the world's largest democracy. The latest provisional results of Census 2001 indicate that India has become the second most populous country in the world after China. In the decade between 1991 and 2001, India produced more people, but also a more even ratio of men to women and a higher literacy rate.

According to the Express News Service, the population of India in early 2001 was 1,027,015,247, reflecting a growth since 1991 of 181 million people. While the country's share of global population increased by 16.7 percent, its growth rate actually declined by 2.52 percent. The sex ratio was 944 females to 1,000 males, a significant increase from 1991. The largest states are Uttar Pradesh, Maharashtra, and Bihar.

The News Service also reports that illiteracy began in 2001 to decline for the first time in over 50 years. Overall, 75.9 percent of males and 54.2 percent of females are literate, reflecting a decrease in the gap between male and female literacy. Literacy varies greatly by region: Kerala reports a literacy rate of 90.9 percent, while Bihar maintains a literacy rate of only 47.5 percent.

India as the world's largest educational system is both a model and case-in-point for planners and academics addressing the issues and problems of a developing nation. The system serves nearly 1 billion people with limited resources and unlimited demands.



UNESCO, ''Statistical Yearbook 1999'' pp. II-41 - II-50.

CONSTITUTIONAL & LEGAL FOUNDATIONS

India's constitution and its Directive Principles of State Policy form the legal-constitutional foundation of national policy on education. Article 45 of the Directive Principle mandates that ''the State shall endeavor to provide within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.'' Article (i) provides for any citizen having a distinct language or script. Article 46 addresses the special care of the economic and educational interests of the underprivileged sections, particularly the Scheduled Castes and Scheduled Tribes, making them an obligation of the state. (Scheduled Castes and Tribes are legally established ethnic subgroups—formerly called ''untouchables,'' a term since outlawed—with specific educational and vocational privileges, special representation in parliament, and protection from discrimination, as outlined in the modern Indian constitution.)

The national education policy has evolved through the periodic evaluation of priorities and the subsequent development of plans to achieve those goals. Since the 1950s, India has followed a planned process of social and national development, incrementally implemented in a series of five-year plans. In 1968, in its Resolution on the National Policy on Education, expansion and quality, especially for education for girls, were emphasized. The actual National Policy on Education (NPE) was not formulated until 1986. It was updated in 1992 with a comprehensive policy framework, the Plan of Action, stipulating main responsibilities for organizing, implementing, and financing various proposals. In keeping with the policy objectives, ''the targets for the Ninth Five Year Plan have been fixed under three broad parameters—universal access, universal retention, and universal achievement'' (Tiwari 2000).

Though education is in the concurrent list of the national constitution, the state governments play an important role in the planning and delivery of education, especially in the primary and secondary sectors. Joshi described to the UNESCO World Conference the particular responsibilities of the national (Union) government:

> Under the Constitutional scheme, ''education'' is in the concurrent list, and the Union Government and States exercise joint responsibilities. As a result, while the role and responsibilities of the States in regard to education remains unaltered, the Union Government accepts a larger responsibility to reinforce the national and integrated character of education, to maintain quality and standards, to study and monitor the educational requirements of the country as a whole in regard to manpower for development, to cater to the needs of research and advanced study, to look after international aspects of education, culture and human resource development, and in general, to promote excellence at the tertiary level of the educational pyramid throughout the country (1998).

EDUCATIONAL SYSTEM—OVERVIEW

India contains about 888,000 educational institutions with an enrollment of about 179 million students. The elementary education system in India is the second largest in the world, with 149.4 million children of 6-14 years enrolled (about 82 percent of the children in that age group) and 2.9 million teachers.

As a democracy, India is committed in principle to compulsory and free education for all its people with special provisions for its underprivileged and traditionally oppressed people. The reality, however, is far from the desired outcome. Poverty and cultural deprivation leave millions of young minds without education. On the contrary, a very sophisticated infrastructure of elitist education modeled after the British private schools exists for the children of rich and influential people who continue to dominate the society in different sectors. Among the residential boarding schools designed exclusively for the elite are The Lawrence School, Lovedale; Kodaikanal International School, Kodaikanal; Rishi Valley School, Chittor; Montford Anglo Indian Boys School, Yercaud; Chinmaya International Residential School, Coimbatore; United World College, Pune; Dow Hill School, Kurseong; St. Paul's School, Darjeeling; The Lawrence School, Sanawar; Mayo College, Ajmer; Welham Girls' High School, Dehradun; and Colvin Tallukedar School, Lucknow.

PREPRIMARY & PRIMARY EDUCATION

Basic Principles: While ''primary education provides the fundamentals of all formal learning'' (Sharma 1997), preprimary learning may be called the foundation for both education and personal development. Little information exists on formal preprimary education in rural India, although the family and community function as a broader arena for holistic learning. In urban communities, the level of preprimary education corresponds directly to the factors of class and wealth. Only the rich and educated opt for kindergarten and Montessori schools, which abound in affluent neighborhoods, while poor, neglected, underprivileged children languish in the streets of Indian cities.

At least in terms of national priorities, primary education takes as a model a humanistic pedagogy, emphasizing the needs of the child over all means and methods of education. Neerja Sharma succinctly writes:

> The buildings, school administration, teachers and personnel, syllabi and textbooks, furniture and uniforms exist because children need education. This truism has been recognized in the Program of Action of the National Policy on Education (1986) that states under its Implementation Strategies: *The country's faith in its future generations will be exemplified in the system of elementary education, which will get geared around the centrality of the child* (11). (1997)

A 1988 governmental reform of the primary curriculum set forth the principles that were to govern this type of education. Students were entitled to a ''broad and balanced curriculum'' including such diverse subjects as religious education, science, and technology. In addition, the standards for students' academic achievement were to be raised, and assessment methods were to serve ''formative purposes'' (Venkataiah 2000).

The implementation of these goals is somewhat confounded by the diversity of India's population and the complexity of its governance. In practice, primary education is a dilemma-ridden field where teachers, schools, communities, and states muddle through a rugged terrain without consensus. As a result, local, regional, and political influences override the foundational issues in pedagogical discourse. In particular, zealous religious groups have been divisive.

S. Venkataiah, a leader in primary and secondary education in India, argues that the legal force and the professional support, even the very goals, of the 1988 reform act created a problem of manageability: ''One of the paradoxes was that there would have been no manageability problem without the principles embodied in the curriculum required by the 1988 Act'' (2000). Venkataiah identifies three types of problems that arose for those charged with managing the curriculum at the school level: curriculum time allocation, teacher expertise, and resources in primary schools.

A further problem with meeting the expansive goals of the nationally determined curriculum of primary schools has been many teachers' shallow approach to education. ''The dominating difficulty in the purpose of primary schools is the fact that 'knowing' is rated more highly than 'teaching,' despite the importance of the latter and its equally intimate connection with 'learning,''' writes Venkataiah (2000). Venkataiah adds:

> The agency responsible for the National Curriculum advised the Government that the statutory curriculum would have to be slimmed down; the agency responsible for the national inspection arrangement reported that those schools that had nearly covered the statutory curriculum had done so only by encouraging superficial learning in their pupils. (2000)

Initiatives: Universalization of the entire educational system has been the main goal of government since independence. Formal and nonformal primary education, however, have been the main challenge to this goal. Universalization of Elementary Education (UEE) is fraught with systemic and socioeconomic factors that call for massive public education and advocacy. A total-literacy campaign is underway despite numerous barriers. Even provision of textbooks in poverty-ridden areas is a challenge. A comprehensive program seeks to target ''i) teachers and all those involved in education of children; ii) students and parents of students, particularly nonliterate parents; and iii) community opinion leaders'' (Government of India 2001).

Residential education of girls, especially from broken homes and poor families, has lately received planners' attention. A program named after Mahatma Gandhi's wife, the Kasturba Gandhi Shiksha Yojana, has been funded with Rs. 2,500 million (rupees). Other financial incentives and scholarships for poor girls have been provided. All such programs, as recorded in the NPE-1986, ''pay special attention to increasing girls' enrollment, improving educational outcomes, strengthening community involvement, and improving teaching and learning materials and providing in-service teacher training'' (Government of India 2001). The status of some of these initiatives is discussed below.

Operation Blackboard: According to the government of India, the number of primary schools that have been transformed under this initiative with central assistance is 523,000. The main purpose of this program is to improve the environment in schools by providing basic facilities.

Decentralization: According to the government of India, the management of elementary education, as envisioned by the NPE, has emphasized direct community involvement in the form of Village Education Committees (VECs). The 73rd and 74th constitutional amendments provide for decentralization of the local self-government institutions, called Panchayati Raj Institutions (PRIs). PRIs have thus become pivotal in the delivery of education in rural and urban communities. The oppressed groups—women, Scheduled Castes and Tribes, and minorities—have especially found PRIs very helpful. This approach is essentially grass-roots educational policy and delivery.

Decentralization has been reinforced during the Eighth Five-Year Plan. The VECs, District Primary Education Program, and Lok Jumbish have been chiefly instrumental in this process. A Special Orientation Program for Primary Teachers has further reinforced support to primary level teachers. During 1992 to 1993 and 1995 to 1996, Rs. 8,163 million were allocated; the outlay for 1996 to 1997 was Rs. 2,910 million. More recent data is not available.

Mobilizing the village community to take responsibility for ensuring quality education for every child is the core strategy of both the Shiksha Karmi Project and Lok Jumbish and in their efforts to universalize and improve primary education. Community involvement has been crucial for the success of these projects.

Shiksha Karmi Project: The Swedish International Development Cooperation Agency has assisted in the implementation of the Shiksha Karmi Project. The project aims at universalization and qualitative improvement of primary education in the remote and economically disadvantaged villages of Rajasthan with a focus on girls. The Shiksha Karmi Project has constituted VECs in 2,000 villages to promote community involvement in primary education and encourage village-level planning. The role of the VEC is to mobilize resources for maintenance, repair, and construction of school infrastructures. The VEC also helps in determining the school calendar and school-day-timings in consultation with the local community and *Shiksha Karmis* (educational workers). *Shiksha Karmis* are frequently used as substitutes to compensate for teacher absenteeism.

In addition to the more formal courtyard schools (*Angan Pathshalas*), the Shiksha Karmi Project also runs nonformal classes called *Prehar Pathshalas* (schools of convenient timings). For girls' education, *Angan Pathshalas* are run in three blocks. As of 2001 the program covered over 150,000 students in 1,785 schools and 3,520 *Prehar Pathshalas,* involving over 4,271 *Shiksha Karmis.*

Lok Jumbish Project: Lok Jumbish is extended to 75 blocks covering a population of approximately 12 million in Rajastahan. The project involves government agencies, teachers, nongovernmental organizations (NGOs), and elected representatives to promote universalization of primary education. The seven guiding principles of Lok Jumbish are (a) a process rather than a product approach, (b) partnerships, (c) decentralized functioning, (d) participatory learning, (e) integration with the mainstream education system, (f) flexibility of management, and (g) multiple levels of leadership.

District Primary Education Program (DPEP): The objectives of DPEP, a major program to implement UEE, are

- to provide all children with access to primary education either in the formal system or through the nonformal education (NFE) program;
- to reduce differences in enrollment, dropout rates, and learning achievement among gender and social groups to less than 5 percent;
- to reduce overall primary dropout rates for all students to less than 10 percent;
- to raise average achievement levels by at least 25 percent over measured baseline levels; and
- to ensure achievements of basic literacy and numeric competencies and a minimum of 40 percent achievement levels in other competencies by all primary school children.

The Government of India finances 85 percent of the project cost as a grant to the DPEP State Implementation

Societies, and state governments provide the rest. As of 2001, the International Development Agency (IDA) of the World Bank had approved credit amounting to $260 million and $425 million under Phase I and Phase II of DPEP, respectively. The European Union is providing a grant of 150 million euros. The ODA (of the United Kingdom) is extending a grant of $80.21 million, and a grant from the Netherlands amounts to $25.8 million.

DPEP has been implemented in phases in different states beginning with 42 districts in the states of Assam, Haryana, Karnataka, Kerala, Maharashtra, Tamilnadu, and Madhya Pradesh. In the second phase, the program was launched in 80 districts of Orissa, Himachal Pradesh, Andhra Pradesh, West Bengal, Uttar Pradesh, Gujarat, and in Phase I States. The main projects are summarized below to exemplify varied governmental objectives.

Bihar Education Project: The Bihar Education Project, launched in 1991, emphasized participatory planning to uplift the deprived sections of society, such as Scheduled Castes, Scheduled Tribes, and women. A midterm review highlighted major achievements including (a) a strong Mahila Samakhya component; (b) organization of VECs and community involvement in program implementation at grassroots levels; and (c) nonformal education through NGOs.

Uttar Pradesh Basic Education Program: The government of Uttar Pradesh launched the World Bank project Education for All in June 1993. The project, operating in 12 districts as of 2001, is planned to expand its coverage to 15 districts under DPEP Phase II. It has an outlay of Rs. 7,288 million spread over 7 years. The IDA would provide a credit of $163.1 million, and the state government's share would be approximately 13 percent of the total project cost. About 40,000 teachers have been trained.

Andhra Pradesh Primary Education Project: The Andhra Pradesh Primary Education Project (APPEP), implemented in the south-central state of Andhra Pradesh, adopts a two-pronged strategy of improving classroom transaction by training teachers and giving a fillip to school construction activities. The Andhra Pradesh area has a female literacy rate of just 34 percent. The project has trained an estimated 80,000 teachers in 23 districts, and more than 3,000 teaching centers have become operational. The project is assisted by the UK's ODA with an estimated outlay of Rs. 1,000 million in the Eighth Five-Year Plan.

National Program of Nutritional Support to Primary Education (School Meal Program): Providing a free, nutritious cooked meal of 100 grams of food grains per school day to all children in classes I-V is an ambitious program in a country of 1 billion people. The program was launched in 1997 to 1998 to support UEE in achieving its goal of increasing enrollment, retention, and attendance in primary classes. In 1997 to 1998 the program covered nearly 110 million children in primary classes. Reportedly school enrollment and rates of retention have increased.

SECONDARY EDUCATION

Enrollment: Secondary education acts as a bridge between primary and higher education and is designed for students ages 14 to 18. Of the estimated 96.6 million people eligible, the enrollment figures of the 1997 to 1998 school year showed that only 27 million attended schools. Thus, two-thirds of the eligible population remains out of the school system. To educate children in schools at the secondary level, there are at present 110,000 institutions (1998 to 1999). With the emphasis on the universalization of elementary education and programs like District Primary Education Program, enrollment is expected to increase. Once this universalization takes place, more than 200,000 institutions will be needed at the secondary level.

Support Organizations: Secondary education is supported by several organizations under the administrative control of the Department of Education: National Council of Educational Research and Training, Central Board of Secondary Education, National Open School, Kendriya Vidyalaya Sangathan, Navodaya Vidyalaya Samiti, Central Tibetan Schools Administration, Central Institute of Education Technology, and the State Institute of Education Technology. A brief introduction to some of these organizations and their programs is given below.

Central Board of Secondary Education: The Central Board of Secondary Education (CBSE), a self-funded agency, was created by a special Resolution of the Government of India in 1929 to raise the standard of secondary education and to make the services of CBSE available to various educational institutions in the country. CBSE has seven committees: Finance, Curriculum, Examination, Results, Affiliation, Committee for Private Candidates, and Committees of Courses. The chairman of CBSE is also the Head of the Governing Body, which in turn reports to the Education Secretary. CBSE has six regional offices at Ajmer, Chandigarh, Chennai, Allahabad, Guwahati, and Delhi to ensure better communication and services. The number of schools affiliated with CBSE has gone up phenomenally from 309 in 1962 to more than 5,237 in 1999.

Kendriya Vidyalaya Sangathan: Kendriya Vidyalaya Sangathan, an autonomous organization established in

1965, has a four-point mission for Kendriya Vidyalayas (KVs): (a) to cater to the educational needs of children of transferable Central Government employees, including defense and paramilitary personnel, by providing a common program of education; (b) to pursue excellence and set the pace in the field of school education; (c) to initiate and promote experimentation and innovations in education in collaboration with other bodies such as CBSE and the National Council of Educational Research and Training; and (d) to develop the spirit of national integration and create a sense of ''Indian-ness'' among children. There are 874 KVs at work and a proposal is under consideration to open some more.

Navodaya Vidyalaya Samiti: Navodaya Vidyalaya Samiti, through the institution of Navodaya Vidyalayas (NVs), seeks to (a) provide high-quality modern education up to the senior secondary stage to talented children predominantly from rural areas, without regard to their family's socioeconomic condition; (b) act as a trendsetter and pacesetter in the areas where NVs are located; and (c) serve, in each district, as a focal point for improvement in the quality of school education through sharing experiences and facilities. The program is competitive, as it is designed to serve 240 students at each unit. In 2001 there were only 404 NVs. Plans for the future, however, include an NV for each district.

Central Tibetan Schools Administration: The Central Tibetan Schools Administration was established to provide education for the Tibetan refugees in India. The Tibetan community, displaced from their native land, receives special modern education in harmony with their traditional system and culture. There are 87 schools in the country to serve Tibetans.

Centrally Sponsored Schemes: Secondary education is supported by a number of centrally sponsored ''schemes'':

1. Vocationalization of secondary education;
2. Integrated education for disabled children;
3. Computer literacy and studies in schools (CLASS);
4. Education technology;
5. Improvement of science education in schools;
6. Promotion of yoga in schools;
7. Strengthening culture and values in schools;
8. Strengthening boarding and hostel facilities for girls; and
9. Environmental orientation to school education.

These ''schemes'' are designed to support local and regional schools in areas that are crucial for a fuller and developmentally complete education.

HIGHER EDUCATION

General Survey: Addressing the graduates of the Allahabad University in 1947, Jawaharlal Nehru, the first Prime Minister of India, said:

> A university stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search for truth. It stands for the onward march of the human race toward higher objectives. Universities are places of ideals and idealism. If the universities discharge their duties adequately, then, it is well with the nation and the people. (Quoted in Joshi 1998)

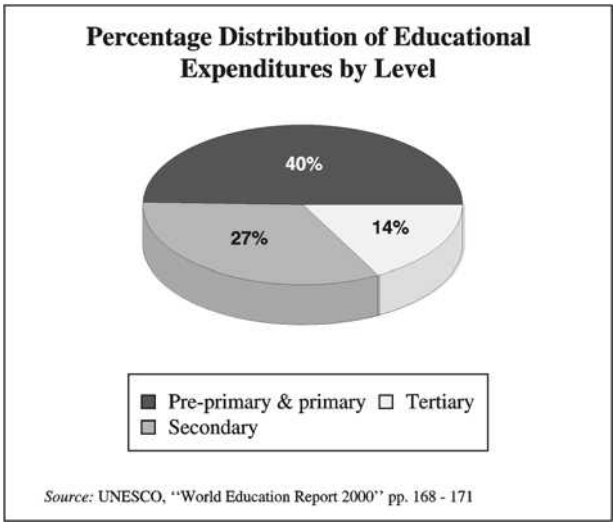
According to Joshi, although prior to independence the university system grew slowly, after independence the pace quickened. Evaluating India's progress towards these goals in higher education almost 20 years later, critic Robert Gaudino described the dueling motives controlling the growth of higher education in India, saying:

> Higher education in India is less purposeful innovation than casual change, less inspired initiative than hastily assembled new departures, less far sighted planning than uneven movement. Irregular and unpremeditated as this moment may be, it is pushed forward by two clear, self-consistent, antagonistic impulses, two persuasions, each sure of itself but in tension with the other. One is the drive to democratize, to expand, to admit greater numbers; the other is the drive to professionalize, to raise the standards, to increase equipment and research in special fields. (1965)

Since then, despite dramatic changes, some of the fundamental challenges remain the same. Expansion and decentralization, not to mention increasing privatization, have opened up institutional gates to millions, but three basic issues continue to vex educational planners: diversity, excellence, and accountability.

India's higher education system, the largest in the world according to the Indian government, includes 237 universities, 10,600 colleges, 41 Deemed Universities, 7.1 million students, and 331,000 teachers. Among these, there are 12 science and technology universities, 7 open universities, 33 agricultural universities, 5 women's universities, 11 language universities, and 11 medical universities. Specialized schools of journalism, law, fine arts, social work, planning and architecture, and other studies are also a part of the Indian university system. The government expenditure on higher education was Rs. 42,126 million in 1996 to 1997, and it has increased since then.

Degrees Offered: The higher education continuum involves three levels: bachelor or undergraduate, master's or post-graduate level, and doctoral and predoctoral level. Diploma courses are also offered at the undergraduate and postgraduate levels. Bachelor's degrees in arts, com-



merce, and sciences involve 3 years of education after 12 years of primary and secondary school education. Honors and special courses are selectively offered. Professional baccalaureate degrees require four years of education in agriculture, dentistry, engineering, pharmacy, technology, and veterinary medicine; five years in architecture; five and a half years in medicine. Degrees are also offered in education, journalism, and library science. A bachelor's degree in law can be taken either as an integrated degree lasting five years or as a three-year course as a second degree. It normally takes two years to obtain a master's degree with or without research work. Engineering, technology, and medicine require the Graduate Aptitude Test and Combined Medical Test, respectively, for admission. A pre-doctoral program, Master of Philosophy (M.Phil.), is taken after completion of the master's degree. The Ph.D. is usually awarded two years after the M.Phil. or three years after the master's degree. Students are expected to write an original dissertation to earn doctoral degrees.

Administration: The central government regulates and funds policies and programs relating to higher education in the country. Through the University Grants Commission and other institutions, the government promotes higher education to help students achieve national and international recognition and to address the country's complex needs.

The University Grants Commission (UGC), established by an Act of Parliament in 1956, discharges the constitutional mandate of coordination, determination, and maintenance of standards of teaching, examination, and research. It also serves as a vital link between the Union, state governments, and the institutions of higher learning. It monitors developments in the field of collegiate and university education, disburses grants to the universities and colleges, advises central and state Governments on the measures necessary for the improvement of university education, and frames regulations such as those on the minimum standards of instruction.

Its composition comprises of the chairperson, vice-chairperson, and 10 other members appointed by the government. The chairperson is selected from among those who are not officers of the central government or any state government. Of the 10 members, 2 are representatives of the central government. Not less than 4 must be teachers in the universities. Others are selected from among eminent education specialists, academics, and experts in various fields. The chairperson is appointed for a term of 5 years or until the age of 65 years, whichever is earlier. The vice-chairperson is appointed for a term of 3 years or until the age of 65 years, whichever is earlier. The other members are appointed for a term of three years. The chairperson, vice-chairperson, and members can be appointed for a maximum of two terms.

Although a central funding body, UGC has no funds of its own. It receives grants from the central government to carry out the responsibilities assigned to it by law. It allocates and disburses full maintenance and development grants to all Central Universities, colleges affiliated to Delhi and Banaras Hindu Universities, and some of the institutions accorded the status of ''Deemed to be Universities.'' State universities, colleges, and other institutions of higher education receive support only from the Plan grant for development schemes. In addition, the UGC provides financial assistance to universities and colleges under various schemes and programs for promoting relevance, quality, and excellence, as well promoting the role of social change by the universities.

Beyond the UGC, a number of professional councils are responsible for the recognition of courses, promotion of professional institutions, and provision of grants to undergraduate programs. The statutory professional councils include the All India Council for Technical Education, the Distance Education Council, the Indian Council for Agriculture Research, the Bar Council of India, the National Council for Teacher Education, the Rehabilitation Council of India, the Medical Council of India, the Pharmacy Council of India, the Indian Nursing Council, the Dentist Council of India, the Central Council of Homeopathy, and the Central Council of Indian Medicine.

Central Universities: Universities that are under the statutory control of the central government serve under the president of India, who is the Visitor of all Central Universities. As Visitor, the president nominates some members to the Executive Committee, the Board of Management, and the Court and Selection Committees of the

university. The Department of Education provides secretariat service for appointment of the vice-chancellor, Executive Committee nominees, Court nominees, Selection Committee nominees, and so forth. A brief description of these central universities follows.

Indira Gandhi National Open University (IGNOU): IGNOU was established in 1985 as an Open University to promotion the distance education system. It offered 43 programs during 1998. The total number of students registered for various programs was 163,000. Students supports services in 1998 consisted of 19 Regional Centers and 346 Study Centers. IGNOU programs telecast on the Doordarshan Network six days a week. Its jurisdiction is throughout the country, and study centers can be designed for overseas demands. The Distance Education Council has the responsibility for the coordination and maintenance of standards in open and distance education system in the country.

University Of Hyderabad: Also called ''The Golden Threshold'' (the residence of the late Sarojni Naidu), the University of Hyderabad serves as a city campus to promote post-graduate teaching and research. The university has eight schools and a Center for Distance Education offering post-graduate diplomas in five disciplines.

University Of Delhi: Established in February 1922 as a residential university, the University of Delhi has 14 faculties, 82 teaching departments, and 78 colleges spread over the national Capital Territory of Delhi. Indraprashtha Vishwavidhlaya has come up in Delhi as a new affiliating state university.

Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya (MGAHV): MGAHV came into existence in 1997 as an outcome of the Wardha Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya Act passed by the parliament in December 1996. As an international institution, four schools were proposed under this university.

Babasaheb Bhimrao Ambedkar University: Established as a state university in 1994 in Lucknow and recognized as a Central University in January 1996, Babasaheb Bhimrao Ambedkar University seeks to provide instructional and research facilities in new and frontier areas of learning. Currently it has three schools and three centers: the School of Ambedkar Studies, School for Information Science and Technology, School for Environmental Studies, Center for Rural Technology, Center for Vocational Studies, and Center for Human Rights.

Pondicherry University (PU): PU has jurisdiction over the Union Territory of Pondicherry and the Andaman and Nicobar Islands. Established in 1985 as a teaching-cum-affiliating university, it has 6 schools, 16 departments, 2 post-graduate diplomas and 27 post-graduate courses, 17 M.Phil and 22 doctoral programs, and a 5 year integrated master's degree program in 2 disciplines. It also has a community college. Several institutions are affiliated to PU (13 are located in Pondicherry, 3 in Karaikal, 2 in Mahe, 1 in Yanam, and 3 in the Andaman and Nicobar Islands).

Visva Bharati: Founded by Rabindranath Tagore, Visva Bharati was incorporated as a Central University by the Visva Bharati Act of 1951. Its jurisdiction is restricted to the area known as Santiniketan in the district of Birbhum, West Bengal. It is unique in its inclusion of education from the primary level to post-graduate and doctorate levels as a unitary residential body. It has 12 institutes: 8 at Santiniketan, 3 at Sriniketan, and 1 in Calcutta. There were 6,336 students enrolled in 1997.

Jamia Millia Islamia, Jamia Nagar: Recognized as a Deemed University since 1962, it acquired the status of a Central University in December 1988 by an act of parliament. It has six faculties, eight centers and five schools. A.J. Kidwai Mass Communication Research Center provides training at the post-graduate level in mass communication, and produces educational material on different subjects for the UGC and INSAT Program. Admissions are made on the basis of merit adjusted through an admission test.

Aligarh Muslim University (AMU): AMU, established in 1920, is a leading residential institution. It has 92 departments, institutions, and centers grouped under 11 faculties. It maintains four hospitals, six colleges (including medical, dental, and engineering colleges), and two polytechnic schools. Six diploma courses are exclusively for women.

Banaras Hindu University (BHU): BHU came into existence in 1916 as a teaching and residential university in Varanasi. It consists of three institutions: the Institute of Medical Sciences, Institute of Technology, and Institute of Agricultural Sciences. It has faculties with 121 academic departments and 4 interdisciplinary schools. It maintains a constituent Mahila Mahavidyalaya and 3 school-level institutions, including a 1,000-bed modern/Ayurvedic hospital.

Jawahar Lal Nehru University (JNU): Primarily established with a post-graduate mission in education and research, New Delhi-based JNU has 7 schools consisting of 24 centers of studies and a separate center for biotechnology.

Maulana Azad National Urdu University: This university was established in 1998, with its main administrative office in Hyderabad. It has three regional offices in Delhi, Patna, and Bangalore. Its aim is to promote and develop the Urdu language and to impart vocational and technical education in Urdu through traditional and distance education.

Assam University: Established as a teaching-cum-affiliating university in 1994, Assam University commands jurisdiction over the districts of Cachar, Karimganj, Karhi, and Hailakandi in the state of Assam. It has 53 affiliated colleges, 24 Departments under 8 schools of studies, and 3 centers of studies.

Nagaland University: Established as a teaching-cum-affiliating university in 1994, Nagaland University serves the whole of the state of Nagaland. It has 39 affiliated colleges with campuses in Kohima, Lumami, and Medsiphema.

Tezpur University: As a non-affiliating unitary Central University set up in the state of Assam in 1994, Tezpur University seeks to offer employment-oriented and interdisciplinary courses, mostly at the post-graduate level. It has 11 departments under 4 schools of studies and 6 centers of studies.

North-Eastern Hill University (NEHU): Established in 1973, NEHU has a campus at Aizwal and a center in Tura with its headquarters in Shillong. Its jurisdiction is over the states of Meghalaya, Arunachal, and Mizoram. Six schools of studies include certain post-graduate departments and four centers of studies. It has 58 undergraduate colleges, 8 professional colleges, and is affiliated with the North-Eastern Regional Institute of Science and Technology (NERIST). It also has a Regional Sophisticated Instrumentation Center.

Specialized Institutes & Research Centers:

Inter-University Centers: Heavy investment in infrastructure has placed some facilities beyond the reach of individual universities. Under Section 12 of the UGC Act, the Commission has established the following Inter-University Centers (IUCs) to provide common facilities, service, and programs to universities:

- Nuclear Science Center, New Delhi, 1984 (Accelerator-oriented research);
- IUC for Astronomy and Astrophysics, Pune (State of the art instrumentation for research in astronomy);
- Inter-University Consortium for the Department of Atomic Energy facilities, Indore, 1989;
- Information and Library Network (INFLINET), Ahmedabad, 1996 (Networking of libraries through electronic media);
- Consortium for Educational Communication, New Delhi, 1993 (To disseminate countrywide programs through television);
- National Assessment & Accreditation Council, Bangalore, 1994 (To assess and accredit public and private institutions of higher learning) (Government of India 2001).

National Facilities: National Facilities represent India's cutting edge fields, such as science and technology, that are deemed essential for the country's future advancement. These centers are funded by UGC in selected universities:

- Western Regional Instrumentation Centre, Bombay (Design and development of indigenous equipment and training of staff in instrumentation);
- Regional Instrumentation Centre, Indian Institute of Science, Bangalore (Design and development of indigenous equipment and training of staff in instrumentation);
- Crystal Growth Centre, Anna University, Madras (Research and dissemination of knowledge and organization of training program in crystal growth);
- MST Radar Centre, Sri Venkateswara Tirupati (Studies in atmospheric dynamics to enable teachers to use MST/radar facility;
- Eastern Center for Radio Astrophysics, Calcutta University (Research in astrophysics);
- Japal-Rangapur observatory, Osmania University, Hyderabad (Science research observatory); and
- Center for Science Education & Communication, New Delhi (Popularization of science).

Trends:

Organization & Growth: In 2001 the Ninth Five-Year Plan was in process. Its main foci included measures for quality improvement, modernization of syllabi, renewal of infrastructure, extra-budgetary resource mobilization, and greater attention to issues in governance. Access and relevance would also receive attention. The plan placed a priority on the conferment of greater autonomy to deserving colleges and the professional upgrading of teachers through Academic Staff Colleges.

Emphasis is being placed on consolidation and optimal utilization of the existing infrastructure through institutional networking, restructuring, and expansion, so as to meet the demands of the traditionally underserved populations, with a focus on women and underprivileged groups. The Open University system, which has been growing in popularity and size, is striving to diversify its courses and offerings and to gain wider acceptability by upgrading its quality. The main focus of this effort is also to serve the educational needs of women and rural populations, including professional training of in-service employees (Government of India 2001).

Among other new initiatives is an emphasis on career orientation in higher education. Under a program

launched in 1994 to 1995, a university or college could introduce 1 to 3 vocational courses to provide career orientation in 35 identified subjects. Attention to higher education for women is also a contemporary trend. According to Joshi, ''A special emphasis has come to be laid on women's education. The number of women's colleges has recorded a substantial increase, and India has 1,195 women's colleges today. The enrollment of women at the beginning of 1997-1998 was 2.303 million, 34 percent of them being of the postgraduate level'' (1998).

The growth of the system overall has also compelled the evolution of the universities' structure. Most of the universities are affiliating universities, which prescribe the affiliated colleges' course of study, hold examinations, and award degrees. Many of the universities, along with their affiliated colleges, have grown rapidly to the point of becoming unmanageable. Therefore, as per the NPE-1986, a scheme of autonomous colleges has been promoted. In the autonomous colleges, whereas the degree continues to be awarded by the university, the name of the college is also included. The colleges develop and propose new courses of study to the university for approval. They are also fully responsible for conduct of examination. There are at present 138 autonomous colleges in the country.

Additional trends and initiatives of the early twenty-first century include protective discrimination, diversification, a national eligibility test for the selection of qualified teachers, an emphasis on quality, and examination reforms.

Cultural Traditions: India's classic Vedic culture bequeathed a rich heritage of *Vedas*, which many Hindu scholars consider the fount of knowledge. This ancient belief system continues to inspire and guide dominant ideologies that determine educational policies. Thus universities and the UGC have clashed over the validity of subjects and sciences considered by some to be obsolete. An example is the 2001 dispute over the status of astrology.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Expenditures: India's investment in education, despite competing priorities, has been increasing from 0.8 percent of the Gross National Product (GNP) in 1951 to 1952 to 3.3 percent in 1994 to 1995. The goal of reaching 6 percent GNP, stipulated in NPE-1986, has been an ongoing challenge and commitment.

NPE-1986 recognized this challenge, offering the following qualifications:

> Since the actual level of investment has remained far short of that target, it is important that greater determination is shown now to find the funds for the programs laid down in this policy. While actual requirements will be computed from time to time on the basis of monitoring and review, the outlay on education will be stepped up to ensure that during the 8th Five-Year Plan and onwards it will uniformly exceed 6 percent of the national income. (NPE-1986, Paragraph 11.4)

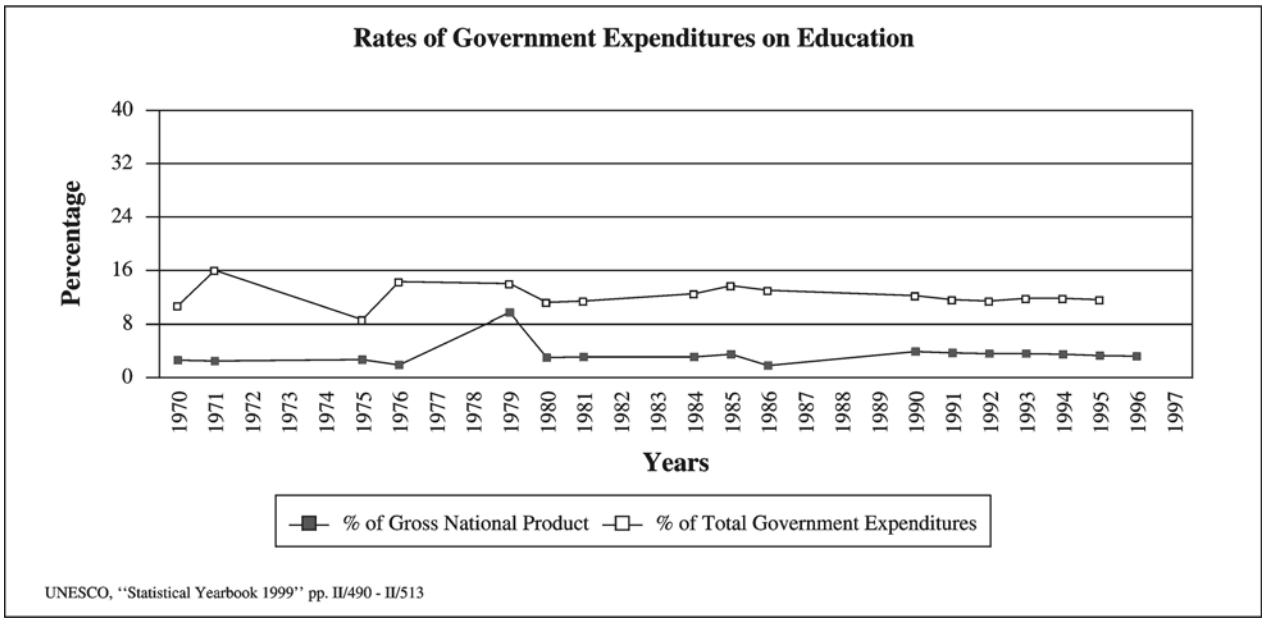
Higher Education: Higher education has witnessed similar growth. According to Joshi, government expenditure on higher education rose from Rs. 172 million in 1950-1951 to Rs. 42,035 million in 1996-1997, although inflation and increases in the population of both the nation and the student body mitigate this increase. Joshi reviews the trends in spending over the last 50 years of the twentieth century:

> On the whole, the trends suggest that higher education had a good start during the 1950s (with real growth of 7.5 percent per annum), and had its golden days during the 1960s, with the real expenditure increasing at an annual rate of growth of 11 percent; but it suffered significantly during the 1970s, with the rate of growth coming down to a meager 3.4 percent as educational planners aimed at consolidation of higher education instead of its rapid expansion; and showed some tendencies to recover during the 1980s. Though the growth in expenditure on higher education has been erratic during the 1980s, it had increased on the whole at a rate of growth of 7.3 percent per annum. The 1990s heralded an era of austerity and higher education suffered greatly. (1998)

Educational Research: The National Council of Educational Research and Training (NCERT), established in 1961, serves as a resource center in the field of school education and teacher education. It undertakes programs related to research, development, training, extension, and dissemination of educational innovations through various constituent departments at the headquarters in New Delhi and 11 field officers all over the country. Publication of school textbooks and other educational materials, such as teachers' guides or manuals, is its major function. NCERT also undertakes time-bound projects in preschool education, education for girls, and education for Scheduled Castes and Tribes. NCERT has five constituent units in the field: (a) RIE at Bhubaneshwar, Ajmer, Mysore, and Bhopal; (b) the Central Institute of Education Technology (CIET); (c) NIE; and (d) PSSCIVE, Bhopal. A fifth RIE is proposed at Shillong. CIET is an important unit of NCERT; it is engaged in the production of satellite-based audio and video programs for elementary and secondary levels, which are aired on All India Radio and Doordarshan.

NONFORMAL EDUCATION

Governmental Programs: India's open universities, adult education programs, and widespread distance edu-



cation cater to the needs of a diverse population. The Department of Education, since 1980, has been sponsoring nonformal education (NFE) for children of ages 6 to 14, especially those marginalized from the formal system for various reasons, especially poverty. In 2001, some 740 voluntary agencies were implementing NFE programs in 25 states. Another 85 agencies sanctioned 9,485 NFE centers during 2000 (Tiwari 2000).

The National Open School (NOS) was established in November 1989 as an autonomous registered society to examine and certify students up through pre-degree courses. NOS provides the following programs: (a) foundation course, (b) secondary education course, (c) senior secondary education course, (d) open vocational education program, (e) life enrichment program, and (f) basic education for Universal Elementary Education (UEE). NOS provides individualized support through a network of study centers. Also called Accredited Institutions, the 972 study centers serve about 400,000 students all over the country. The aforementioned Indira Gandhi National Open University (IGNOU) also provides distance education.

Community-based Learning: Traditional societies have thrived on their nonformal systems of education. Joshi writes: ''Ancient records of the Indian tradition testify to the search for the Rishis and sages for higher knowledge (*para vidya*), and their discoveries have been continuously transmitted to posterity and kept alive through its history, marked by periods of expansion, specialization, decline and renewal'' (1998). Long before the bureaucratized western structures of schooling mushroomed in the ''less developed'' nations, India's nonformal education was enshrined in its familial and cultural units.

Students and educators in India thus usually share a common history and a legacy of collective wisdom. This learning process reinforces the curricular thrusts in structured settings. To isolate the two systems from each other is to fracture the whole learning process. There are fields—fine arts, medicine, astronomy, and numerous other skills—where knowledge has been transmitted from one generation to another within familial ties without any formal structures. One can argue that India's cultural continuity is indebted to this informal system of education.

Venkataiah calls this education beyond structured curricula ''a collective alternative self-curriculum, for over the years it involves learning, in the neighborhood and more intensely in the playground, a succession of codes and adjustments and conventional learned responses through which children complement their development with collective experience'' (2000).

TEACHING PROFESSION

Teaching traditionally was a priestly function ascribed to the people at the helm of a caste hierarchy. As society advanced, individual accomplishments replaced the higher-caste monopoly on teaching. The status of teachers, though materially lesser than other lucrative and rewarding professions like medicine, law, engineering, and civil services, has tremendously increased as salary and other benefits have been nationally upgraded at all levels.

While much can be written to credit and discredit the people involved in the calling of teaching, it must be realized that society has an obligation to uphold the dignity of a profession that it deems essential for progress. Education and its processes, however, do not exist in a vacuum. Public corruption, nepotism, and unfair assessment practices have paralyzed a system that is potentially capable of empowering the whole nation.

Student Unions and Teachers Associations abound. While their role is not always functional, their organizational strengths and weaknesses characterize what ails the academic world. However, they do serve as incubators for future leadership that will run the Indian democracy.

SUMMARY

India's achievements during the post-Independence era are phenomenal. The progress India has made in educational, professional, scientific, and technological spheres can neither be underestimated nor adequately summarized in a brief essay.

India's vision for its education system is reflected in the resolution passed by the UNESCO-sponsored World Conference on Higher Education in Paris, which reads:

> Ultimately, higher education should aim at the creation of a new society—nonviolent and non-exploitative—consisting of highly cultivated, motivated and integrated individuals, inspired by love for humanity and guided by wisdom. (Quoted in Tiwari 2000)

The gap between rhetoric and reality, however, is evident if one travels through India's vast cultural landscape. India is a land of contrasts. One finds impoverished schools and marginalized children as frequently as squalor and poverty. The ubiquity of deprivation, cruelty, and neglect outweighs the glamour and elegance of elite schools which nourish the chosen ones of the rich and influential classes.

The Indian educational system maintains its dynamism by interacting with international bodies that seek collaboration and partnership. India's collaborative endeavors with foreign universities and professionals, especially in the United States, Canada, most European countries, Russia, Japan, and many Afro-Asian countries, is a success story. The American Institute of Indian Studies, the U.S. Educational Foundation in India, and the Shastri Indo-Canadian Institute, to mention the main ones, organize bilateral programs of international significance.

India's goal of achieving universal access and achievement, noble as it seems, will ring hollow and hypocritical unless the barriers of inequality and injustice are demolished through a thoughtfully planned program of progressive education and equal opportunity. It takes a village to raise and to destroy a child. The plight of poor children has not received the attention it merits, while the culture of privilege looms large with ominous consequences. India's cultural conundrums are mirrored in an educational system that treats people with different backgrounds in different ways. True universal achievement will require more than self-congratulatory reports and self-righteous resolutions.

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—Brij Mohan

INDONESIA

BASIC DATA

Official Country Name:	Republic of Indonesia
Region:	Southeast Asia
Population:	224,784,210
Language(s):	Bahasa Indonesia, English, Dutch, Javanese

Literacy Rate:	83.8%
Number of Primary Schools:	173,893
Compulsory Schooling:	9 years
Public Expenditure on Education:	1.4%
Foreign Students in National Universities:	1,147
Educational Enrollment:	Primary: 29,236,283 Secondary: 14,209,974 Higher: 2,303,469
Educational Enrollment Rate:	Primary: 113% Secondary: 51%
Teachers:	Primary: 1,327,178 Secondary: 986,896 Higher: 157,695
Student-Teacher Ratio:	Primary: 22:1 Secondary: 14:1
Female Enrollment Rate:	Primary: 110% Secondary: 48%

HISTORY & BACKGROUND

Indonesia is the world's largest archipelago, straddling the equinox and formed by 17,670 islands. Its national territory stretches from Australia to Southern Asia and is the fourth most populous country after the People's Republic of China, India, and the United States.

Indonesia's population of nearly 200 million experienced a diminishing growth rate of 1.82 percent in the period 1990-1995, when compared to its 2.32 percent growth rate the previous decade (1971-1980). Although the population growth will decrease, the total population of Indonesia is expected to increase from 195.7 million in 1995 to 242.6 million in 2020. The World Bank estimates a continuing decrease in population growth, to less than one percent in 2015-2020. The decrease is attributable to the nation's proactive family planning efforts. National literacy rates have progressed rapidly since Indonesia's independence on 17 August 1945, in spite of natural impediments such as the nation being made up of 400 distinct ethnic groups and the fact that more than two-thirds of the population live in rural areas. In 1930, less than six percent of the population was literate, while the 1990 census data reveals an 84 percent literacy rate of those over 10 years of age.

Corresponding to the advancements in literacy is the change in the Indonesian labor force as characterized by the continuous decrease of employment opportunities in the area of agriculture and an increasing demand for knowledge and skills in industry. The structural shift in the economy has generated new challenges and demands affecting the education system. According to the 1987 Survey of the National Labor Force, 70 percent of the labor force had not been educated beyond primary school level, inadequate for a society approaching the era of modernization. However, the 1990 population census shows a growing tendency toward higher education within the labor force. Likewise, over the past 25 years, the number of pupils more than doubled for primary school, rose four and a half times for the junior secondary school, eight times for the senior secondary schools, and about 10 times for higher education. Such growth has resulted in a more educated population and labor force.

In June 1993, UNESCO awarded President Suharto with the Avicenna Medal (Ibnu Sina Award), recognizing Indonesia for implementing its universal education program for 7 to 12 year olds in a much quicker way when compared to other developing countries. Jacques Hallak from the Institute for Educational Planning, UNESCO, wrote in 1990 that ''higher level industrial countries with better social economic conditions like the United States and other developed West European countries like France, Germany and England needed 60 to 100 years to accomplish universalization of basic education.''

CONSTITUTIONAL & LEGAL FOUNDATIONS

The national educational system draws heavily from the Indonesian culture. The system-based on Pancasila, the 1945 State Constitution, and the National Education Law No. 2/1989 aims to ''generate abilities and to increase the standard of living and dignity of the Indonesian people in order to achieve the national development objectives.''

Undergirding all government programs is Pancasila, Indonesia's state philosophy. Also known as the Five Principles, Pancasila was first articulated by President Sukarno on 1 June 1945 when declaring Indonesian independence. The Five Principles serve as the nation's blueprint for Indonesian society and way of life. These basic truths are presented visually in the nation's coat of arms and are actively taught in school. In fact, the entire first week of each new school term is called ''Pancasila Week.''

The following values constitute Pancasila:

1. Belief in ''One Supreme God''
2. A call for a just and civilized humanity—not tolerating physical or spiritual oppression of any person

3. Promoting nationalism and Indonesian unity—a concept of one nation and one language binding together the country's diverse people
4. Pancasila-style democracy—this calls for discussion (musyawarah) and mutual assistance (gotong royong) establishing a national authority of consensus (mufakat) rather than domination
5. A system of social justice—assuring equal distribution of welfare and the protection of the weak

Building upon the state's philosophy is the 1945 State Constitution, Article 31 which assures that ''Every citizen has a right to obtain an education and that the government shall create and execute a system of national education provided by law.'' The National Education Law No. 2/1989 provides the foundation for one national education system to be universally implemented in a complete and totally integrated manner. Universal means open to all people and valid throughout the country; complete means to cover all channels, levels and types of education; and integrated means that there are mutual supporting links between all types and levels of national education and development efforts.

The National Education Law further issued two objectives of the national education system: first, to establish a high-quality and self-reliant human being whose values are based on Pancasila, the state philosophy; secondly, to keep and maintain Indonesia's cultural background while at the same time generating the knowledge, skills, and scientific progress that will keep the nation abreast in the twenty-first century. National education aspires to improve the life of the nation along with fully developing the intellectual, moral, spiritual, physical, and social capacity of its citizens. (This National Education Law gains support from the Presidential Decree No. 10, 1973 launching compulsory primary education for 7 to 12 year olds and the Government Regulation No. 28/1990 expanding compulsory education to every Indonesian 7-15 years of age. President Suharto reiterated this national policy of compulsory education in 1994.)

The National Guidelines of the State Policy of 1993 stress that the nation will pursue a three-pronged approach to development. Speaking directly to the education aspect, President Suharto's speech to the People's Consultative Assembly (MPR) on 6 January 1993, emphasized, ''We have to see that education is being developed more fairly and equally to meet the needs of development and to be able to produce output in the form of human resources of quality . . . . Education should be directed to and in accordance to the need of productive working power in all sectors, in all fields and in all development activities.''

In 1994 Indonesia entered the nation's second 25 Year Development Plan (PJP II). The most significant aspect of PJP II is the strong emphasis on human resources development through a commitment to excellence in science and technology equal to that of other developed nations.

EDUCATIONAL SYSTEM—OVERVIEW

Compulsory Education: Presidential Instruction Decree No. 10 of 1973, initiated Indonesia's program of compulsory education and by 1984 the government of Indonesia had fully implemented the six year compulsory education for primary school age children (7-12 years). The result of this new policy was significant in that the participation rate in primary school reached 92 percent in 1993 compared to 79 percent just 10 years earlier.

Ten years after the compulsory primary education program came fully into effect, Indonesia launched the Nine Year Basic Education Program, as proclaimed by President Suharto on 2 May 1994, extending compulsory education to the 13- to 15-year-old population. The compulsory nine-year basic education affords opportunities for Indonesian citizens to get an education. The extension from six years to nine years of basic education was also intended to alleviate the problem of child labor.

Age Limits: According to the National Education Law No. 2/1989 and the Government Regulation No. 28/1990, basic education is a general education program with a duration of nine years—six years of primary education and three years of junior secondary education. The nine-year Compulsory Basic Education Program attempts to provide an education for every Indonesian in the 7 to 15 age group.

Academic Year: At the primary and secondary levels the school year lasts 38 weeks on the average. The average length of teaching periods on the primary level is 30 minutes in grades one and two, 40 minutes in grades three to six, and 45 minutes in junior secondary school.

Language of Instruction: Classroom instruction is provided in the national Bahasa Indonesian language.

Curriculum Development:

Primary School Education: Basic education offered in primary schools aims to provide the ability to read, write, and do arithmetic, and to instill primary knowledge and skills that are useful for pupils in line with their development levels, as well as to prepare students to attend education in lower secondary school. Basic education is also carried out in lower secondary schools and is aimed at expanding the knowledge and improvement of skills obtained in primary schools that are useful for students to develop their lives as individuals, members of society, and citizens.

The education program for primary schools is prescribed by Article 39, Clause 3, Law No. 2/1989 and Article 14, Clause 2, Government Regulation No. 28 of 1990, and the February 25, 1993 decree of the Ministry of Education and Culture No. 060/U/1993. The curriculum content of compulsory primary education consists of subject matter covering Pancasila education, religious education, citizenship education, Indonesian language, reading and writing, mathematics, introduction to science and technology, geography, national and general history, handicrafts and art, physical education and health, drawing, and the English language. Such subject matter groups are not necessarily course titles as more than one material group can be combined with another subject; likewise, one subject can be divided into more than one subject.

Secondary School Education: The general secondary school curriculum is determined by the 25 February 1993 decree of the Minister of Education and Culture No. 061/U/1993. This program covers study materials and subjects required for Class l and II students: Pancasila education and citizenship, religious education, Indonesian language and literature, national and general history, English language, physical and health education, mathematics, natural sciences, social sciences, and arts education. The language program consists of four subjects: Indonesian language and literature, English language, other international languages, and cultural history. The natural science program includes physics, biology, chemistry, and mathematics. The social science program offers economics, sociology, public administration, and anthropology. These subjects are aimed at improving pupils' abilities and stimulating interactive relationships with the social, cultural, and natural environment.

Built on foundational courses in Class I and II, the special teaching program implemented in Class III can be selected by pupils according to their abilities and interests. This program prepares students to continue on to higher education in the academic or professional field.

Apart from general and special programs, there are also extracurricular activities that are offered outside the teaching hours. These activities—such as scouting, school health activities, sports, and first aid—along with the theoretical knowledge gained in the curricular program are intended to develop the whole person.

Vocational Secondary Education: This curriculum was set forth by the Minister of Education and Culture in Decree No. 080/U/1993. The objective of vocational education is to prepare students to enter employment and to develop professional skills and to prepare students to choose a career, to instill the ability to compete and develop independently, and to foster a national workforce to meet the manpower needs of business and industry.

Vocational secondary school implements education programs according to the perceived present and future demands for employment types. The vocational secondary school curriculum program is envisioned to be completed in three to four years. The curriculum is divided into six groups: the agricultural and forestry group, for occupations in such areas as agribusiness, agronomy, animal husbandry, fisheries, and agriculture production management; the industrial technology group, offering professions in building construction, mining, marine engineering, graphics, textiles, informatics, and industrial instrumentation; the business and management group, leading to careers in accounting, office management, finance and banking, trade, and secretarial work; the community welfare group, targeting employment with social services, community health, and community development; the tourism group, whose graduates move into the hotel, catering, fashion, and beauty occupations; and the arts and handicraft group, whose skills are focused on applied arts, visual arts, and the handicraft industry.

Special Education: Special education is intended for students with physical, mental, and/or behavioral disabilities. The programming is organized by multiple agencies including the government's Ministry of Education and Culture, other ministries, and private and nongovernmental organizations.

The aim of special education is to help disabled students acquire knowledge about their environment and to develop skills for competing in the job market or to continue their education beyond the customary special preschool (one to three years duration), special primary school (at least six years duration), and special secondary schooling (at least three years duration).

In the 1995 school year, there were 703 schools teaching special education, with 32,921 students, 7,723 teachers and a student-teacher ratio of 4.26:1. There is a measure of difficulty in assessing the student-teacher ratio within the field of special education. In addition to numbers of students, other criteria must include the student's degree of disability, curriculum to be pursued, and physical and mental therapies offered.

Higher Education: In the early stages, higher education used the program structure inherited from the Dutch colonial period consisting of bachelor's, master's, and doctoral programs. The curriculum was based on a prescribed course of study, the whole of which should be taken by the student. In 1979 the semester credit unit system was adopted offering more latitude in choice of courses.

The master's program consists of a class load of 36 to 50 semester credit units and a written thesis to be completed in no less than four semesters and no greater than

ten semesters. Study for a doctorate requires 40 semester credit units and a dissertation which is to be completed in no less than four semesters yet not exceed 14 semesters.

Following secondary education, graduate studies for educators consist of diploma programs (Diploma I-IV) and specialist programs (Specialist I-II). The Diploma I study load ranges from 20 to 50 semester credit units and is taken over a period of 2 to 4 semesters after secondary education. The Diploma II program study load is from 80 to 90 semester credit units scheduled over a period of 4 to 6 semesters. The Diploma III study program consists of 110 to 120 semester credit units spanning 6 to 10 semesters. And the Diploma IV study program is 144 to 160 semester credit units scheduled over 8 to 14 semesters.

The standard load for Specialist I study is 36 to 50 semester credit units taken over 4 to 10 semesters after the graduate program. And Specialist II study is 40 to 50 semester credit units over 4 to 10 semesters after the Specialist I program or its equivalency.

PREPRIMARY & PRIMARY EDUCATION

Preschool education is aimed at stimulating the physical and mental growth of pupils outside the family environment before entering primary school or out-of-school educational programs. Among the types of preschool education available are kindergartens, playgroups and child care centers. Kindergartens are part of the school-based education system and, as such, are under the Ministry of Education and Cultural Development (Government Regulation No. 27 of 1990). Play groups and childcare centers are part of the out-of-school system and the responsibility of the Ministry of Social Affairs. Preprimary education is not considered to be neither a prerequisite nor a requirement for entry into primary school. Preschool is provided for children from four to six years of age, while play groups and child care centers are attended by children under three years of age. Apart from these schools, there are also special Islamic preschools which have the same status as kindergartens. These schools, known as Bustanual Atfal and Raudlatul Atfal, are organized by the Ministry of Religious Affairs.

Subject matter taught at the kindergarten level includes: Pancasila (state ideology), moral education and religion, discipline, language skills, intellectual stimulation, creativity, emotional harmony, social skills, manual skills and physical ability, and health.

Kindergartens have increased in terms of total numbers of school buildings, students, and teachers, and have experienced a dramatic reduction in the student to teacher ratio as well. In 1969, for example, there were 6,072 schools, 343,466 students, 10,423 teachers, and a student-teacher ratio of approximately 32:1. By the 1995-1996 school year, the numbers had increased to 40,715 schools, 1.6 million students, 98,094 teachers, and a student-teacher ratio of less than 17:1. These figures demonstrate an increasing community support of this preparatory educational level for students.

Six years of compulsory education for primary school-age children (7-12 years) was instituted in 1984. Then, in 1990, by order of Government Regulation No. 28/1990, compulsory education was expanded to a total of nine years, adding three years of junior secondary education thereby covering children 7-15 years of age. The number of primary schools and children attending them increased from 63,056 schools and 12.8 million pupils in 1969 to 149,954 schools and 3.6 million pupils by 1995.

The goal of basic education, as expressed by the Indonesian Ministry of Education and Culture, is to develop the lives of children as individual members and good citizens of society. The core content of basic education curriculum consists of Pancasila (state ideology), religion, civic education, Indonesian language, reading and writing, mathematics, introduction to sciences and technology, geography, national and world history, handicraft and art, physical and health education, drawing, English language, and local content.

For the calendar year 1995, figures indicate nearly one hundred percent enrollment of 7 to 12 year old students in government-funded primary schools. For the same calendar year, 62 percent of 13 to 15 year old children (junior secondary level) were enrolled in government-funded schools. This represents a decline from primary level enrollment which parallels a decline in government subsidy for students over 12 years of age.

In addition to the regular school system, there are religious schools, known as madrasas, equivalent to primary and junior secondary schools. The distinction is that the school curriculum, administered by the Ministry of Religious Affairs, is founded upon the Koran and commentaries of the Koran, sayings of the Prophet Muhammad, and the Arabic language. This is where Muslim children learn the precepts and traditions of the Islamic faith to carry back to their homes and villages. Such instruction sustains the living presence of Islam among the world's largest Muslim population, Indonesia having more Muslims than all the Arab nations combined. In the 1994-1995 school year, there were 24,232 Islamic primary schools, with 3.5 million students and 138,931 teachers.

SECONDARY EDUCATION

Senior secondary education is available to graduates of basic education, (six years of primary school education

and three years of junior secondary education). The types of secondary education include general secondary education, vocational secondary education, religious secondary school, service secondary school, and special secondary school.

General secondary education gives priority to expanding knowledge and developing students' skills in an effort to prepare them to continue their studies at the higher levels of education. Vocational secondary education gives priority to expanding specific occupational skills and developing professional attitudes as students prepare to enter the world of work. The government introduced something similar to Germany's dual system, transforming the role and function of the more than 200 vocational schools spread over Indonesia. The concept of vocational education is to create a work/study program through the participation of industry and commerce. More than 2,000 commercial and industrial institutes have pledged their cooperation in making training space available for students.

Religious secondary education gives priority to the mastery of special religious knowledge. Service secondary education is education that emphasizes preparedness for employment in the nation's civil service or government work. Special secondary education is specifically intended and designed for the physically and/or mentally limited students.

In 1995, approximately 39 percent of 16 to 18 year old students were enrolled in government sponsored senior secondary schools. With 13 set as the minimum age level for employment, and with family incomes averaging a meager US$1,000 annually, many young people opt to extend the family's limited resources through employment rather than pursing an education beyond the junior secondary level. Tuition fees also place secondary education beyond the reach of many families.

HIGHER EDUCATION

Higher education follows the secondary school formatting with some institutions designated for academics and others for professional education. Academic education is mainly aimed at mastering science, technology, and research, whereas professional education is aimed more at developing practical skills. Centers for higher education include academies, polytechnic schools, colleges, institutes, and universities. Higher education is offered by both the government and the private sector with approximately 51 public universities and more than 1,000 private universities.

In 1979 a semester credit unit system was officially introduced and academic education modeled along the lines of the U.S. system. This system consisted of bachelor's, master's, and doctoral programs. A non-graduate program leading to a diploma was simultaneously instituted as another type of terminal degree.

Enrollment of new students into a national university is based on a national entrance exam or a portfolio assessment, also called achievement monitoring (PMDK). Those who are accepted through the PMDK process are not required to take an entrance exam as they are judged to have content-eligible academic performance ever since they were enrolled at senior secondary level. (The PMDK selection process is not implemented at all universities.)

In 1995 there were 1,300 institutes of higher education, with 2.3 million students enrolled, less than 10 percent of the total 19 to 24 year old age group. The vast majority of senior secondary school graduates opt for the job market and employment rather than higher education.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of National Education and Culture (MOEC) is the organizational structure of the Indonesian educational system. It consists of seven principal units at the central level. These seven units are the Secretariat General, Office of Educational and Cultural Research and Development, Inspectorate General, Directorate General of Basic and Secondary Education, Directorate General of Higher Education, Directorate General of Out-of-School Education and Youth and Sports, and the Directorate General of Culture.

These positions assist the Minister of National Education in setting forth an administrative structure of education, developing curriculum, financing education, establishing the infrastructure and providing for equipment necessary for carrying out educational activities, and training faculty and staff to serve the education system.

At the local level, the Ministry of Education and Culture is represented by an Office of Education and Culture in each of the 27 provinces, and by a district office in each of Indonesia's 305 districts. The major task of the provincial and district offices is to interpret and implement ministerial policies on education and culture with recognition given to distinctive features of the local area.

The Ministry of Religious Affairs is responsible for the Islamic preschools, primary schools, junior secondary schools, and senior secondary schools. Provision of higher education is managed by the Ministry of National Education and Culture through the directorate general of higher education, as well as by the Military Academy and the College for Civil Servants.

Finance: Technically, the government is responsible for financing education. However, costs for education

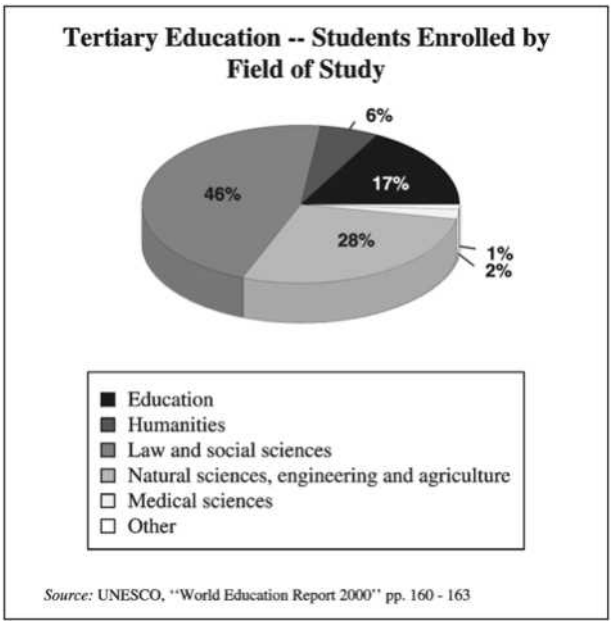
carried out by the community is recognized as the responsibility of those institutions. In some cases the government funding is limited to specific elements of compulsory education. The education programs funded by the government are mainly financed through the administration's annual budget along with a separate development budget. Other funding sources are international aid (loans and grants) and assistance from regional governments and the private sector.

Primary school is free and theoretically requires no fees. Routine assistance for financing the middle and higher levels of education is the responsibility of the family in the form of a school fee paid to the state by each school to be reallocated back to the schools through an account known as the Education Funds Support. While the government offers subsidies to universities and among the various regions, it strongly encourages the participation of the local government, community and business in educational finance. Essentially each educational institution is expected to manage its own admission process and finances.

The Ministry of Education budget has expanded continuously over time. Within the first five-year development planning period or Repelita (1969-1973) the budget was 147 billion rupiah. There was a marked increase in monies appropriated in 1973 in support of the presidential decree launching the compulsory six years of primary school education. The budget increased to 12.9 trillion rupiah during the Fifth Repelita (1989-1993), and financial allocations for the first year of the Sixth Repelita (1994-1999) expanded to 4.6 trillion rupiah. The annual percentage of MOEC budget fluctuates in close proximity to the gross domestic product (GDP).

During the Fifth Repelita, 83.5 percent of the routine budget of the MOEC was designated for salaries and employee related expenditures. This concentration of the routine budget on employee-related expenditure resulted in limited availability of funds for procurement of teaching supplies, educational facility development, and administrative activities. Most consistently noted in allocations is the preeminence given by the Indonesian government in making of good citizens through the teaching of Pancasila. For example, in the school year 1997-1998, approximately 1.3 percent of the budget was allocated toward the development of ''Followers to Believe in God'' whereas the government allocated 2 percent of the total allocations toward producing more professional educators.

Also during the Fifth Repelita, international loan assistance amounted to 51 percent of the total development budget. Loans from the World Bank (International Bank for Reconstruction and Development) amounted to US$457 million, and loans from the Asian Development Bank totaled more than US$507 million. The World Bank provided assistance to Indonesia during 1970-1995 for developing education in the amount of US$1.54 billion. The total amount of Asian Development Bank loans during the period 1975-1995 was US$1.39 billion.

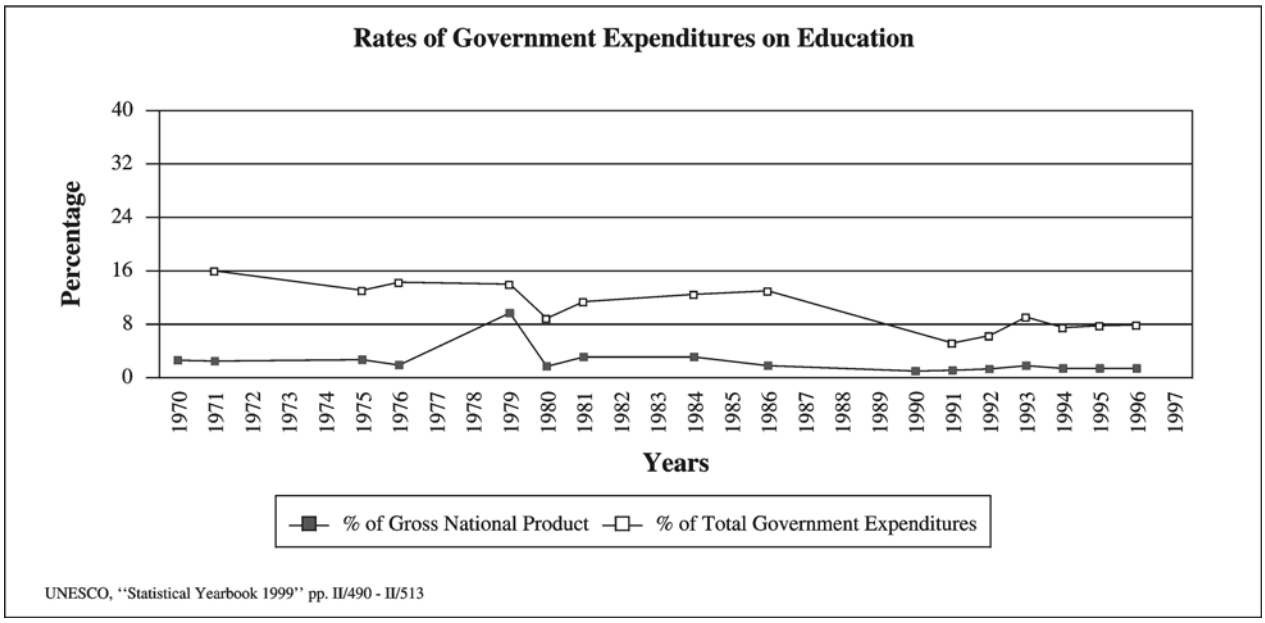


Source: UNESCO, ''World Education Report 2000'' pp. 160 - 163

Educational Research: The key to quality postgraduate education is in focusing on research conducted by the university. Regular and continuous funding for research has only been available within this decade. With this funding availability has come greater opportunity to solve education development problems such as enhanced capacity for lecturers of various science and math subjects. Further, university research is rendering technology innovations having commercial and copyright potential in such fields as agriculture, tropical rain forests, biotechnology, and computer software programs. Increased research capacity might allow for academicians to travel outside their campus, helping to develop small and struggling industrial business enterprises, and in identifying and solving problems at regional and local levels.

NONFORMAL EDUCATION

Nonformal or out-of-school education is a substitute program designed to eradicate illiteracy in letters and numerals and the Indonesian language. Programming also provides individuals with an opportunity to develop knowledge and skills required to work and generate an income; to enable individuals to proceed to a higher level within the formal educational system; and to fulfill needs of persons, families, and communities that cannot be met by the formal education system.



Out-of-school education provides an educational equivalent to primary and junior secondary schools and is offered outside the formal education system. Features distinguishing nonformal from formal education include flexibility of the former in relation to the time and period spent, the age of the learners, the content of the lessons, the way the lessons are organized, and the assessment of the outcome.

Courses are organized at the basic, middle, and advanced level. Groups studying ''Packet A'' are organized to obtain an educational level equivalent to the primary school level. Groups studying ''Packet B'' are organized to obtain the equivalent of the junior high school level of education.

Out-of-school education is provided by governmental and nongovernmental agencies, the private sector, and the community. Communities may provide all types of education with the exception of formal education.

TEACHING PROFESSION

Previously, primary school teachers were graduates of schools for primary school teachers (SPG), a three-year program following junior secondary education (at the same level as the senior secondary school). However, in order to improve the quality of primary school, the government increased the educational requirements of primary school teachers to a two-year diploma course (D II program) following senior secondary education. At the same time, the government launched a national in-service training program for primary school teachers throughout Indonesia using the Open University. Its objective is to train existing teachers to the equivalent level of the Diploma II. The new requirement for junior secondary school teachers is to have at least D II education. The teachers of senior secondary schools are mostly recruited from D II and D III teacher training, and a master's degree, also referred to as Level I.

The quality of education at the various school levels is closely related to the capacity of the Teacher Training Institute to produce quality teachers. The institute graduates an average of 7,500 primary school teachers at the Diploma II level per year. This is a relatively small number when compared to the national demand for teachers (296,653 primary school teachers in 1994-1995). There are four contributing factors to the teacher shortage:

(1) the number of teachers retiring, dying, or leaving for non-teaching jobs each year, which reached 23,453 persons or 2 percent in 1994-1995;

(2) the imbalance in the geographic distribution of teachers;

(3) the current surplus and shortage of teachers depending on the subject matter (e.g., surplus teachers are in subjects like Pancasila education, Bahasa Indonesia, social science, handicraft and arts, sports and health, national history, sociology, geography, and foreign languages; a shortage of teachers is found to be in mathematics, science, English, and local content); and

(4) the final challenge to the Teacher Training Institute is in the high number of current teachers not meeting the published teacher standards.

For example, in the 1994-1995 school year, there were 1.1 million primary school teachers, 392,588 junior sec-

ondary school teachers, and 316,479 senior secondary school teachers. Of the total number of primary school teachers, 5.3 percent were deemed qualified, 87.5 percent semiqualified, and 7.2 percent underqualified. Of the total number of junior secondary school teachers 38.5 percent were judged to be qualified, 50.3 percent semiqualified, and 11.2 percent underqualified. Of the total number of senior secondary school teachers 45.7 percent placed in the qualified category, 39.2 percent semiqualified, and 15.1 percent underqualified.

SUMMARY

National Focus: Indonesia's second 25 Year Long Term Development Plan, covering the period 1994-1995 to 2018-2019, emphasizes the economy as the most decisive factor of national development. Yet, steady improvement of a society cannot be separated from investments made in human capital, specifically that of the nation's educational system. This requires a financial commitment on the part of the government to ensure universal application of compulsory education for all students without regard to their ability to pay, adequately trained and compensated teachers, newly constructed and rehabilitated classrooms, textbooks, and other quality teaching tools.

Administrative Coordination: Consolidation of education oversight, from several ministries to one, would allow for better coordinated efforts, as well as redirect duplicated administrative costs to the field. Of further benefit would be the creation of a master plan, a roadmap to the future, with clear concepts, involving all elements of the education system—state and local governance, teachers, parents, and students.

Teacher Training Institute: Studies offered at the Teacher Training Institute should maintain flexibility so as to respond to the numerous trends and challenges within education. Flexibility, coupled with educational quality improvement programs (creating, monitoring, and evaluating systems of educational quality) will help the institute to become an inseparable part of the educational process.

Private Sector Participation: Industries require job-specific trained employees from the educational system; yet, as global markets shift and the Indonesian economy matures, higher critical thinking skills will be required of the work force. A system that might better serve the needs of students and businesses alike would be a partnership between the Ministry of Education and the private sector, in which the nation's education system equips students with the fundamentals required for work readiness while private industry teaches specific job skills. This partnership would allow the nation's education system to attain excellence in designing a well-balanced, broad spectrum approach of preparing future workers.

Higher Education: Universities are being challenged to become independent institutions, free from government subsidy and involvement. Yet it is a nation's commitment to public education that most contributes to the prosperity and well being of society. Should the nation continue to disavow itself from higher education, negative outcomes might result. For example, without state-sponsored schools, only elitists could afford to attend school; the nation might experience a ''brain-drain'' with students attending affordable schools in other lands and remaining there to work. Scrambling for resources, some schools of higher education are bound to disappear over time, thereby weakening Indonesia's overall educational offerings. The government (MOEC) must remain involved in higher education, in order to equip future generations, ensure institutional improvements through a national accreditation system for public and private universities, and encourage research for resolving issues of national import.

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—Jane Sabes

IRAN

BASIC DATA

Official Country Name:	Islamic Republic of Iran
Region:	Middle East
Population:	65,619,636
Language(s):	Persian, Turkic, Kurdish, Luri, Balochi, Arabic, Turkish
Literacy Rate:	72.1%
Number of Primary Schools:	63,101
Compulsory Schooling:	5 years
Public Expenditure on Education:	4.0%
Foreign Students in National Universities:	622
Libraries:	1,002
Educational Enrollment:	Primary: 9,238,393 Secondary: 8,776,792 Higher: 579,070
Educational Enrollment Rate:	Primary: 98% Secondary: 77% Higher: 18%
Teachers:	Primary: 298,729 Secondary: 280,309 Higher: 40,477
Student-Teacher Ratio:	Primary: 31:1 Secondary: 32:1
Female Enrollment Rate:	Primary: 95% Secondary: 73% Higher: 13%

HISTORY & BACKGROUND

The Islamic Republic of Iran (IRI), a country located in the Middle East, covers an area of 1,648,00 square kilometers and is surrounded on the north by the former Soviet Union and the Caspian Sea, on the east by Afghanistan and Pakistan, on the south by the Persian Gulf and the Oman Sea, and on the west by Iraq and Turkey. The climate is arid and the terrain mountainous. Roughly 20 percent of its landmass is desert and infertile, 55 percent is natural pasture, and 8 percent is forest. Only the remaining 10 to 15 percent is arable.

The population as of July 2000 was estimated to be 65.6 million. More than half of the country's population (61 percent) is between 15 and 64 years old, and 34 percent is under 14 years of age, making Iran one of the youngest countries in the world. Recent figures show that this might be changing, however. The population's annual growth rate was estimated in 2000 at .83 percent, a significant decrease from the 3.6 percent that was estimated between 1976 and 1986—an economically disastrous burden believed to be caused by the absence of a family planning program during the height of the revolutionary period that overthrew the former ruler, the Shah of Iran.

Iran is commonly misperceived as an Arab country, but in truth, its Arab population comprises only 3 percent of its ethnic identity. The major ethnic groups are Persian (51 percent) and Azeri (24 percent). And, in fact, Arabic is only used in religious contexts and expressions, while Farsi (Persian) is spoken by 58 percent of the population. Other spoken languages include Turkic, Kurdish, Luri, Balochi, and Turkish. Of these, only Turkic is spoken by a significant portion of the population (26 percent). The

official religion, in accordance with Article 12 of the Islamic constitution, is the Jafari Faith of the 12 Imams. About 99 percent of the population is Muslim, 89 percent of which belong to the Shi'a sect. Religious minorities in Iran include Christians, Jews, and followers of the ancient Persian faith, Zoroastrianism.

Iran is one of the Middle East's main reservoirs of oil, and in recent years numerous other industries have developed and expanded, but agriculture still employs roughly 33 percent of the workforce. Twenty-five percent of the population is involved in industry, while 42 percent work in other service positions. With a 1999 unemployment rate estimated at 25 percent, an inflation rate of 30 percent, and a real growth rate of 1 percent, the Iranian economy has suffered from continuous stagnation since the revolution. In 1996, approximately 53 percent of the population was living below the poverty line.

Historical Evolution: In 1979 the Islamic revolution ended Pahlavi rule and the ancient tradition of monarchical government from which it claimed authority. The Pahlavi's, a relatively short-lived dynasty in the history of Persian Civilization, seized power from the Qajars in 1925. That occurred 20 years after the Constitutional Revolution had limited their (the Qajars) authority and created in Iran a constitutional monarchy, recognizing the people as a source of legitimacy.

The tradition of absolute monarchical rule dates back to the sixth century B.C. and the Achaemenid Empire, a successful regime that made the subsequent Persian empire not only one of the most powerful of the ancient world, but also the most progressive. Its contributions to art, literature, science, and law make it one of the seedbeds of civilization. The Islamic foundations of Iranian government were not introduced until the Islamic conquest of the seventh century, which had a profound impact on Iranian culture in general by introducing a new language, social, and legal system. In the ninth century, the Islamic Empire broke up and Farsi again replaced Arabic as the spoken language in a reconstituted Iran; however, by that time, Islam had taken hold. The Safavid dynasty (1501-1732) made Shi'a Islam the state religion, institutionalizing its preeminence and creating a presence in Iranian government and education that would not be seriously challenged by its rulers for hundreds of years. Under the Qajar dynasty, though, the traditional Islam-based approach to education began to show its inadequacy, as Iranian intellectuals increasingly stressed the need for the inclusion of Western educational mechanisms and a national educational system; this was seen as a response to European power. However, very few intellectuals went so far as to advocate a separation of education from religion. In fact, a contributing factor to the demise of the Qajar dynasty was its perceived lack of religious authority. Another important factor was its weakness in the face of European power.

Despite European influence on the Qajar's by both Britain and Russia—at one point those two had divided Iran into spheres of influence—Iran was never colonized or fully controlled by any European authority and has traditionally maintained a fierce independence from western society. The westernization of education was seen as a means of empowering the country to fight western dominance—a paradox that plagued many reformists of the period. When the Constitutional Revolution took place in 1905, the intellectuals who inspired it focused on developing primary education and pushed through the Supplementary Constitutional Law of 1907. The law guaranteed the freedom of ''acquisition . . . and instruction in all sciences, arts and crafts'' and established The Ministry of Sciences and Arts to govern all educational institutions. In 1910 the Ministry of Education was established. This was the first real attempt to nationalize the educational system. The constitution also mandated the inclusion of Islamic studies in school curriculums and gave the Ministry of Education the power to exclude any textbook seen to be in conflict with the tenets of Islam.

The rise to power of Reza Shah Pahlavi reflected the failure of the constitutional experiment to live up to the challenges of western power, as was made painfully evident during World War I. The influence of the Pahlavi's on education was profound, for it was under their leadership that the basic educational structure and system was developed and westernized. As of 2000, the education structure in Iran continued to reflect the French system, which was selected as a model under Pahlavi rule: primary, secondary, and higher education, with degrees at the university level, including bachelor's, master's, and doctoral. It was under the Pahlavis that the first university in Tehran was established as a coeducational institution in 1920, and after World War II other institutions of higher learning were established in Tabriz, Esfahan, Mashhad, Shiraz, and Ahvaz.

The Ministry of Education was further empowered and was given the responsibility of regulating all public and private schools. There was also an increase in students studying abroad, as the Shah Reza sought to bring western advancements to his country. Most notably, the educational system was secularized, with the emphasis on training Iranian youth to succeed in modern occupations—especially science and administration. In the eyes of many Iranians, especially the clergy and leftist political groups, westernization became an increasing trend in the development of education as Pahlavi Rule passed to Mohammad Reza Shah Pahlavi. And in fact, the educational system was a high-profile example of how the regime supported modernization. Textbooks used at that

time downplayed religious history and emphasized loyalty, modernity, and nationalism. Under the Pahlavi's, the *vatan* or *mihan* (motherland)—and a citizen's commitment to it—was the highest value, and the purpose of education was to train students to serve the needs of the motherland above any other authority, including religion.

The success of the Pahlavi regime in terms of education literacy and enrollment is difficult to judge because there are few reliable statistics available before 1940. It is known that although the Pahlavis were never able to fully realize a national educational system, they did make significant progress. In 1940, only 10 percent of all elementary-age children were enrolled in school, and less than 1 percent of youths between the ages of 12 and 20 were in secondary school. By 1978, these statistics had improved dramatically, as 75 percent of all elementary-age children were enrolled in primary schools, and nearly 50 percent of all teenagers were attending secondary schools. It is also known that although the Mohammed Reza Shah made significant attempts at improving literacy, the illiteracy rate in 1976 was still 63 percent.

The rise to power of the Iranian *ulama*—religious scholars—was a manifestation of public dissatisfaction with the Shah's attempt to modernize and westernize a nation that did not have a strong industrial infrastructure and was culturally and spiritually dependent on its Islamic traditions. When economic crises caused by a fluctuating oil market made class and wealth distinctions intolerable, the absence of meaningful spiritual and cultural leadership became intolerable as well. What the Islamic theory of political and spiritual leadership, the *velayet-i-faqih*, offered was a strong leadership that, in theory, placed the leader of the republic in a position to interpret and administer the will of God. What it did not provide, in terms of education, was a resolution to the conflict between modernizing the education system so that Iran could compete with western nations, and maintaining an identity as an Islamic nation. The new regime also had to face many cultural and economic challenges that effected educational practice and principle, including a major war with Iraq, a high rate of illiteracy, and a population explosion.

Constitutional & Legal Foundations

In Article 3, the IRI constitution of 1979 establishes the goal of ''free education and physical training for everyone at all levels, and the facilitation and expansion of higher education.'' Additionally, article 30 requires that the government ''provide all citizen with free education up to secondary school,'' and ''expand free higher education to the extent required by the country for attaining self-sufficiency.'' To ensure the expansion of literacy and enrollment in the public educational system, the Second Economic, Social, and Cultural Development plan (1995-99) made education not only free, but also compulsory, requiring school age children and illiterate adults under age 40 to attend education and literacy courses. The constitution does not touch on issues of educational practice other than to establish the importance of intellectual freedom and equality based on Islamic revolutionary principles. Because of the doctrine of *velayet-I faqih*, there is no separation between the Qur'an and the ideological and legal foundations of the educational system. Furthermore, interpretation of what Islamic revolutionary principle is comes from the religious leader, the Ayatullah. The aims of the educational system envisioned by the Ayatullah Khumayni were made apparent in 1980 when he called for the formation of a Council for Cultural Revolution, requiring that education be in keeping with Islamic culture and that educators be committed to the ideals of the revolution.

This effort began the Islamization of Iranian education. The first step was to stop the secularization of the system and to purge those academics that did not embrace revolutionary principle. Efforts to forcibly de-secularize the university system led to several violent clashes, the suspension of higher education for three years, the closing of 200 institutes of higher learning, and a radical decrease in enrollment for those institutions that re-opened in 1983. Enrollment at the University of Tehran, for example, dropped from 17,000 to 4,500 students, and the percentage of women's enrollment in institutions of higher learning plunged from 40 percent in 1980 to 10 percent in 1983. The emphasis on revolutionary commitment over expertise also led to a lowering of overall educational quality and a reduction in the emphasis placed on the necessity for sufficient skilled manpower needed to achieve economic goals.

Like the Pahlavi regime, the *ulama* saw the purpose of education as a means of supporting the ideology of the government. At the primary and secondary level ''Islamization'' and ''Westoxification'' mainly focused on changing textbooks to those that transmitted acceptable ideological beliefs and social behaviors. Particularly in the humanities, textbooks were purged of all ideas that were thought to promote western values and were rewritten to promote the concept of a New Islamic citizen in terms of political beliefs, cultural values, and role models.

A national literacy campaign was central to the government's plans for cultural Islamization, and one of Khumayni's first acts after the revolution was to establish the Literacy Movement of Iran. The regime also placed great emphasis on primary education and teacher training as a means of propagating revolutionary ideals. Especial-

ly in the early 1980s, a commitment to Islamic revolutionary principles was more important than competency at nearly all levels of instruction, especially within the Literary Movement Organization (LMO).

EDUCATIONAL SYSTEM—OVERVIEW

The precollege educational system in the Islamic Republic of Iran has not changed significantly since the rule of the Pahlavis and is modeled after the French system. It consists of one year of preprimary education at age 5, five years of primary education (from age 6 to 11), three years of lower secondary, or guidance, school (from age 11 to 14), and three years of secondary school (from age 14 to 17). Students who wish to enroll in a university have to take one year of pre-university training and pass the National Entrance Examination. Secondary vocational and technical education is also available. At all levels, the language of instruction is Farsi, except at the University of Shiraz, where English is used. In accordance with Article 30 of the IRI constitution, education through age 11 is both free and compulsory. The official length of the academic year for preprimary to lower secondary levels is 10 months, but the official starting date is subject to change. Traditionally it has run from September to June. Most universities operate on a similar time frame. The grading system through all levels of education is based on a 20-point scale, with an A being worth four points and an F worth zero points. To graduate, a C average in all courses is required.

PREPRIMARY & PRIMARY EDUCATION

Preprimary education is a one-year period in which five-year-old children are prepared for primary school. The main goals of preprimary education are:

- To contribute to the physical, mental, emotional, and social growth in young children based on religious and ethical principles
- To develop the abilities and talents of students in order to prepare them for future studies
- To promote the Persian language, particularly in the provinces, which have different native languages
- To prepare children for social relationships and cooperation
- To help families with low incomes by creating a safe educational atmosphere to train their young children

The curriculum at this level is standardized through use of two teaching manuals titled *Content and Methods of Instruction in Pre-Primary Centers,* Volumes I and II. These demonstrate appropriate behavioral and pedagogical techniques as well as a general curriculum focusing on basic life skills, natural sciences, hygiene, literacy, history, and religious history and practice.

Primary education in Iran is split into two types: elementary and lower secondary, or guidance, schools. The elementary level is a four-year program and includes religious training and the study of the Qur'an, Persian composition, dictation, Persian reading comprehension, social studies, arts, hygiene and natural science, mathematics, and physical education. Special emphasis at this level is given to reading comprehension. In grade one, half of the 24 allotted teaching hours are set aside for this discipline. The main objectives of primary education are:

- Creation of a favorable atmosphere for the purification and moral superiority of students
- Development of student's physical strength
- Enabling the students to read, write, and upgrade their calculating skills, and providing necessary training on proper social behavior
- Instruction for individual hygiene and providing necessary advice on how to behave at home as well as in society

All subject musts be passed in order for students to pass on to the guidance cycle. Textbooks are standardized and must be prepared and approved by the Ministry of Education. The dropout rate at the primary level from 1993 to 1994 was 1.9 percent. The repetition rates for the same year varied depending on grade level but were highest in grades one (9.5 percent) and five (8.7 percent). In the 1994-95 academic year, the transition rate from the primary to lower secondary level was 94.2 percent.

The lower secondary, or guidance, cycle (*doreh-e rahnamaii*) is a three-year program in which the emphasis on instruction changes from teaching general knowledge to an effort at helping a student discover an area of specialization. The goals of the guidance cycle include:

- Developing a student's moral and intellectual abilities
- Increasing the student's experiences and general knowledge
- Helping students to continue the habits of discipline and scientific imagination that have been taught in elementary school
- Diagnosing individual preferences and talents in students so that they may be directed towards suitable studies and professions

At this level the subjects of history, geography, Arabic, vocational training, foreign languages, and defense preparation are added to the curriculum. Mathematics and natural sciences are given a larger portion of the 28 allotted teaching hours—four to five hours—although Persian language and literature remains the focus of in-

struction. In the area of religious training, religious minority groups are given their own special subjects. Students who successfully pass a regional examination conducted at the end of the cycle receive a Certificate of General Education/General Certificate of Guidance Education. No statistics on dropout rates were available for this level. In the 1993-94 school year, grade repetition levels ranged from 10 to 13 percent depending on year. For the 1994-95 school year, the transition rate from lower secondary or guidance school to upper secondary level was 98 percent.

SECONDARY EDUCATION

Depending on their tested aptitudes and potential, at this point students may choose to pursue one of two possible courses of study: The theoretical branch, or the technical and vocational education (TVE) stream.

The theoretical branch is comprised of general academic disciplines such as mathematics, physics, empirical sciences, human sciences, and economics. Students in this curriculum must take 63 units of general study and an additional 36 units in one field of specialization. After completing this track, they take the national examinations and, if successful, are awarded the *Diplom-Motevaseteh* making them eligible for the pre-university course—a one year program designed to prepare them for university. Successfully completing pre-university study earns them the Pre-University Certificate and the right to take the *Konkur,* or National Entrance Examination. The vocational and technical branch (TVE), *Kar-Denesh* (knowledge-skill branch), and the integrated associate degree in the technical and vocational stream comprise the technical/vocational track of Iranian secondary education. The vocational and technical branch students take applied science courses designed to train them in the agricultural trades. Here they can earn a trade certificate. The Kar-Denesh track develops semiskilled and skilled workers, foremen, and supervisors who can earn second-degree skill certificates. The integrated associate degree is a five-year course following lower secondary education designed to develop highly skilled technicians. These students may also opt for the pre-university stream after three years in the program. In 1986, the Ministry of Education listed 30 fields of study in the TVE system and over 400 in the Kar-Denesh.

Teaching hours at this level range from 30 to 32 and curriculum varies significantly depending on the individual student's field of study or vocational path.

HIGHER EDUCATION

Types of—Public & Private: Until very recently, higher education in the IRI has been completely state-run and public, with only a small number of private institutions opening in the past few years. Iran has 46 universities, 60 postsecondary technical institutions, about 200 colleges/higher institutes/professional schools, and a number of teacher training colleges. While there are no exact numbers available for private institutions, there were at least four as of 1997. The most prominent of Iran's public universities include The University of Tehran, Tarbiat Modaress University, Shahid Beheshti University, Shiraz University, Tabriz University, and Isfahan University.

Admission Procedures: In order to apply for university admission a student must possess the *Diplom-Motevaseteh,* complete the pre-university course, and take the National Entrance Examination. The transition rate from upper secondary to postsecondary level (including private and public), was reported by IRI's Ministry of Education to be 40 percent in 1996. Those numbers are misleading however, because they combine vocational and theoretical tracks. In the traditional academic disciplines, the percentage of successful applicants to university is much lower—only 12 percent in 1991. High marks on the National Entrance Examination do not necessarily guarantee admission into a university, partially because of the limited number of spaces available to a highly educated and youthful population and partially because of preferential treatment given to soldiers and veterans. While there are no statistics available concerning the enrollment numbers for foreign students, they can be admitted providing they have a visa and hold a Secondary School Leaving Certificate with a minimum average of 62.5 percent for studies leading to a bachelor's degree.

Administration: The administration of higher education is connected by law and policy to the Iranian government by the concept of *velayet-i-faqih*, but the tight control over educational administration is a reflection of the power that student movements have traditionally had in Iranian politics. To a large degree, the revolution itself was a student movement, and, especially in the 1990s, unrest and protest against restrictive government policies were centered on university campuses. So the strong connection between the university system and the government has been a political necessity. Any decisions made at the institutional level must be approved by either The Ministry of Culture and Higher Education and its Supreme Council on Higher Education Planning or the Ministry of Health, Treatment, and Medical Education, depending on the nature of the institution. Decisions regarding the policies of higher education are made by these organizations under the approval of the Islamic Parliament, the Cabinet, and the Higher Council of Cultural Revolution. University administration is undertaken by the Board of Trustees, affirmed and appointed by the

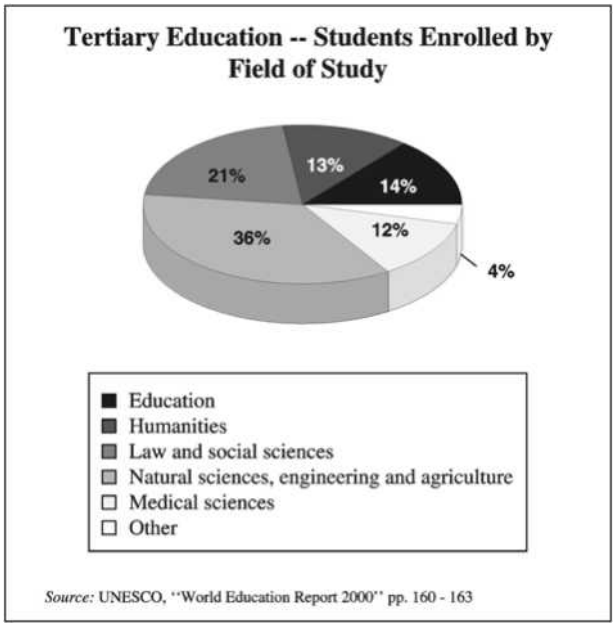
Higher Council of Cultural Revolution. By law, these trustees set university budgets, research finances, and teaching salaries, subject to the approval of the council. They are also responsible for supervision of the effective administration of educational research, cultural affairs, student, official, financial, construction, and discipline affairs, scientific services, all national and international relationships of the university or institution, and the coordinating and leading of different units and departments.

The Educational Council forms the second institutional level of university administration. This council is made up of members of the administrative body and the deans of faculties, junior colleges, and research departments, as well as faculty teachers who are members of each institution's specialty council. Some of the duties of this council include the study and approval of short-term educational and research projects and new educational courses or fields.

Tuition & Academic Year: In 1998 tuition expenses for students at the university level varied from 0 to 450,000 Iranian rials, depending on the level of aid. The academic year runs roughly from September to June.

Programs & Degrees: Much as in the West, university level studies in Iran are divided into three stages, associate's degree (*Kardani*) or bachelor's degree (*Karshenasi*), masters degree (*Karshenasi-arshad*), and doctorate. At the undergraduate level, however, there are differences, depending on whether or not the student desires to continue on to the graduate level. A student desiring an associate's degree must complete two years of study (67 to 72 credit units). Associate-level curricula include traditional academic disciplines such as medicine, technical engineering, and agriculture. To receive a noncontinuous bachelor's degree a student must then complete another two years of study (65 to 70 credit units). And if he or she wishes to continue to the graduate level, that student must complete at least 140 credit units and pass another competitive entrance examination. A master's degree in arts and science requires two more years of study and another 28 to 32 credits (depending on the program), including the submission of a thesis and a passing grade on a comprehensive examination. A master's degree in architecture is more rigorous, requiring six-and-a-half years of study (a total of 172 to 182 units).

At the doctoral level, specialized degrees (or professional doctorates) are offered in the areas of medicine, dentistry, pharmacy, and veterinary medicine. These programs require six years of full-time study (210-290 semester credits). For the medical degree, a student must complete seven semesters of study (121 units), a nine-month externship (95 units), an 18-month internship (68 units), and a doctoral thesis (6 units) for a total of 290



units. After completing this program, a student may then enroll in a residency program in different fields (three to five years beyond the doctorate). In order to pursue a doctor of philosophy, or Ph.D., prospective applicants must hold a master's degree or a professional doctorate degree and pass an entrance test set by the individual university, as well as an interview with that university. They must also submit at least two recommendations from former professors. There is no age limitation, except in cases of scholarship (33 years). The Ph.D. must be completed in four-and-a-half years and requires 42 to 50 units. After completing 30 semester units, students must pass a comprehensive examination before continuing to the second phase of the program, in which they must successfully complete a dissertation and defend it in front of a dissertation committee.

Outside of the university system, there are abundant opportunities for postsecondary education, especially in vocational and technical fields. In fact technical and vocational institutions greatly outnumber universities. Technical institutions offer programs leading to the *Fogh Diplom,* or First-Class Technicians Certificate. Such programs are open to graduates of four-year technical and general secondary schools.

Study Abroad: Since 1979 the pursuit of education in foreign countries was nearly eliminated by the Islamic regime as an effect of Islamization and Westoxification policies. The year before the revolution, there were 13,107 students sent abroad for study. Between the years of 1983 and 1988, that number was only 1,395. In the 1990s restrictions were eased and the number rose to around 3,000. The United States has the highest concen-

tration of Iranian students studying abroad. Other countries of educational preference include Germany, the United Kingdom, France, and Italy. Due to fears of western influence, the government made it very difficult for many students studying abroad to return to Iran upon graduation from foreign universities. This too began to change in the 1990s, and the easing of that policy is another reflection of the more pragmatic goals of the IRI in handling crippling economic problems, such as manpower shortage and ''brain-drain''—the emigration of intellectuals and highly skilled technicians from Iran that has occurred since the revolution.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Governmental Educational Agencies: Important governmental institutions and agencies related to education in Iran include the Ministry of Education; the Higher Council of Education; the Ministry of Higher Education; the Ministry of Health, Treatment, and Medical Education the Literary Movement Organization; the National Council for Scientific and Industrial Research; the Institute for Research and Planning in Higher Education; the Exceptional Education Organization; and the Technical and Vocational Training Organization of the Ministry of Labor and Social Affairs.

Ministry of Education: Iran's educational system and its administration is highly centralized under the Ministry of Education, which in turn is responsible to the Islamic Parliament, the Cabinet, and the Higher Council of Cultural Revolution. In essence this organization is responsible for all educational policies relating to primary and secondary education and the setting and implementation of objectives relating to them, from forming the makeup of its Higher Council of Education to the development, printing, and distribution of textbooks. Other significant duties include procurement of facilities; the creation and supervision of vocational, academic, and physical education programs; the supervision of teacher training; insurance of the freedom and access to education for all citizens; the financial and educational support of the children and families of both martyrs and war dead; the coordination of defense training within the schools; the support and development of special education; development of the arts; student recruitment; support for the Literary Movement Organization; and cooperation with all other significant educational offices. All provincial and regional offices report to the ministry.

Educational Budget: In 1996 the budget for the Ministry of Education was 6.1 billion rials, or 3.8 percent of the gross national budget. These funds are divided among administrative, research, training, and procurement, with each level of education allotted specific funds. By far the greatest expenditures in the 1995-96 academic year were for primary education (1.6 million rials) and upper secondary education (.93 million rials). The expenditure for higher education and research is budgeted separately to the Ministry of Higher Education and was 1.6 million rials for the same academic year. These figures reveal the emphasis placed on primary education in the IRI.

Educational Research: Fields of educational research taken on by the Ministry of Education are divided into three areas of study—educational, psychological and social, and economic. Educational research relates to problems concerning objectives, curricula, methodologies, manpower training, organizational inadequacies, and policies for management and evaluation. Research on psychological and social issues relating to children, juveniles, and youth concerns personality development, social participation, and problems related to leisure time. Economic research studies the appropriate allocation of funding and its relation to the achievement of educational objectives.

NONFORMAL EDUCATION

Nonformal education is conducted in the IRI through the Literacy Movement Organization, adult education classes, TVE programs, and distance education.

Literary Movement Organization: Established in 1984, the Literary Movement Organization (LMO) was created to encounter the disastrously high rate of national illiteracy inherited from the Pahlavi regime. Its main functions include the provision of adult education and education for children outside of the educational system, training instructors and qualified Muslim teachers committed to the principles of *velayat-I faqih* and to the Iranian constitution, preparing and adopting textbooks in keeping with the Islamic faith, promoting cultural awareness and revolutionary commitment, and attracting citizens to literacy classes.

Existing statistical reports show that the LMO covered almost 2.8 million people in the 1994-95 academic year. Of that number 78.9 percent were women and 21.1 percent men, while 53.7 percent were rural and 42.7 percent urban. Because of almost universal enrollment at the primary school level, 89 percent of the learners were adults with the average age of 29 years.

Literacy education is split into two cycles, introductory and complementary. Curriculum for the first cycle includes reading, writing, dictation, and arithmetic. The second cycle, or final course, includes study of the Qu'ran, Islamic culture, composition, mathematics, experimental science, social science, dictation, and Persian language.

Adult Education: What is termed adult education by the IRI is really supplementary evening courses provided for those who were not able to finish their studies during prior periods. The youngest age of a learner in the ''adult'' education program is 18 years of age. In reality adult education in Iran is handled by the Literacy Movement Organization.

Technical-Vocational Programs: The Technical and Vocational Training Organization (TVTO) of the Ministry of Labor and Social Affairs is designed to prepare learners for the job market through instruction in necessary job skills. Training for the nonformal TVE is separated into three contexts: industrial, agricultural, and administrative and hygiene.

Distance Learning: Nonformal studies are offered as distance education at Payam-E-Noor University for holders of the *Diplom-Motevaseteh*. Courses last between five and eight years in fields such as education, mathematics, chemistry, and Persian literature. An associate's degree and bachelor's degree are awarded.

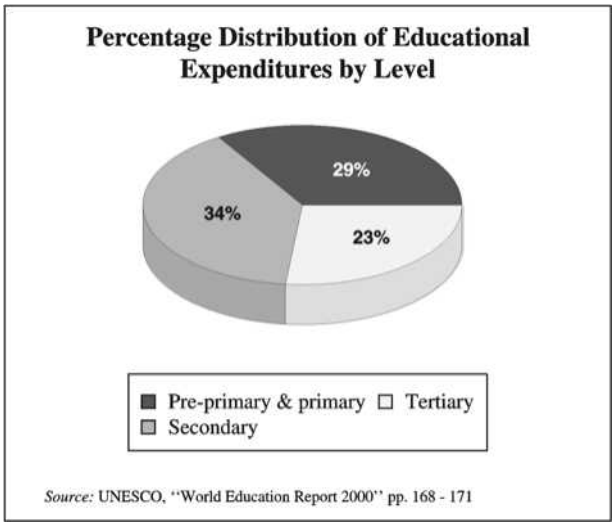
Teaching Profession

In the 1994-95 academic year, there were more than 500,000 teachers in the preprimary to upper secondary level. In accordance with ''The Act of Coordinated Payment to State Employees,'' these professionals have salaries equivalent to those of regular public workers. The Ministry of Education places a high priority on teacher training, stating that ''teachers have always played a significant role in education. So, the training of teachers should be of major concern in the changing of world future society.''

Primary School & Lower Secondary Teacher Training: Primary school and lower secondary, or guidance, schoolteachers are trained in two years in teacher training centers (*Daneshsari-rahnamai*), where they obtain an associate's degree. In the technical/vocational sections, they are selected from graduates of technical and vocational schools.

Secondary School Teacher Training: Secondary school teachers must pass the National Entrance Examination, ask for a scholarship, and follow a four-year course leading to a bachelor's degree. Upper secondary school teachers are trained at Tarbiat Moallam University and the University for Teacher Education, both in Tehran.

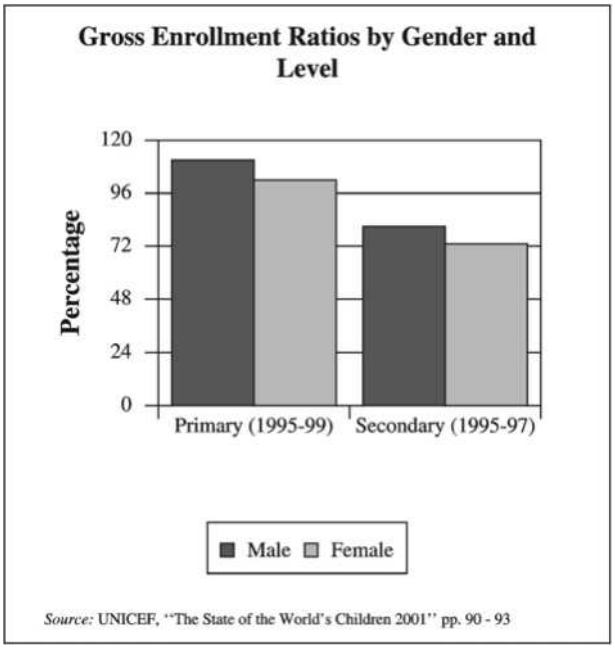
Higher Education Teacher Training: Tarbiat Modares University has been established to train faculty members and researchers in different scientific fields.



Summary

General Assessment: The educational system in Iran continues a process of philosophical transition that began with the revolution in 1979. Since the inception of Islamization, the government attempted to balance between the desire for cultural and spiritual independence from the West, and the desire to succeed as a modern nation in competition with the West. In the 1990s, economic demands and labor force necessities created some changes in the attitudes and goals of the fundamentalist administration. Both Rafsanjani and Khatami began to stress the need for expertise in the workforce, cultural awareness of western ideas, and a revitalized concept of modern Islam. This change was most evident in their attitudes toward women. While women were still encouraged to serve traditional roles in the family and subject to severe restrictions concerning dress and movement, they were also encouraged to pursue education and limited professional development.

In 1998 the freshman class in Iranian universities had more women than men. Between 1987 and 1994, the ratio of female students to total students for the educational system as a whole rose from 38 percent to 45.8 percent. Women's literacy has also shown significant improvement, rising from 25.5 percent in 1976 to 72.4 percent in 1996—largely due to the concentration on women's education in the LMO. The role of women in education in a key indicator of the tenuous balance the regime has attempted to strike between the maintenance of fundamentalist values and the pursuit of knowledge—both ideals inherent to the Shi'a faith. Other indications of liberalization in the educational system included a slight opening of opportunities for students to study abroad and the reinstitution of a private school system. By the year 2000, en-



rollment in private schools rose from 1 percent to 5 percent.

The most impressive achievement of the Islamic Regime in terms of objective data has been its Literacy Movement Organization. Though estimates vary, literacy in Iran rose from roughly 45 percent before the revolution to roughly 80 percent by 1996. Between the ages of 10 and 24, that percentage rises to roughly 93 percent. Considering the youthfulness of the population, this statistic holds great promise for the future. The success of the LMO has received international acclaim, and in 1998 The Corresponding Services Project of the Literacy Movement was awarded the Malcolm Adiseshiah Literacy Prize for innovative postliteracy and continuing adult education initiatives.

The regime has also made improvements in overall enrollment since the revolution. In 1991 the number of students enrolled in primary education was 9.1 million, and by 1996, enrollment at primary schools was almost universal. Enrollment at secondary schools and upper secondary schools had risen from prerevolutionary figures of 62 percent and 27 percent to 99 percent and 50 percent. Also, despite the initial effects of the revolution in driving down university enrollment, the number of students in postsecondary education from 1978 to 1995 rose from 175,000 to 1.2 million—though that figure decreases to roughly 600,000 for exclusively academic disciplines. Still, the education system of the IRI has significant challenges resulting in part from the split goal of education as a both a search for knowledge and as a device for the propagation of fundamental beliefs. An emphasis on tradition and commitment may encourage cultural stability, but it can also be a major inhibitor to innovation and development. Teaching techniques in Iran, for example, have remained somewhat stagnant, and too often the most highly qualified teachers are passed over for the more highly committed. This reality, coupled with the lack of employment opportunities for many educated Iranians, has resulted in a restive youth population and the emigration of some of the best minds in the country. One of the problems with women's education in Iran, for example, is that while the educational opportunities for women have increased, their opportunities to work outside the home remain limited. The Ministry of Education also admits to a teaching shortage, particularly in secondary education, caused by a lack of interest in the profession.

The future of education in Iran is difficult to assess because the country continues to undergo cultural change, although the Ministry's stated commitment to decentralization is promising. With the election of reform-minded President Hojjatoleslam Seyed Mohammad Khatami in 1997, there could be further philosophical and even institutional changes forthcoming.

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—Joel Peckham, Jr.

IRAQ

BASIC DATA

Official Country Name:	Republic of Iraq
Region:	Middle East
Population:	22,675,617
Language(s):	Arabic, Kurdish, Assyrian, Armenian
Literacy Rate:	58%
Number of Primary Schools:	8,145
Compulsory Schooling:	6 years
Educational Enrollment:	Primary: 2,903,923 Secondary: 1,160,421 Higher: 169,665
Educational Enrollment Rate:	Primary: 85% Secondary: 42%
Teachers:	Primary: 145,455 Secondary: 62,296 Higher: 8,818
Student-Teacher Ratio:	Primary: 20:1 Secondary: 20:1
Female Enrollment Rate:	Primary: 78% Secondary: 32%

HISTORY & BACKGROUND

Historical Evolution: The Republic of Iraq, *al-jumhuriyya al-'iraqiyya,* is an Arab nation located in southwestern Asia, at the head of the Persian/Arabian Gulf. Iraq is bordered by its Arab neighbors Kuwait, Saudi Arabia, Jordan, and Syria and by non-Arab Turkey and Iran. The capital of Iraq is Baghdad, also its largest city. The land area measures 438,446 kilometers (175,378 square miles). In July 2000 the population was estimated to be more than 22.6 million. About three-fourths of Iraq's people live in the fertile area that stretches from Baghdad, following the Tigris and Euphrates rivers. The ancient Greeks named this area Mesopotamia, or ''between rivers.'' For thousands of years, the agriculture of the area has depended on the flow of irrigation from these two sources.

The country is comprised of 18 administrative units, or governorates (*muhaafatha,* plural *muhaafathaat*), further divided into districts and subdistricts. Iraq is a nation of varied ethnic groups and cultural heritages; Iraqis of Arab descent comprise 75.8 percent of the population, while Iraq's Kurdish peoples number 15 to 20 percent. Turkomans, Assyrians, and other groups compose the remaining 5 percent of the population. The three governorates of Arbil, Sulaymaniya, and Dohouk form the Kurdish Autonomous Region, an area of limited self-rule by Iraq's Kurdish minority. Kurdish is the official language of the Autonomous Region and is widely used as the language of educational instruction in the area. Nearly 97 percent of Iraq's people are Muslim, along with tiny groups of Christians, Jews, and Yezidis. The Muslim population is split into the *Sunni* (32 to 37 percent) and the *Shi'a* sects (60 to 65 percent). Approximately three-quarters of the population speak Arabic as their native language. Arabic is the official language of Iraq, with Kurdish, Assyrian, and Armenian spoken among their respective ethnic groups.

Iraq's natural resources give it the potential to be one of the wealthiest nations in the region and the world. A founding member of the Organization of Petroleum Exporting Countries (OPEC), Iraq possesses more than 112 billion barrels of oil—the world's second largest proven reserves. Iraq also benefits from its geography, unique in the region; two great rivers, the Tigris and the Euphrates, converge in the heart of the nation, creating a fertile alluvial plain and generous tracts of cultivatable land.

The history of Iraq has been marked by cultural ascendance comparable only to the glory of the ancient Egyptian and Greco-Roman civilizations. Mesopotamia sustained its place as an axis of learning for more than 4,000 years, attracting students, thinkers, and intellectuals from around the world. The world's first civilization developed in the area of Mesopotamia known as Sumer around 3500 B.C.E. Ancient Iraq was also the site of the Assyrian and Babylonian civilizations, extant in the period from 3500 B.C.E. to 53 B.C.E. The Code of Hammurabi, the first codified legal system, and cuneiform, the

first system of writing, were both invented in what is now modern Iraq. The Arab conquest of 637 C.E. brought with it Arabic, the language of the Qur'an, and the Islamic faith. Mesopotamia was soon to be the hub of trade and culture in the Muslim world, becoming the seat of the Abbasid dynasty in 750 C.E. Saladin, or *Salah Al-Din,* a Kurdish warrior from Mesopotamia, defeated the Crusaders in Jerusalem in 1187. In 1258, Arab rule over the area was brought to an end by invading Mongol forces from central Asia. Mesopotamia lost its preeminence through Mongol neglect and fell into a deep decline. The Ottoman Empire's domination of the region began in the early 1500s and continued until Britain seized Mesopotamia from the Ottomans during World War I.

Modern Political Contexts: The League of Nations, the international organization that preceded the United Nations, granted Britain a mandate over the area in 1920; Britain promptly renamed the country Iraq and installed a puppet monarchy. France, Britain, and the United States competed for dominance of the Middle East beginning after World War I, when massive oil reserves were discovered there. In 1945, the U.S. State Department described the petroleum of the region as ''one of the greatest material prizes in world history.'' Though Britain's mandate ended in 1932 making Iraq an independent nation, the British continued to exert influence on Iraqi affairs, including a stake in national oil profits and considerable sway over the monarchy they had installed. The year 1958 saw Iraq's first modern revolution: King Faisal I was overthrown by Iraqi army officers and a republic was declared. In 1963, military officers and members of the socialist, pan-Arab *Baath* Party (Arabic for ''resurrection'') assassinated the premier, General Abdelkarim Qassem. A second revolution followed in 1968. In 1973, the Iraqi government fully nationalized the nation's oil industry and huge profits were realized, especially in light of the oil explosion of the 1970s. Saddam Hussein rose to power as president in 1980 after years of behind the scenes influence within the ranks of the *Baath.* The *Baath* Party continues to dominate contemporary Iraqi politics and government.

The recent history of Iraq is fraught with almost unabated military conflict, at a great cost to the Iraqi government and people. In 1980, Iraq invaded neighboring Iran, and an eight-year long war caused egregious losses on both sides; a cease-fire was declared in 1988 and no clear winner emerged. Conflicts with its Kurdish minorities in the north and Shi'a groups in the south have lead the Iraqi government to take such steps as: the forced resettlement and dispersal of entire communities of Iraqis; the draining of marshland integral to the way of life of its occupants; and the use of armed forces to curb opposition.

In 1990, Iraq invaded neighboring Kuwait after protracted disputes involving Iraqi debt to the Gulf state, border disputes, and accusations of illegal oil drilling. Allied forces from more than 30 nations ejected the Iraqi military from Kuwait, and Operation Desert Storm came to a halt in February 1991. In response to Iraq's invasion and occupation of Kuwait, the United Nations, led by the United States, effected a complete trade embargo on Iraq that has crippled its economy. This embargo, a form of international sanctions, legally prevents Iraq from exporting oil or importing any products, save for a small amount intended for humanitarian supplies (''Oil for Food'') and reparations to Kuwait.

The Impact of Sanctions: The sanctions have become the key factor preventing the Iraqi government from recovering from its costly conflicts, rebuilding its infrastructure, and providing for its population. The sanctions prevent Iraq from selling oil and, thus, sever the most significant part of the Iraqi economy. Since 1991, Iraq's economy has shrunk by two-thirds; inflation reached 135 percent in 1999. More than 150,000 Iraqi people died as a result of the Gulf War; more than 1 million more have perished as a result of the sanctions, which some have described as genocide. The mortality rate for young children has more than doubled since 1989. Iraq's health care, social infrastructure, employment, and its ability to extend educational opportunity to its citizens, a primary goal of the Iraqi government since the late 1960s, have all been paralyzed by the trade embargo. In 1989, Iraq had a nearly 100 percent primary school enrollment rate. Once on the threshold of the first world, Iraq's standard of living has been reduced to less than that of such developing nations as Bangladesh. Any consideration of the future of this nation must take into account the sanctions' devastating effect on the Iraqi people.

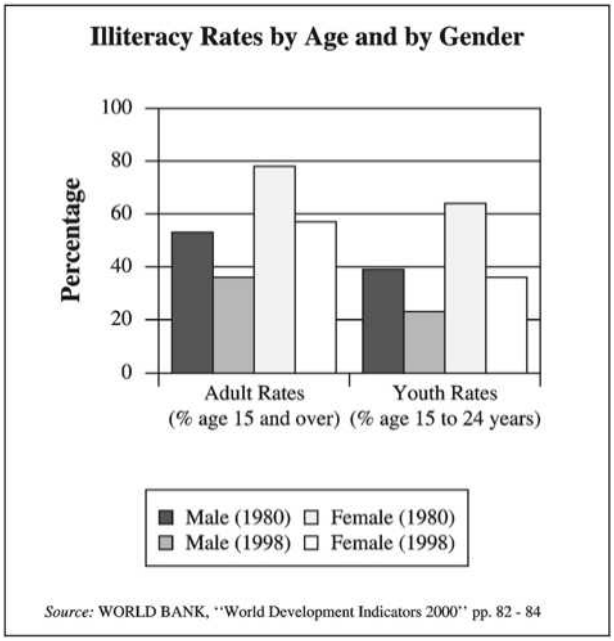
CONSTITUTIONAL & LEGAL FOUNDATIONS

The educational system of Iraq is legally codified in the Provisional Constitution of 1970. In this code, following the precedent of the General Education Law of 1940, primary education is compulsory and universally guaranteed to the Iraqi people. In 1976, the Compulsory Education Law was promulgated, requiring children between the ages of 6 and 15 to attend primary school. Iraq is a signatory to the 1978 Convention on the Recognition of Studies, Diplomas and Degrees in Higher Education in the Arab States.

The Iraqi government, embodied in the Revolutionary Command Council, has long made universal literacy and education a national priority; in the past free schooling was available from the primary to the graduate levels, as well as student nutrition, classroom materials, and the

opportunity for graduate study abroad, all at government expense. The government highlights the eradication of illiteracy among Iraqi women as a main goal. Equal educational opportunities are offered to both genders, though some specifically target women, including literacy programs and home economics courses. The Iraqi government has passed detailed educational legislation in order to more closely hone in on areas of development and innovation. Such laws include the formation of parents and teachers' councils, schools for the gifted, teacher training centers, fine arts centers, guidelines for educational television, and the Boy Scout program.

The remarkable successes of the government in the past are due to its commitment to various national planning strategies, including long and short-range plans, and its deep investment in the modernization of Iraqi society. Iraq emphasizes innovation and technology, including computers and media, as cornerstones of its educational system. The government also seeks to consolidate the relationship between education, labor, and production. After the implementation of economic sanctions in 1990, the Iraqi government's ability to continue such ambitious programs has been severely constrained. Only one percent of the funds earned through the ''Oil for Food'' initiatives embodied in United Nations Resolutions 983 and 1153 (which allow Iraq to sell more than $5 billion semiannually for food and medicine) is allotted for education.



Source: WORLD BANK, ''World Development Indicators 2000'' pp. 82 - 84

EDUCATIONAL SYSTEM—OVERVIEW

In 1976, a number of Arab and international education organizations participated in the Baghdad Conference for the Eradication of Illiteracy. This meeting helped produce a comprehensive national campaign against illiteracy in the nation. Compulsory Education Law 92 was passed in the same year, requiring all children between the ages of 6 and 15 to attend school; the law also stipulates that the state must provide the facilities for such learning.

Students in Iraq begin the school year in September and end in June of the following year. School is in session six days a week and closes on Friday, the Muslim Sabbath. The Iraqi educational system is largely influenced by Western educational systems, including the granting of leaving certificates or their equivalent and the use of standardized, national testing.

Education in Iraq emphasizes Modern Standard Arabic, or *fusha,* which differs from spoken (Iraqi) Arabic. In the Kurdish Autonomous Region, Kurdish is the main language of instruction, with Arabic and English also used. English and French are the main foreign languages studied in Iraq. Some faculties in colleges and universities, like medicine and engineering, employ English as the language of instruction. Various English language courses are offered throughout Iraq. The most popular destinations for Iraqi graduate students studying abroad in the past have been the United States and the United Kingdom.

School and general examinations are employed to assess the degree to which educational goals are being met among students. The Ministry of Education periodically assesses these methods through a special technical subcommittee, which is also tasked with the development of examinations. Passing the annual promotion exam is required in order to be promoted to the next grade level. The minimum passing grade is 50 percent on a 100 percent scale. Baccalaureate tests (national, standardized examinations) are administered in the sixth, ninth, and twelfth grades. The grading system used in secondary and higher education institutions is based on the 100 percent scale. In secondary schools, the minimum passing grade is 50 percent, while in higher education, it ranges from 50 to 59 percent.

A supreme committee of the Ministry of Education administers an educational guidance program. Provincial committees are also a part of training guidance counselors. The program's aims are to overcome instructional and psychological problems that children face in school, to help them make educational progress, and to develop methods of social interaction.

The government has highlighted religious education in recent years through a campaign to teach students about the *Qur'an,* the sacred text of Islam. The principles of the National Faith Campaign for the Teaching and Understanding of the Holy *Qur'an* are derived from the doc-

trines of the *Qur'an* itself, as well as the *Sunnah* (the sayings and actions of the Prophet Mohammad, as recorded by his disciples). The campaign's special curriculum starts from the first grade and ends in (preparatory) grade six.

PREPRIMARY & PRIMARY EDUCATION

For children aged four to five, preschools (nurseries) provide preliminary and kindergarten levels of education. Nursery and kindergarten levels teach children aged four to six years. Enrollment in nurseries and kindergartens is voluntary. Primary schools enroll students beginning at age 6 and ending at age 11; students graduate with a Primary Baccalaureate or Certificate of Primary Studies. The number of pupils in nurseries for the academic year 1997-1998 totaled 70,585, with 50.8 percent males and 49.2 percent females. The enrollment rate was 6.8 percent for this age group. The Basrah governorate has the highest enrollment, with 10.4 percent, while the Baghdad governorate had the lowest, with 1.4 percent. In 1991-1992, the enrollment rate for this age group was higher at 8.2 percent. In 1997 some 566,337 new students enrolled in grade one; they ranged in age from 5 to 10 years. Male enrollment in this group was 53.3 percent, while female enrollment totaled 46.7 percent. In 1997, approximately 12.5 percent of students in grade one had attended early childhood development programs. In 1997, a total of 3,029,386 Iraqi children were enrolled in primary school, with 55.4 percent male students and 44.6 percent females. In the same year, primary school teachers with teaching certifications numbered 111,956; they represented 78.9 percent of all primary teachers in the country. Primary school teachers with university degrees numbered 29,981, or 21.1 percent of all primary teachers. The pupil-teacher ratio is 21:1 nationwide, excluding the Kurdish areas.

Repeaters & Dropouts: Repetition continues to be a major issue in Iraq. On the primary level, the repetition rate was 14.5 percent nationwide in 1997-1998 (excluding the Kurdish Autonomous Region). The repetition rates for primary school for the same year were: grade one, 13.2 percent; grade two, 13.2 percent; grade three, 12.0 percent; grade four, 13.7 percent; grade five, 22.7 percent; and grade six, 7.2 percent.

The highest repetition rate was in grade five, with 26.3 percent of all male students and 19 percent of all female students repeating the grade. In 1997-1998, the mean rate of repetition for grades one to five equaled 17.0 percent, down from 20.1 percent in 1991-1992. The government aims to reduce the repetition rate to 4 percent by academic year 2005-2006. The rate of pupils who passed the promotion examination for grade four in 1997-1998 was 70.7 percent.

Dropout or wastage rates are computed for both students and teachers. A total of 259,125 students dropped out of primary school in 1998-1999. Many professionals have left Iraq to escape the depressed economy and shattered national infrastructure brought about by the sanctions, while many students have dropped out of school to work or due to a lack of motivation. There is a high incidence of malnutrition, anemia, and fatigue and diarrhea among students; an absence of adequate heating and cooling in school buildings aggravates such health concerns. The numbers of pupil and student dropouts in 1997-1998 were as follows: primary, 72,598; intermediate, 33,390; preparatory, 3,645; vocational, 1,919; and teacher training, 509. The overall number of dropouts was 112,061.

A total of 26,394 teachers and school staff quit by 1997-1998. The Ministry of Education reported a shortage of 624 teachers for the kindergarten level in 1998-1999, with a projected shortfall of 963 by 2005-2006. By the same academic year, the total primary teacher shortage is expected to reach 12,037 teaching professionals.

The learning plan for the elementary stage in Iraq includes the following subjects for all grades one through six: Islamic education, Arabic language and calligraphy, mathematics, science, technical education, physical education, and singing and music. English is studied in grades five and six along with history, geography, and family education. Civics is studied in grades four through six while social education is studied in grades one through four. In grades one through three, students take a total of 32 classes, while those in grades four through six take 34 classes.

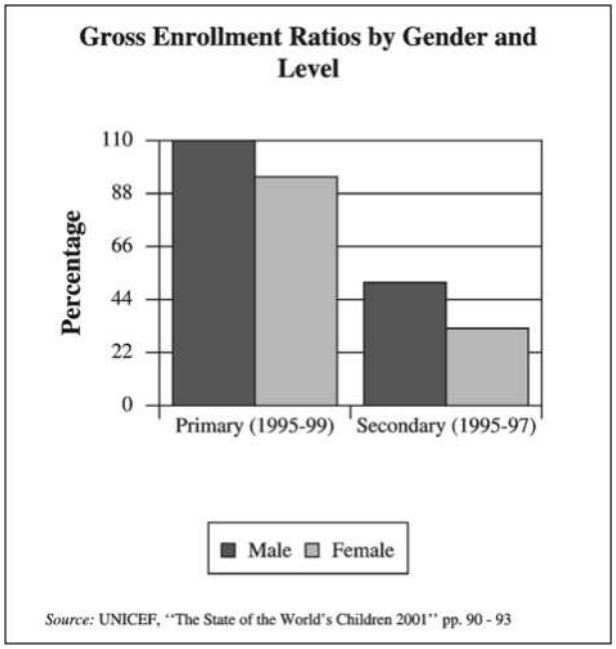
In addition, the Christian religion is taught for two periods in schools where the majority of the student population is Christian. Agricultural education in rural schools is taught for two periods in grades four, five, and six. Workshops that train students in manual, technical, and athletic skills are arranged beyond regular school hours as extracurricular activities. In 1998, the number of school libraries totaled 6,594.

Special education is provided to below average students by way of special classes annexed to various elementary schools in the governorates. In 2000, the number of classes ranging from grades one to four was reported to be 383, with 3,360 pupils and 463 teachers.

The trade sanctions have had a deeply deleterious effect on all phases of education in Iraq. Approximately 40 percent of Iraq's schools, some 4,157 structures, were destroyed in the aftermath of the Gulf War; total damage to the educational infrastructure is estimated at 214,626,319 Iraqi dinars. The embargo prevents the purchase of materials to repair these buildings, though Unit-

ed Nations/UNESCO efforts have mended and updated some structures and provided some students with books and chalk. In 1998, some 3,981 school buildings still needed repair. In 1979-1980, the number of primary school buildings was 9,460—9,053 were government buildings and 407 were rented. In 1997-1998, there were 7,419 government buildings (153 were rented). The supply of textbooks is extremely limited; the Ministry of Education has implemented a plan where students use 50 percent new texts and 50 percent used texts, while utilizing a textbook exchange program between schools.

Communicable diseases and malnutrition are rampant, preventing many children from being able to attend school. In 1995, only 41.5 percent of those enrolled in primary schools reached the fifth grade. Many students must drop out and take up jobs in order to support their families, or they simply lack the drive to continue their studies.



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

SECONDARY EDUCATION

Secondary education is divided into two three-year cycles. The intermediate cycle follows a common curriculum and culminates in the Third Form Baccalaureate or Certificate of Intermediate Studies; this level enrolls students from the ages of 12 through 14. The preparatory cycle follows the intermediate cycle. In the general academic schools, the preparatory cycle requires students to choose a specialization; one of two tracks is chosen after the fourth year in secondary school. Students choose scientific or literary studies, both leading to the *adadiyah,* or Sixth Form Baccalaureate. Vocational secondary education is divided into agricultural, industrial, veterinary, or commercial studies. Courses lead to a Vocational Baccalaureate. After the intermediate cycle, a student may also enroll in a teacher-training institute for a degree in primary education; the period of study is two years.

The learning plan for the intermediate phase includes the following subjects for all grades one through three: Islamic education, Arabic language, English language, history, geography, civics, mathematics, technical education, and athletics/military education. In grades two and three, chemistry, physics, and biology are also studied. General science is studied in grade one, while health, algebra, and geometry are studied in grade three. In grades one through three, female students take a class called ''Family Education for Girls.'' In this phase, all students in grades one through three take a total of 34 classes. During evening school, athletics and military training are eliminated. Vocational training is provided in some secondary schools, as an experimental plan, for two periods per week.

HIGHER EDUCATION

Higher education is provided by public and private universities, private colleges, and the 28 institutes operating under the auspices of the Commission of the Technical Institutes. Universities are legal entities in their own right and are controlled by the Ministry of Higher Education and Scientific Research; an internal administrative council also administers each university. Apart from the private colleges, institutions are financed by the state.

A four-year undergraduate phase follows secondary school, after which is added a tertiary phase for those wishing to pursue the Master's or doctoral degree. Most Bachelor's degrees are conferred after four years of study, while in architecture, dentistry, and pharmacy, the Bachelor's is earned after five years. In medicine, the duration of study is six years. The Master's degree requires one year of matriculation and one year of research. The Doctorate is conferred after a further three years' study beyond the Master's degree, with one year of coursework and two years of thesis preparation. Higher Diplomas are mainly conferred in medical fields and admission is based on a Bachelor's degree in the same field. A minimum 65 percent grade average is required. Some specialized institutes offer a two-year, Postgraduate Higher Diploma.

Major universities in Iraq include the University of Baghdad, the University of Mosul, the University of Basrah, the University of Mustansiriyah and Salahaddin University, all of which grant the Bachelor's, Master's and Ph.D. degrees. Salahaddin University, formerly the University of Sulaymaniyya (founded in 1968) was estab-

lished in the academic year 1982-1983. It is the largest of the three universities in the Kurdish Autonomous Area, situated in the provincial capital town of Arbil.

In view of the economic sanctions and the concomitant state of financial resources in Iraq, a doctoral degree may now require eight years of study, rather than the usual three beyond the Master's degree. Iraq's professors and intellectuals have complained of being isolated from the international academic community since the embargo took effect in 1990; they are not invited to participate in international conferences, and their requests for research materials are denied. Academic materials as well as computers and other technology are banned under the trade embargo. Humanitarian supplies are slow to arrive and insufficient to meet the needs of the country.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Kindergarten, primary, and secondary education are funded and supervised by *wizaarat al-tarbiya,* the Ministry of Education. The Ministry also administers vocational (industrial, agricultural, and commercial) and teacher's training programs. The Minister of Education leads the Ministry. According to Governmental Decree number 34 (1998), the Ministry of Education is composed of the following: the Minister's office; the offices of the undersecretaries; the legislative division; and 18 general directorates. Each is tasked with various subsets of the educational system, including planning, elementary education, educational technologies, computers, administration, financial affairs, and the production of educational materials. Committees under the direction of the Ministry of Education are responsible for functions such as general examinations, the development of educational media, program development, and the supreme board for scouts and girl guides. On the level of the *muhaafatha* (governorate), 11 general directorates across the country are responsible for the execution and monitoring of educational plans and the construction and maintenance of schools.

University and postsecondary education are supervised and funded by the Ministry of Higher Education and Scientific Research, including graduate study abroad. The National Foundation of Technical Institutes directs vocational training centers for the education of skilled laborers. Similar vocational instruction projects are administered by the Ministry of Labor and Social Affairs; the Ministry of Industry and Military Industrialization; the Ministry of Health; the Ministry of Transport and Communications; and the Ministry of Petroleum.

Iraq is home to a variety of international and pan-Arab educational organizations, including UNESCO's Regional Office for Education in Arab countries. It also hosted the Arabic Research and Studies Institute from the period of 1980-1990.

In 1996, Iraq's primary education expenditures totaled 7 billion Iraqi dinars. The total educational budget for that year equaled 16 billion dinars. Public expenditure on primary education is expected to reach 18 billion dinars in the year 2000, while total projected allotments on all levels of public education are predicted to reach 27 billion dinars for the same year. In 1995-1996, educational allotments were distributed as follows: kindergarten, 2.8 percent; primary education, 64.0 percent; secondary education, 27.9 percent; and vocational training, 5.3 percent.

Educational supervision is achieved through training of teachers and administrators, class visits, educational conferences, and instructional seminars. The Ministry of Education has allotted a segment of supervisors specifically for kindergartens and the elementary stage.

Due to financial and infrastructure difficulties brought on by the trade embargo, Iraqi parents were asked to provide school books and equipment for their children in school beginning in 1999. In September 2000, the Iraqi government suspended free education. The education ministry set a scale of fees ranging from 2,000 dinars for primary school to 25,000 dinars for university matriculation. These rates cover one academic year. Attendance by both teachers and students has dropped off considerably as people struggle to work various jobs to survive. Teachers earn an average of 3,500 dinars a month, worth approximately US$1.70.

NONFORMAL EDUCATION

In striving to achieve its intended goals of eradicating illiteracy and reaching out to urban and rural women, the Iraqi government has embraced a variety of methods. Programs specifically geared to women include labor education, health education, and agricultural training. In 1994, a program jointly administered by UNICEF and the educational ministry was implemented to educate 7,000 girls in reading, writing, arithmetic, sewing, and health issues. This program especially targets girls who have dropped out of formal schooling and exceeded its aim with an enrollment of 7,768 in the year of its inception. During the summer of 1995, a seasonal program enrolled 4,245 students in the first session and 3,077 in the second.

The educational ministry has also expanded vocational training through private institutes, allowing Iraqi students such options as printing, tailoring, and hairstyling; the Ministry of Education supervises these training programs. It has provided additional programs for slower learners, adult education classes, and even summer activities for students. In addition, professional syndicates participate in the process of nonformal education.

Distance Education: The Ministry of Education's General Directorate produces various materials for use

inside and outside the classroom, including cassette tapes, colorful visual aids, and flashcards for language learning. Cassettes are also used to teach mathematics and reading at all levels. These materials are distributed to Literacy Centers, spread throughout the country, for use in Arabic and English language projects. The government makes use of these materials in nonformal settings, such as distributing these materials to drivers in Baghdad and to rural women in the countryside, with the aim of reaching a broad spectrum of Iraqi society. Cassettes and teaching materials are specifically aimed at the lowest classes, those that experience the highest level of dropout, or wastage. They are designed to provide workers, women, peasants, and military personnel with additional educational opportunity, specifically via exercises and lessons that can be done after the workday has finished. These methods foster teamwork among adult students, who are encouraged to review their work with others, especially their children and families. For this reason, the cassette and visual aid system has been most effective with regard to Iraqi women.

The education ministry sponsors a variety of educational television programs across a range of instructional levels. In 1977, a children's show called *Simsim* (sesame) was introduced in order to provide children too young to attend school a means of preparation for formal education, much like the American show *Sesame Street.* It presents reading, mathematics, and cultural material in an entertaining and lighthearted manner for a preschool audience. In 1997, Iraq devoted renewed energy to this method of teaching and exposure. Mathematics, reading, and culture are taught through programs that are broadcast twice a week to ensure the widest possible audience.

TEACHING PROFESSION

Training: The traditional teachers training program in Iraq has depended on independent training institutes in which future teachers enroll after the completion of the intermediate phase. Primary school teachers enroll in a five-year course after secondary intermediate school. Courses lead to a diploma. There also exist two-year training institutes to which students are admitted after completing the secondary phase. Most of these institutes have been converted into four-year teachers' colleges at the university level. The Colleges of Education functioning within the Universities of Baghdad, Mosul, Basrah, Al-Mustansiriyah, and Salahaddin train secondary school teachers. They offer a four-year Bachelor of Arts degree program.

In 1992-1993, many central teachers training centers were converted into teachers colleges. Institutes that specialized in Islamic education, a significant part of modern Iraqi educational philosophy, were opened.

The following describes the training activities of teachers, supervisors, educational specialists, and educational administration employees, in the context of primary and secondary education, during the period 1994-1995. In 1994, 43 courses in nurseries were taught to 195 trainees; in 1995 it was 37 courses to 1,023 trainees. In 1994, there were 904 primary education courses taught to 30,719 trainees, and in 1995 there were 1,017 courses taught to 35,470 trainees. In 1994, 504 secondary education courses were taught to 13,702 trainees; in 1995, 625 courses were taught to 19,013 trainees. In 1994, 11 vocational education courses were taught to 238 trainees; in 1995, nine courses were taught to 151 trainees. In the areas of education and specialization, 10 courses were taught to 208 trainees in 1994, while 11 courses were taught to 242 trainees in 1995.

Teaching skills and pedagogical innovation are reinforced and developed throughout teachers' careers. The Ministry of Education prepares teachers' guidebooks in order to help them develop their teaching styles. Among the activities recommended for teachers are: encouraging students to utilize problem solving methods; teaching of undertaking simplified research and reports; working on individual and collective projects; and using discussions and the exchange of opinions as teaching tools.

SUMMARY

Since the mid-to late 1970s, Iraq has made major strides in providing universal, free, or low-cost education to its population. In recent times, the Iraqi people have been among the best educated in the Middle East, with ample opportunities for remedial education, study abroad, and graduate study. The Ministry of Education and other government organizations, as well as private institutions and organizations, have developed a comprehensive system for the planning, implementation, and review of the Iraqi educational infrastructure. Special, ongoing attention has been devoted to the eradication of illiteracy and the education of women. People's schools continue to grant primary school certificates to adults, while women have been the greatest beneficiaries of rural literacy training and outreach programs. The modernization of the nation had, until, the early 1990s, largely depended—and succeeded—on the strengthening and energizing of the educational system.

Since the outbreak of the Gulf War, Iraq's placement under international sanctions has drastically limited its ability to continue its ambitious educational and social programs. At the level of higher education, professors and academics complain of an ''international boycott'' that prevents them from accessing the latest materials and research sources. Government funds are unavailable for the construction of schools, hiring of faculty, purchase of

textbooks and materials, and the continuation of the school nutrition program. Iraq has seen exponential rises in student absences and dropout rates, as well as teachers quitting to find other work. While the health and social infrastructures continue to deteriorate, costing thousands of lives on a monthly basis, education is often seen as the last target for humanitarian efforts. The future of Iraqi education and the nation itself appears to hinge largely on the elimination of the sanctions and the reconstruction of the country's infrastructure. Until then, any study of the country must reflect Iraq's potential as an educational superpower and the limits under which it must survive as a result of the international sanctions.

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— Nader K. Uthman

IRELAND

BASIC DATA

Official Country Name:	Ireland
Region:	Europe
Population:	3,797,257
Language(s):	English, Irish (Gaelic)
Literacy Rate:	98%
Academic Year:	September-June
Number of Primary Schools:	3,391
Compulsory Schooling:	9 years
Public Expenditure on Education:	6.0%
Foreign Students in National Universities:	5,975
Libraries:	351
Educational Enrollment:	Primary: 358,830 Secondary: 389,353 Higher: 134,566
Educational Enrollment Rate:	Primary: 104% Secondary: 118% Higher: 41%
Teachers:	Primary: 16,202 Secondary: 27,273 Higher: 8,979
Student-Teacher Ratio:	Primary: 22:1
Female Enrollment Rate:	Primary: 104% Secondary: 122% Higher: 43%

HISTORY & BACKGROUND

The Republic of Ireland is the second largest British isle, covering 27,136 square miles and bordered to the northwest by Northern Ireland; in the past it went by the Irish Free State (1922-1937) and Eire (1937-1949). Eire is still used by many persons as their name of choice for Ireland, also causing some confusion outside the country's borders. The capital city is Dublin, containing one-third of the Irish Republic's population. During the second half of the twentieth century, the presence of so many fine higher education institutions in Dublin led to the renovation or restoration of many neighborhoods that had been reduced to slums. The predominant religion is Catholic. Ireland's 26 counties have been free of British rule since 1922, which has resulted in some educational changes, including great emphasis on the Irish language, literature, customs, and history.

Beginnings: Ireland's history began during the Mesolithic Era. Hunters from faraway British Isles and likely even southwest Europe first settled this island west of present-day Great Britain. The country began to show signs of civilized development in the Neolithic period about 4000 to 2000 B.C. A communal people, the language of these Pre-Celtic people has been lost.

Celtic & Roman Influences: Ireland's rugged beauty has always attracted settlers and conquerors. The best known of these were the Celts, likely hailing from the Iberian Peninsula (Spain and Portugal), known for their skills as goldsmiths and artisans. Shortly before the birth of Christ, Celtic was the primary language of the country under the ruler of Celtic chiefs. For hundreds of years, the Celts failed to develop a sophisticated form of writing other than a means of documenting family names.

In 54 and 55 B.C., Julius Caesar won some skirmishes with the natives he encountered in Britain. His documentary writing preserved his experiences, and schoolboys in England and America at one time translated them for practice. Caesar referred to Ireland as *Hibernia,* translated literally as the place of winter.

Catholic Church's Preservation of Scholarship: During the Middle Irish period, poets and scholars were trained at church schools, historians believe. The evidence comes from writings that survive as clues to the period. Irish tracts reveal that a mentor called a foster father tutored a pupil known as a *felmac.* Scholars were trained in Irish law, history, and literature, as well as in Latin.

These schools, by the fourteenth century, had changed. Instead of religious scholars acting as tutors, non-clergy scholars taught subjects, such as verse writing, to their pupils. Students of medicine learned from Irish texts that had been translated from English medical books.

After Caesar, the name most renowned and associated with Ireland is St. Patrick (circa 385-461). In addition to his many successes as a missionary, Patrick is said to have encouraged the preservation of the old warrior chants by having the words set down for posterity. Although the details of Patrick's life are blurred (partly because his own Latin writings show no mastery of the subject), he was a Brit whose father was a Roman bureaucrat and, while young, he was captured in Ireland and spent six years in slavery as a herder; he escaped and was schooled in Latin and theology, though precisely where is mere speculation. Patrick returned to Ireland in 432 and set out to convert to Catholicism the people whose nation he had come to love. One result of these conversions is that Ireland by the sixth century had several established monasteries that were havens for the preservation (and copying) of manuscripts, culture, and learning.

After an invasion by Norsemen in the eighth century, Ireland was under Viking influence until the Irish king Brian Boru fashioned an army that fought for independence. In the eighth century, the population with the name *Gael* then, replaced the term *Erainn* that had been the name for the people of Ireland. In time, the term *Irish* became applied to the people of this nation, even though the term was derived from a Welsh word meaning ''savage.'' The natives, to distinguish themselves from the Viking conquerors, used Gael.

During the beginning of the Middle Ages, Ireland maintained a reverence for teachings of the Church and Church documents. In turn, the monasteries preserved the old Irish tales and accounts of heroes and everyday life. These clearly would not have survived had the monks not copied them into their manuscript books. Ironically, it was the Catholic nation's policy of putting no local ruler above the Pope in the Vatican that led to Ireland's long-standing domination by Great Britain. The only pope of English ancestry, Pope Adrian IV, in a political agreement, gave Henry II, the former Duke of Normandy (who gained control of England by invasion), permission to serve as overlord of Ireland. This decision to turn Ireland into a fiefdom was disputed by the Irish as an illegitimate transfer of power. Lands owned by the Irish were given to absentee landlords in Britain, creating a peasant class existing in woeful ignorance and poverty. In spite of Henry II's edicts maintaining that there existed separate areas of church and state, in Ireland even in the twenty-first century, that line of separation frequently dissolved.

Political, Social, & Cultural Bases: Just as religion influenced the daily life, social divisions, and political upheavals of Irish life for centuries, so too has it had a profound effect on education in the Emerald Isle. That very upheaval and strong allegiances to the Church interfered with the development of a unified system of education in Ireland.

In the late 1500s, coinciding with the growth of Protestantism in the country, non-Catholics had decidedly better schools. While Protestant diocese schools and ''royal schools'' set up by the Crown benefited the wealthier Protestant class, charity schools inadequately supplied the needs of the children of poor Protestants during the seventeenth and eighteenth centuries.

The Catholic poor were largely ignored, their children termed urchins. One minister in 1712 said that when all the needs of the poor Protestant children were met, the schools then should try to assist the Catholic children. The charity schools were run by the Church of Ireland and were similar to those in Britain. Funding was supplied variously by parishes, landlords, clergy, and district governing boards.

The Church of Ireland was declared the state church in 1537 and remained so until 1870. In 1539, monasteries were declared dissolved, although it took some years for many to disappear. However, during much of the sixteenth century, nearly all areas of the country outside Dublin and areas of Northern Ireland were Catholic. The Crown brought Scottish settlers to Northern Ireland that were members of the Church of Ireland. During the closing years of the sixteenth century, the Church of Ireland made a conscious attempt to establish parishes in every county of the nation.

The royal schools were grammar schools started at the insistence of James I, the king of England, Scotland, and Ireland, who ascended the throne with the help of Elizabeth I. (Elizabeth, in 1587, executed his mother, Mary (Stuart) Queen of Scots, with no protest from James, after she was found guilty of plotting the death of Elizabeth). James, who authorized a version of the Bible still used today, was an erratic man who believed in the divine right of kings. These royal schools were started in the 1600s by Church of Ireland bishops, but perhaps because they were founded under coercion, had many deficiencies and poor supervision.

Higher Education History & Background: Like other political areas, higher education in Ireland has always had confrontations, although much less in the late 1990s and early twenty-first century. In 1591 (or 1592, as some claim), the oldest continuous university in the country, the University of Dublin was begun, with Trinity College as its only college. Throughout its history, the school's agenda and even curriculum displayed a marked Protestant orientation, though the state had a loosely enforced policy of giving no money for denominational higher education.

In spite of politics and religious rancor at times, Trinity, since the 1700s, has been one of Europe's respected institutions, highly competitive and fiercely proud of the highest academic standards. Its senior fellows ran the school as a sort-of personal fiefdom, and seniority among fellows, rather than scholarly accomplishment, was used to establish a pecking order. By 1792, the institution enrolled 933 students. The Catholic Church in Ireland entered the realm of higher education in 1851, establishing Catholic University with famed author and educator John Henry Newman as rector; Newman, a one-time Church of England minister who converted to Catholicism and became a Cardinal, was world famous for his book, The Idea of a University, and other writings. In 1883, it became the University College, Dublin, operated under control of the Jesuit Order (known also as the Society of Jesus). When all of Ireland was under British rule, Catholics in the nineteenth century were given first the Queen's University and then the Royal University of Ireland. But the government found it could not run a school catering to just one denomination, and Royal University became open to anyone passing entrance requirements.

Until 1970 when a long-standing Catholic boycott was lifted, Catholics tended to avoid enrollment at the Anglican-run Trinity College in Dublin, perhaps the best-known Irish university. Some Irish students of Presbyterian background also preferred to pursue their higher education in Scotland, rather than accept the dominion of the established faith. In truth, this religious atmosphere could not be escaped at Trinity since many prospective religious leaders of the Church of Ireland took their degrees here. After 1970, the student population became more diverse.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The fundamental rights of citizens to an education are among the rights guaranteed in Article 42 of the 1937 constitution of Ireland. The constitution was largely prepared by New York-born Eamond deValera (1882-1975), Ireland's most visible leader following the granting of independence from Britain, and the country's two-time president. The constitution acknowledges the responsibility of the nation to work with parents to entitle children to receive an education without cost to the family.

There also have been a number of important statutes directly concerning education. For example, the Medical Act of 1886 was concerned with ensuring the quality education of doctors; the law stated that graduates had to be educated in surgery, medicine, and obstetrics. The education of girls was done sporadically until 1892, when a law mandating compulsory attendance was passed. At the time, it only assured students of a primary school education and little more. In 1972, the law was changed regarding compulsory education, raising the age of required education to 15 years old.

The Vocational Education Act of 1930 established Vocational Education Committees (VEC) throughout Ireland. Such committees oversaw what then was defined as ''technical and continuation education.'' Today, about 10 percent of costs pertaining to this area of education is VEC funded, while the Department of Education foots 90 percent of the costs.

Also related to education are the provisions of the Dublin Institute of Technology Act, 1992, and section 9 of the Universities Bill, 1997, that formalized by statute whether a new school of higher learning should be granted a charter or not.

If there is a deficiency in Irish education, it has been the lack of a guiding educational philosophy. However, the new curriculum that became effective around the turn

of the twenty-first century may be a step in that direction. Child-centered learning is the goal, along with developing skills in all subjects, particularly science and instructional technology, while also concentrating on training students in the traditional basic subjects.

EDUCATIONAL SYSTEM—OVERVIEW

Around 1800 the Anglican Church was responsible for supervising the education of boys and girls at both the primary and secondary levels. But many areas of the country that were heavily Catholic were resistant, and some rural Catholic areas either had no schools or offered little financial support for them.

There were a few superior schools in Ireland, the education historian R.B. McDowell has written—the well-funded Royal School at Armagh, Enniskillen, and Burrowes. But these were the exception. Hence, Ireland, in many pockets of the country, relied upon numerous private academies taught by schoolmasters of various skill levels and education levels to educate students in cities and rural towns. Some of the schoolmasters were clergy. Others were women, and limited their students to young ladies (in the parlance of the time). Some offered room and board or meals only for the young people. Standard subjects were elocution, arithmetic, bookkeeping, foreign languages, and geography. The girls' schools added ''finishing school'' classes to raise cultured pupils.

Almost as it was in the Middle Ages when scholars traveled far and wide to recruit students and teach, in Ireland during the late 1700s and early 1800s, poor, learned men traveled to offer classes in barns and anywhere else a few students might be assembled. The schools were nicknamed ''hedge'' schools because they were as apt to be taught under the shade of a hedge as in a building, and they were of uneven quality—as likely to be taught by an itinerant, unqualified teacher as a scholar. In time, however, even some of the secret, underground hedge schools became permanent fixtures in a community, and the classrooms sometimes were the equivalent of mainstream classrooms with proper textbooks instead of merely a handy Bible or popular novels.

Nonetheless, Catholics, in particular, considered them a better alternative to Protestant schools or no schooling at all. Estimates during the 1820s were that as many as 400,000 pupils were in attendance at hedge schools. There were 9,000 such schools in existence in 1824, according to *The Oxford Companion to Irish History.*

In sharp contrast to the hedge schools, a handful of day schools associated with the Church of Ireland opened in Ireland that were the equivalent of day schools for younger children in England. In 1811, impressed with those schools, some business leaders from Dublin (who were Quakers and members of other sects) resolved to try to improve educational opportunities for poverty-stricken youth. These reformers called their organization the Society for Promoting the Education of the Poor in Ireland, and their crusade resulted in the state granting funding. The Society also admired the pioneering work of English educational reformer Joseph Lancaster, founder (in 1801) of a free elementary school that organized one-room schoolhouses for the poor. Teachers enlisted their better students and designated them as monitors to train younger or less-quick-to-learn peers.

Following Lancaster's precepts, a monitorial system was installed at the Society's headquarters in Kildare Place in Dublin, and the hope was that superior teachers could be trained here. Each student monitor was given a bench with 10 students to school. In contrast to brutal methods of some schoolmasters, Kildare Place eschewed beatings in favor of shaming miscreants. But the daily practice of Bible reading infuriated Catholics in the country; they refused to accept the validity of the King James Bible and disagreed with the school'srefusal to interpret the scripture reading for students. By 1831, funding for the school dried up and went to the national schools where separation of church and state was followed in theory, though not in practice.

Enough students possessed sufficient literacy for the cities to support at least one newspaper and occasionally many papers. More sophisticated subscribers read *Hibernian Magazine.* Theatres did a brisk business entertaining a story-loving people. Dublin supported a lending library, and booksellers made a living off scholars and the well-to-do. But McDowell, the critic, said that the general state of Irish letters was poor then, the glory years of the great Irish playwrights at the Abbey Theatre and poets such as Yeats were still one century away. McDowell stressed that Ireland failed to measure up to comparison with the intellectual accomplishments of Scotland, let alone Britain.

Perhaps the most significant time in the establishment of a countrywide, state-aided educational system of elementary schools was in 1831, championed by Lord Edward G.S.M. Stanley. Conflicts immediately arose over the matter of keeping religious influence out of schools because the elementary schools were told that churches had the right to provide pupils with supplementary religious education. Even though, in theory, no aid was to be given to the primary schools and emerging secondary schools, in reality, religious influences permeated all levels of the educational system, particularly the school boards, which were headed by priests or vicars, depending on the district's religious makeup.

At first, however, Protestants were the main critics against ''godless'' schools, while Catholic leaders, wor-

ried about high illiteracy rates among their people, generally supported the state-run educational system, at least at first. Eventually, Catholics came to despise the system, saying students were exposed to pro-British and anti-Catholic influences. Nonetheless, the formation of national schools was an important step forward in the history of education in Ireland. It was intended to give an equal education to all pupils without meddling from churches. It gave Irish schools a semblance of structure, and it established a policy of local districts to pick up their fair share of costs for teacher salaries, school lots and building costs, and schoolbooks.

During the nineteenth century, as classes were taught in English, there eventually occurred a downplaying of Irish as the native tongue. During the twentieth century, following a great surge of nationalism after Ireland gained its independence from Britain, there was a clamor to restore the teaching of Irish once again in schools of all levels. However, as native speakers age and die, there are linguists who predict that the ''true Gaeltacht'' dialect may disappear; others are dedicated to its preservation. With Catholicism further losing its influence in the twenty-first century, some nationalists feel it is important to preserve all forms of the Irish tongue as a way to unify the nation.

Literacy: The INTO teachers union in 1998 founded a committee for the study of literacy issues in Ireland. The union announced that it was looking into strategies for assisting children with literacy problems. The committee concluded that Irish children too often perform below the literacy levels of other European countries. They have performed in substandard fashion in reading levels. INTO concluded that teachers must be recruited who are particularly trained in developmental studies and remedial education. In addition, areas of particular concern to INTO are adult literacy problems and the literacy deficiency of people living in disadvantaged areas of the Irish Republic.

Special Needs Education: In 1998, Micheal Martin, Minister for Education and Science, announced that the government had made the needs of special education students a priority. In particular, the government has ensured that children with autism will have automatic access to special classes. There also will be trained teachers available and the support and infrastructure to serve their needs. The pupil-teacher ratio of special needs youngsters is 6:1. The cost of the reforms in 1999 was estimated at nearly 4 million pounds.

Compulsory Education: In Ireland, compulsory education is from the age of six, theoretically. However, given the increasing role women have played in the Irish labor force, the majority of children enroll by the age of four or five. In 2000, some government spokespersons advocated cutting off free primary education at 18-years-old, but the proposal has met with parent indignation and media expressions of outrage in favor of giving slow learners all the time they need to graduate.

Female Enrollment: As in other countries, the education of girls and women was slow to take hold as a concept in Ireland. During the Middle Ages, Ireland truly was a land living in the Dark Ages when it came to schooling females. There were some gains in the 1500s, but those were lost the following century.

Not until the 1700s did some women from wealthier backgrounds not only show their aptitude for serious study, but also a number of female poets, writers, and intellectuals contributed significantly to Irish letters.

That somewhat of a turnabout had been achieved by 1831 is seen in the creation of a national school system that provided the same curriculum for males and females, as well as access to scholarships to acquire training to serve as teachers. However, clear to the end of the 1870s, those schools that charged tuition put emphasis on graduating ladies able to take their place in society.

Finally, in the late 1870s and 1880s, attitudes changed dramatically in Ireland, and women earned the right to pursue rigorous studies at the university level, forcing schools at the lower level to upgrade curriculum choices for women. At individual universities, administrators showed varying degrees of acceptance for female equality in education. In Belfast, Cork, and Galway, women who could afford the tuition took classes alongside males in the 1890s, but Dublin schools of higher education resisted compliance until 1910.

With the worldwide spread of feminism in the last half of the twentieth century, many inequities in the education of all females came under criticism. Slowly, the country moved ahead to enable women from lower income families to gain an education with the aid of public funding targeted for that purpose.

Academic Year: Many Irish schools are in session far fewer days than schools in other industrialized nations. The exceptionally shortened school calendar has been linked to dismal scores of many Irish students in science and mathematics, according to educational experts interviewed by *The Irish Times* in 1995. Only 35 percent of Irish schools remain in session for more than 175 days (with a high of 200 days), while 90 percent of schools in Scotland and England do so.

While 65 percent of Irish students who are 13-years-old go to school only between 151 and 175 days, in En-

gland and Scotland, less than 3 percent of students are in school for fewer than 175 days. Irish 13-year-olds scored next to lowest in a ranking of competing countries in science and scored eighth out of 14 in mathematics.

In 2001, as secondary teachers were involved in a dispute over salary, commentators noted that if higher pay scales were granted, teachers might be asked to teach additional school days to equal the number of days scheduled by English and Scottish schools.

PREPRIMARY & PRIMARY EDUCATION

Irish children tend to start school at a younger age than do other world children. Both junior and senior infant classes are the equivalent of preschool classes in most other countries. Ninety-five percent of all five- to six-year-olds are in senior infant classes, and 59 percent of four- to five-year-olds are in junior infant classes. Provision in national schools for children aged four and five is an integral part of the regular school system.

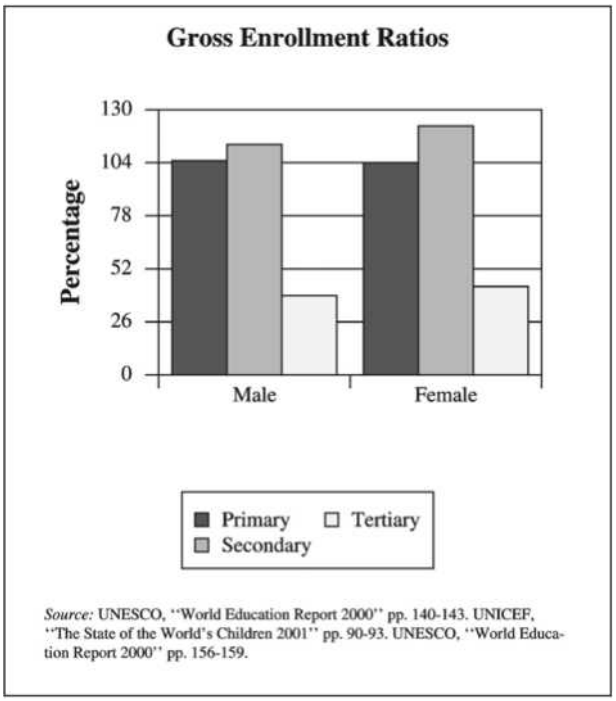
Children in infants' classes follow a prescribed curriculum that was introduced in September of 1999. Teachers are trained national school teachers; however, parents and media critics are loud in their denunciation of the preprimary school program and what is perceived as less-than-strong interest on the part of the state in this area. Eleven major reports from 1980 to 2000 have criticized the preschool program. According to the latest figures (1998), slightly more than one percent of three-year-olds in Ireland were in school full-time.

The Department of Education, in addition to regular classes offered mainly at private preprimary schools, also sponsors an Early Start Preschool pilot program, a program for children with disabilities, and the Breaking the Cycle pilot project for at-risk children.

Children are not legally mandated to attend school until their sixth birthday. Nonetheless, nearly 100 percent of five-year-olds and 52 percent of four-year-olds attend primary schools. Four-year-old girls are four to five percentage points more likely to be in primary school than are boys. Primary schools have expenses for the site and 15 percent of the capital costs paid by local communities. The state pays 85 percent of capital costs, plus an additional 10 percent in areas designated to be disadvantaged.

The Department of Education pays the salary of teachers. Schools are given a grant for a portion of expenses such as lighting, heating, cleaning, maintenance, and teaching materials.

At this level, Ireland's educators have been asked to increased emphasis on active learning and problem solving in their classrooms. Parent satisfaction with primary schools has generally been high. However, the Irish National Teachers Organization in 1994 conducted a study of six comparable schools in Limerick and Derry, finding wide differences in school funding between the two jurisdictions. Primary schools in the Republic of Ireland were said to be ''under-funded and under-resourced'' compared to Northern Ireland schools. The Republic of Ireland also displayed higher pupil-teacher ratios than their counterparts in Northern Ireland. The findings created considerable concern in Ireland, and led to cries for curriculum reform and additional government funding.



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93. UNESCO, ''World Education Report 2000'' pp. 156-159.

Six years later, a curriculum reform committee and consultants had addressed most of the major weaknesses in the primary system. A new primary curriculum was approved by the Minister of Education and introduced by the Department of Education in 1999-2000 to 3,000 primary schools for the first time since 1971, but some of the courses such as a social, environmental, and science course were delayed until 2002. Initial reaction to the curriculum was positive from both an important teachers union and the National Parents Council, both of which were involved in curriculum discussion.

More than 10 years in the writing, the new curriculum attempted to address low rankings in science among Irish students who had earned schools the criticism of media writers and parents. The curriculum emphasizes child-centered learning with skills development. Math (with an emphasis on problem solving), history, and geography were also given emphasis, according to *The Times Educational Supplement.* Science; educational

drama; and social, personal, and health education were added to the new curriculum.

The changes were implemented by 21,000 primary school teachers to their 460,000 pupils. The curriculum was broken into 6 main areas and then subdivided into 11 subjects. Other important aspects include a revised Irish curriculum ''based on a communicative approach;'' a new English syllabus; and updated educational methods in language learning, reading, and writing.

In the Republic of Ireland, the National Council for Curriculum and Assessment (NCCA), although not a statutory body, takes an advisory role to assist with the formation of a new curriculum. The NCCA consulted with course committees for each subject before sending a recommended curriculum to the Department of Education.

Textbooks: With the adoption of the new curriculum, educators and administrators have also discussed what they perceive has been an over-dependence on textbooks in the primary school curriculum. Educators say that too many teachers allow textbooks to drive their classes rather than using them as a resource in moderation.

SECONDARY EDUCATION

A national system of education was established in 1831 that was intended to be nondenominational, but struggles between the Catholics and Church of Ireland members made that a near impossible goal to accomplish. That principle was reaffirmed in 1878 when the government established the Intermediate Education Board.

In the first half of the twentieth century, Catholic parochial schools included both minor seminaries and elementary and secondary schools. Facilities were generally aged and decaying. More emphasis was put on religion and the preservation of morals than on academic preparation. Textbooks were outdated. In part, some of the blame goes to shortsighted religious leaders, but some also goes to the exclusion of Catholics from Irish schools for so many years.

One of the major reforms in Irish education occurred in 1947 when the Education Act provided free secondary education in national schools. Then, in 1963, the minister of education carefully restructured postprimary schools into secondary and vocational programs. This coincided with increased secondary attendance owing to an increase in the birthrate following World War II. The government announced its commitment to education as crucial to the growth of industry and professions, as well as the nation's economic health and stability.

Because the Leaving Certificate, administered in the thirteenth year, is the primary entrance requirement for higher education, secondary teachers put considerable emphasis into getting their classes fully prepared. With only so many students accepted, there is pressure since even students that graduate in Ireland do not automatically qualify to get in. Far more applicants send in their application papers than can be admitted. Acceptances are given based on merit and scores on the final secondary school-leaving examination. Places for medicine and veterinary studies are especially competitive.

Curriculum Requirements: Republic of Ireland schools have set Irish (Gaelic) as the primary language of instruction since 1922 (part of the mandatory curriculum in 1928), although English is so widely used that nearly all Republic of Ireland schools qualify as bilingual.

In the Republic of Ireland, the main academic subjects in the curriculum are mathematics, history, geography, and a choice of other recognized subjects, usually science. A revised curriculum in all of Ireland is being implemented, marked by increased science emphasis. Students are asked to observe, perform experiments, and develop reasoning and inductive skills.

Much of the push for increased science emphasis can be credited to an organization called Forfás, overseeing the National Policy and Advisory Board for Enterprise, Trade, Science, Technology, & Innovation. Forfás encourages and promotes the development of enterprise, science, and technology in Ireland, including support for education at all levels.

Educational System: Pupils that expect to apply to university take up to nine subjects and a minimum of six subjects. After three years of secondary education, students complete the junior cycle and the junior certificate is then taken. The certificate measures achievement, but it is not used by universities for admission purposes. At the end of the final year of secondary school, students take the leaving certificate. There are two levels of achievement: the ordinary level and the higher level. Although both cover the same school material, the higher level requires more sophisticated responses.

Expenditure: Secondary schools have 90 percent of total expenses for approved building and equipment costs paid by the government. Teacher salaries and allowances, with minor exceptions, are paid by the Department of Education. Schools are expected to operate within the limits of a budget provided to administrators at the start of the school year. A capitation grant pays for ordinary overhead, library books, and partial computer expenses.

Until late in the twentieth century, when educators placed increasing value on instructional technology,

computers were considered a luxury. If additional funding is required for computers, schools must participate in fundraising activities to meet the costs. Musical instruments and school trips also are paid with money raised through volunteer efforts. In 1994, critics of fundraising for free schools argue that the practice likely hurts the parents of school children in disadvantaged areas. Parents who are poor may feel obligated to make contributions and may suffer financially for their payments. Other critics say such parents have enough trouble putting money aside to send their children off to college eventually, as the poor of Ireland have long been underrepresented at the higher-education level.

Then too, in 2000 and 2001, employers have claimed that a shortage exists in workers trained to use computers, which has resulted in recent governmental attention to the perceived oversight. A national project called Schools IT 2000 was set in place to correct the computer shortages in education. To administer the program, The National Center for Technology in Education (NCTE) was established and asked to coordinate the program. An administrator and four staff members were hired to see that the directive would be carried out. The program is both exciting and extensive. Telecom Eireann gave each school a multimedia computer with an Internet connection. Also provided was a telephone line, free rental of the line for two years, and five hours of free Internet access.

Previously, the NCTE, together with the Department of Education and Science, provided schools with 15 million pounds in funding to buy 15,000 new computers and equipment in 1998 under the Technology Integration Initiative scheme. All schools in the free education system at primary and postprimary levels were given generous per-pupil grants. Because the equipment without teacher training is not useful, another 1.4 million pounds were granted to buy hardware for Teacher Training Institutions, Education Centers, and the School Integration Project. There also were nationwide seminars for teachers, and the NCTE provided hardware specifications and discounts from suppliers to help schools make wise computer choices.

Because teachers are expected to require computer support, the Schools Support Initiative developed a support network called ScoilNet, to give advice and assistance. The Department of Education and other offices are forming partnerships with corporations such as IBM as well. In 2001, arrangements were set in place for a National Policy Advisory and Development Committee (NPADC) to act as a support group for the Minister and the Department of Education and Science on the future implementation of computers and technology in the schools.

Foreign Influences on Educational System: Ireland continues to be an attractive destination for students pursuing an undergraduate, postgraduate, and professional education. Medical students find Ireland's prestigious programs, up-to-date facilities, and attractive setting especially appealing. The National University of Ireland or NUI, which offers a full-time undergraduate degree in Medicine plus specialist training at postgraduate level, reports that two-thirds of its full-time student population is made up of international students. The Royal College of Surgeons in Ireland (RCSI) attracts both undergraduate and postgraduate students from more than 40 different countries and from all five continents. More than 65 percent of places offered to undergraduates each year are allocated to students from outside Ireland.

Dropouts: Since 1988, an educational program for those leaving school early was operated with the cooperation of local education and labor training authorities. The Youthreach Program provides two years of education, training, and placement for those between 15 and 18 who fail to earn a formal diploma. In 1991, some 3,336 persons enrolled in Youthreach but, by 1995, that number had dropped to 1,630 boys and girls.

The first or ''Foundation'' year provides skills classes, on-site job training, general education, and counseling services. The second, or ''Progression Year,'' provides similar training, plus options such as training in specific skills, temporary employment, or additional education. In addition to secondary school dropouts, vocational colleges in Ireland have also become concerned about dropout rates for students that many educators perceive are rising at a troubling rate. Several colleges formed committees to get a handle on the problem in 1998. Colleges were also asked to compile accurate records showing what percentage of the entering class leaves prior to the start of the second year.

HIGHER EDUCATION

University, non-university, and private colleges provide higher education in Ireland. The number of applicants for places in third-level colleges outnumbers openings for students, and the dropout rate of first-year students is a national concern, causing critics to question the quality of the nation's secondary schools. Perhaps the most important occurrence in the behind-the-scenes running of Ireland's colleges was the establishment of a Higher Education Authority. This advisory board was an important adjunct to the minister for education, making recommendations on fiscal matters and on ways to upgrade colleges and universities. The Higher Education Authority and the Department of Education work in cooperative fashion. Higher Education in Ireland takes the form of universities, technology institutes, and colleges

for teacher education. Additional institutions provide specialized training in art, design, medicine, theology, music, and law.

Since the 1960s, industry in Ireland has reported a shortage in skilled workers, particularly, after 1995, those with sophisticated computer skills. Since universities were unable or unwilling to address these needs, the government of Ireland set up the National Institute for Higher Education (NIHE) to upgrade and start technical colleges graded as third-level educational institutions.

Higher education in Ireland has changed considerably throughout the past two decades. The number of students enrolled has increased markedly with the establishment of teaching institutions with a technology emphasis such as the Regional Technical Colleges (RTCs). Most institutions of higher education are state-supported, meaning they receive more than 90 percent of their income from the State. Since 1975, additional universities in Limerick and Dublin were opened, and the Institutes of Technology were expanded to take more enrollees. Disciplines gaining favor from students since 1965 are in the arts, social sciences, technology, and business. Also since 1965, Ireland's universities have experienced a significant jump in enrollment from 21,000 in 1965 to nearly 97,000 in 1997.

Since the passing of the Irish Universities Act in 1997, eight universities operate in Ireland. These are the University Colleges at Dublin, Cork, and Galway; the National University of Ireland (NUI); the University of Dublin (Trinity College); Dublin City University; University of Limerick; and Maynooth University. Each of these colleges offers courses as varied as social science, the arts, Celtic studies, law, medicine, dairy science, veterinary studies, architecture, and agriculture. In addition, there are a number of designated third-level institutions that interact with the Higher Education Authority. These are the Royal College of Surgeons in Ireland, The Royal Irish Academy, the National College of Art and Design, and The National Council for Educational Awards.

In Ireland there also is a higher education unit called non-universities, and in 2000 there were 14 of them located throughout the country, including Tallaght and R.T.C. Co. Dublin, which opened in September of 1992. They provide higher technical and technological education.

In 1995, the government published a document called ''Charting our Education Future'' that said the nation was striving ''to ensure the highest standards of quality in all fields, in order to provide students with the best possible education.'' The government's ''White Paper,'' as the report was called, said, ''the restructured Higher Education Authority will be responsible for monitoring and evaluating the quality audit systems within individual institutions. The system will be based on cyclical evaluation of departments and faculties by national and international peers preceded by an internal evaluation; arrangements for the implementation and monitoring of evaluation findings; and the development of appropriate performance indicators.''

The Department of Education, university presidents, and the Higher Education Authority developed performance indicators for higher education institutions and their faculties that assess all activities, particularly teaching and research.

Admission Procedures: Admission procedures for universities and colleges of higher education set their own minimum entrance requirements. The office that acts as a coordinator for applications is the Central Applications Office. Scores on the school leaving-certificate examination are used to reserve places for students on a point system.

Applicants may be admitted to an Irish university if they have earned a Leaving Certificate or diploma that signifies the successful completion of 13 years of schooling with a minimum overall average. (Prior to 1999, a student had to show evidence of passing the Matriculation Examination of the National University of Ireland; the exam was phased out in 1992). Most higher education institutions use the Central Applications Office in Galway to screen applications. The Central Applications Office was established in 1976.

Enrollment: According to the Central Statistics Office, in the decade between 1988 and 1998, the number of Republic of Ireland students enrolled in full-time or part-time undergraduate courses increased by 72 percent. Over the same period, postgraduate students more than doubled. Of the 89,500 students in higher education in 1994, approximately 52,000 attended at the university level.

Professional Education: An institute of higher education offering training in medicine began in Dublin during the seventeenth century, but it was run haphazardly until 1711 when a medical school opened at Trinity College, Dublin. Even then, very few doctors chose to earn their degrees here. Most preferred to study medicine at established, prestigious schools in Great Britain or other European countries. In the earliest days of medicine, surgeons were associates of barbers and belonged to the Barbers Surgeons Guild. In time, a Royal College of Physicians of Ireland (RCPI) was established in 1654. Next, Charles II chartered a Fraternity of Physicians in 1667.

In 1713, a Dublin physician named Sir Patrick Dunn died and bequeathed a chair of medicine to Trinity Col-

lege. Even by 1747, the number grew only to two additional distinguished professor chairs. In 1785 the school began a College of Surgeons. In 1816, the school was connected with a hospital and offered clinical studies, ensuring its reputation. Cadavers, as was the custom of the day as recalled in literature by Charles Dickens and Ambrose Bierce, were stolen from cemeteries in the night by grave robbers.

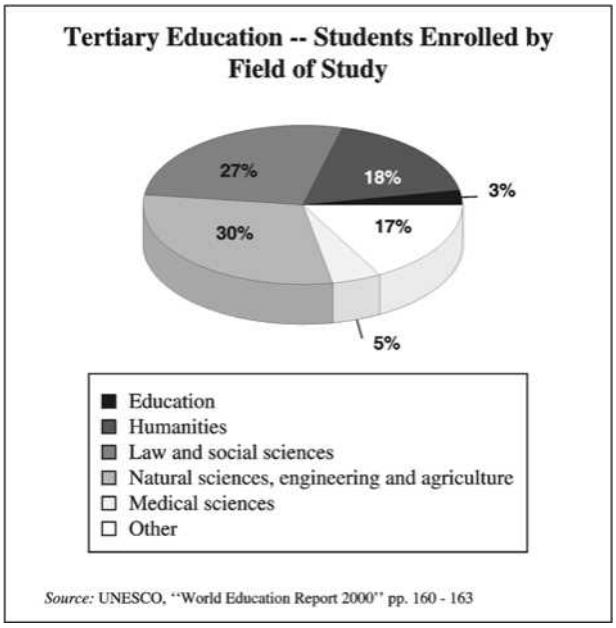
The Royal College of Surgeons in Ireland (RCSI) was established in 1784 and now is associated with NUI. Ireland's most prestigious medical school, it is housed in an early nineteenth century building on St. Stephen's Green in Dublin. The renovated building contains state-of-the-art computer laboratories; modern lecture, theatre, and seminar rooms; and laboratories.

During the late eighteenth and early nineteenth century, other prominent physicians expanded their practices by opening medical schools. A number of physicians in other cities also began to run them, but these failed to outlive the men who started them. In 1855, Catholic University also operated a hospital that eventually was taken over by University College, Dublin.

Members of the legal profession practiced law well before the twelfth century in Ireland. Formal schooling was required of attorneys during the sixteenth century. Prospective attorneys by 1628 were required to study at the Inns of Court in London, a professional school that, at the time, had been in existence for two centuries, for the required five years.

Catholics were prevented from becoming attorneys by means of a loyalty oath to the Church of Ireland that they were unable to take, lest their own Church excommunicate them. Lawyers who successfully passed the London Inns of Court and took the oath were admitted to the professional company of judges and lawyers in a society named the King's Inn (after the building that for a long time housed the society). Today, tradition continues as the Honorable Society of King's Inns and the Incorporated Law Society provide academic preparation in law for prospective attorneys to qualify respectively for barrister-at-law and for solicitor.

Vocational Colleges: By way of example, students seeking a career in tourism find an internationally acclaimed institute in the Shannon College of Hotel Management. It was founded in 1951 by educator Brendan O'Regan, as a source of trained managers for the Irish hotel trade. Shannon College is a hands-on college that uses internships to enable students to acquire on-site hotel experience to complement management training. Those earning the diploma in International Hotel Management are expected to demonstrate business skills, managerial skills, and fluency in one or more foreign languages. The National Council recognizes the school's diploma for Educational Awards, the National University of Ireland, and several prestigious industry associations such as The International Hotel Association.



Religious Institutions: Chief among religious institutions is the National University of Ireland (NUI), established in 1908. NUI is actually made up of three colleges: University College, Galway; University College, Cork; and University College, Dublin. The Royal College of Surgeons and St. Patrick's College, a training school for future priests, also are associated with NUI.

Private Colleges: In Ireland there are a small number of private colleges providing third level and professional education. By way of example, four of the major institutions are:

1) The National College of Ireland (NCI) located in Dublin is an independent institution specializing in industrial relations, management, and related areas; it offers a National Diploma in Personnel Management (4-year evening course) and a B.A. in Industrial Relations (5-year evening course) conferred by the NCEA.
2) The Shannon International Hotel School offers a four-year Diploma in Hotel Management. The final year includes a management internship in the United Kingdom or United States.
3) The National College of Art and Design (NCAD) offers sub-degree, primary degree, and graduate programs in its specialty areas.
4) The American College offers degrees and diplomas in the humanities, business, international law, and

psychology. Validation is from a university in the United States.

Degrees Offered: A bachelor degree is obtained after a three- or four-year full-time course or comparable period of part-time study. This degree is usually pursued in a particular subject or field of study. The Bachelor of Arts (B.A.) program requires three or four years' study, while Bachelor degrees in Medicine and Dentistry require six years of study.

Postgraduate Training: A Graduate Higher Diploma is generally obtained after one or two years of postgraduate study. A research thesis is generally required. A Master's degree requires course work, a research project, and examination in a specific field of study. The normal duration of study is from one to three years following the Bachelor degree.

The Doctorate is the highest academic qualification awarded in Ireland. The Doctor of Philosophy (PhD.) Degree, Doctor in Letters (D.Litt.), Doctor in Science (D.Sc.), and some others may be obtained only by research and are, in general, completed in one to three years after the Master's Degree.

National & Government Educational Agencies: Higher education in Ireland is managed only at the national level and not administered by regional agencies in Ireland. The government has entrusted its Department of Education to oversee and administer the country's system of higher education—known as the third level. The vocational schools, also known as technical institutes, get operating funds from the Department of Education; however, the Universities and some colleges of education apply for funding from the Higher Education Authority (HEA). Other third level institutions provide specialist education in areas such as the arts or the professions and business, but these, too, get the bulk of budgetary funding through the state.

The state has reacted to strong criticisms of its higher education facilities by taking a far-reaching role in educational matters. Most conspicuously, it founded the HEA in 1969 to keep a master plan for such institutions, as well as to possess budgetary powers. In addition, an agency was formed to monitor standards and curriculum matters in 1972. The National Council for Educational Awards (NCEA) oversees both undergraduate and graduate school matters under its jurisdiction. Another bureaucratic addition came about in 1976 to take over certain administrative duties such as processing applications from persons applying for courses at the universities, some specialty colleges, and a number of private colleges as well. This agency is called the Central Applications Office (CAO).

Expenditures: Public moneys appropriated for preschool, primary, and secondary schools fall short of those spent by many comparable European nations, but Ireland's spending on higher education compares favorably with rival countries, according to the Organization for Economic Cooperation and Development (OECD). In 1993, the Republic of Ireland spent 1.7 billion pounds (US$2.6 billion) on education. Areas where the Republic of Ireland falls relatively low in preschool, primary, and secondary education were pointed out by a study issued by the Organization for Economic Cooperation and Development in 1995 (though based on 1992 figures). The OECD finds Ireland deficient compared to other European countries in per-pupil expenditures at the preschool, primary, and secondary levels.

The Department of Education: The Department of Education administers public education, including primary, postprimary and special education. State subsidies for universities and third level colleges are given out through the Department. The three main levels of the education system are first, second, and third levels. The first and second level is referred to generally as primary and postprimary, respectively. The mission statement of the Department of Education says its purpose is ''to ensure the provision of a comprehensive, cost-effective, and accessible education system of the highest quality, as measured by international standards, which will enable individuals to develop to their full potential as persons, and to participate fully as citizens in society, and contribute to social and economic development.''

Nonformal Education: Teachers in Ireland frequently find teaching aids and sources from 1 of 30 part-time and full-time Education Centers in the country. These centers offer various support services and resources to teachers and to other partners in education. Two of the best known are the Blackrock Educational Center and Dublin West Education Center. These centers also keep an online presence with information on how to access contact persons and information.

In 2000 and 2001, many Irish children participated in a multi-center project called Write-a-Book. Meant to be a celebration of writing and artistic abilities by Ireland's children, not a contest, the student authors chronicle their lives, cultures, and homelands. Each participant receives a certificate. A few outstanding books are selected upon merit, and an Irish television star or media personality presents awards to the children.

Continuing Education: Students who do not enter a university or technical college but wish postsecondary school training frequently elect to take additional coursework in vocational schools. More than 30,000 part-time

students were enrolled in vocational, community, and comprehensive schools in 1994-1995. More than 300 courses are open to such students.

Vocational schools, as have other Irish higher education institutions, improved much in the 1990s. With industry jobs going begging in the late 1990s, many additional students found new institutions such as the Regional Technical Colleges (RTCs) a good fit for their needs. In 1996 the Minister of Education unfolded plans to also allow the Dublin Institute of Technology (DIT) to offer degree-granting programs for professional and managerial students.

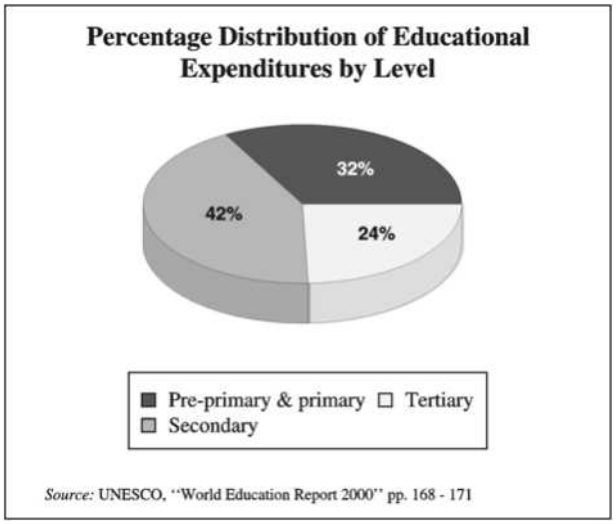
Distance Education: Taking courses via the Internet, television, video, and radio—distance education—can be taken in addition to regular university courses or in place of university courses. Distance learning is equal to the amount of work performed in a regular classroom, but it is done at a time and place chosen by the student. No formal entry requirements are required for applicants aged 23 and older, making distance learning particularly attractive to adults and students getting a second chance at a college degree after dropping out earlier in life. Students also have the option of taking courses through the established Open University and the developing Irish National Distance Education Center (NDEC) headquartered at Dublin City University.

For students willing to give up the benefits of classroom instruction and close face-to-face interaction with professors and their fellow students, distance education is an option worth taking to earn a B.S. or B.A. degree that could not be obtained by traditional means. Course offerings include selections from literature, philosophy, history, psychology, and sociology. Another option is a BSc degree in information technology. Students choose from a course menu including management science, computing, and communications technology.

TEACHING PROFESSION

In 1834 a systematic teacher-training program began in Dublin at certain model schools for male and female students. There were about 25 model schools there by 1850; the training period lasted six months. For a time, both Protestant and Catholic students attended these schools, but in the mid-1860s Catholic authorities forbade students from attending, not wanting the Protestant influence on the children. When teacher training became more formalized, the schools no longer were used to train teachers but, nonetheless, many of the schools continued to exist until the twentieth century.

Irish teacher training involves several differences between primary and second level schoolteachers. Second level teachers usually complete a primary degree at university and then follow up with a Higher Diploma in education at a university. Primary school teachers complete a three-year program, leading to a Bachelor of Education (B.Ed.) degree, at a teacher training college. St. Patrick's College, Church of Ireland College, St. Mary Marino and Froebel College of Education are based in Dublin. Mary Immaculate College is based in Limerick. One criterion for primary school teacher training in Ireland is proficiency in Irish.



Student-Teacher Ratio: In 1997-1998 the teacher-student ratio was 19 pupils per teacher in the Republic of Ireland. This was two more pupils per teacher than in Northern Ireland.

The Training of Agriculture Instructors: The government involved itself in national agricultural operations, such as the training of teachers in agriculture-related subjects, in 1899. Ireland that year created the Department of Agriculture and Technical Instruction (DATI), hoping that education and scientific farming methods could prevent a recurrence of the Great Famine that ravaged Ireland from 1845-1849. Heavily dependent upon potatoes, a non-native crop brought to Europe from South America by the Spanish in the sixteenth century, Ireland's potato crop was ruined by blight caused by a fungus possibly introduced with imported fertilizer. Up to one million people died from starvation and disease, and many more Irish emigrated to the United States and other countries.

In addition to agriculture, the maintenance of fisheries, and the keeping of agricultural statistics, the Department of Agriculture involved itself in the training of teachers in such areas as health, science, plant breeding, and animal husbandry. Unfortunately, the department failed to establish a clear division of powers with the

Congested Districts Board (CDB). The CDB, begun in 1891 as a board intending to improve agriculture in areas of extreme poverty, was given large amounts of money in its budget and the power to arrange training of agricultural instructors.

As is true of other areas of politics in Ireland, the DATI and CDB never could resolve differences. DATI ceased to exist in 1922 and a Department of Lands and Agriculture came into being. Although both groups were involved in strife, and the CDB was scored for chronic mismanagement of funds, a number of good instructors were trained, and Irish farmers and poor townspeople learned the dangers of relying upon a single crop for sustenance.

Students unwilling or unable to obtain a college degree may opt to attend classes and on-farm-site training to qualify for a Certificate in Farming. This three-year agricultural education and training program provides basic skills training in animal and crop husbandry, farm equipment and machinery, and environmental conservation.

The Farm Apprenticeship program is carried out by the Farm Apprenticeship Board. An apprentice begins the program with one year of courses at a recognized agricultural college and then begins an apprenticeship with a sponsoring farmer.

Unions & Associations: Three unions, the Association of Secondary Teachers, Ireland; the Irish National Teachers' Organization; and the Teachers' Union of Ireland represent Ireland's teachers. The Association of Secondary Teachers is the union representing secondary school teachers in Ireland. The Irish National Teachers' Organization was founded in 1868 and is the largest teachers' trade union in Ireland; it represents teachers at the primary level in the Republic of Ireland. The Teachers' Union of Ireland's teachers and lecturers work in vocational schools, community and comprehensive schools, Institutes of Technology, and colleges of education.

The reputation of the teachers' union was dealt a damaging blow in 2001, as media reporters, parents, and students condemned a pay dispute by secondary teachers who used their students as pawns in an effort to get the government to accede to their demands. The striking union, the Association of Secondary Teachers, Ireland, made an attempt to force the government's hand by claiming it might fail to process the Leaving Certificate examination needed by students for entry into Irish universities.

Just as upset as parents and students were teachers, among the lowest paid in Europe, and envious of Northern Ireland schools with better resources, who expressed anger and resentment over the nation's failure to reward their hard work as teachers with the competitive pay rate they felt they deserved. The government treated the teachers' demands as a bluff. By April 7, 2001, so many teachers had agreed to correct the Leaving Certificate out of concern for their students or fear for their jobs that the union clearly had been defeated.

The other unions also decried low wages but agreed to an arbitration process called benchmarking, which was intended to bring teacher salaries on a par with wages paid to other types of employee groups in Ireland.

SUMMARY

Since the 1960s, the Irish have been aware of serious deficiencies in the educational system. Reforms, however, have been incomplete and less than satisfactory, as several studies and self-studies note.

In 1966, a research team headed by educator Patrick Lynch completed a thorough analysis of the primary and secondary systems and produced a scathing report called ''Investment in Education.'' In 1967, a report completed by a special commission on higher education concluded that the third-level was no less problematic. Changes were implemented immediately, although these were less successful than ministers of education, parents, and politicians hoped they would be. The primary level revamped its curriculum. Smaller secondary schools with aging facilities and other deficiencies were consolidated with stronger schools into institutions with a modern look and characteristics. Of utmost importance, the government made it possible for many of Ireland's sons and daughters to receive an education at state expense.

The combination of free schools and better facilities pleased parents immensely. In 1965-1966, there were 143,000 students enrolled in postprimary schools. Fifteen years later, 301,000 students enrolled. For the immediate future, Ireland's educational prospects continue to look promising at the university level in particular. In 1995, the Steering Committee on the Future Development of Higher Education released projections of a total enrollment of 120,000 students in higher education by 2005. The predicted increase has been attributed at an economic boom, technological development, and greater opportunities for lower-income students.

According to a new report released in 2001 by census officials, more than 25 percent of all births in the Republic of Ireland now occur outside marriage. The information is contained in a new compendium publication *Ireland, North and South*—a statistical profile that has been jointly produced by the Northern Ireland Statistics and Research Agency (NISRA) and the Republic of Ireland's Central Statistics Office (CSO). The high number of children from one-parent homes is expected to have an effect on primary education in Ireland by 2005, and it eventually will affect secondary schools.

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—Hank Nuwer

ISLE OF MAN

BASIC DATA

Official Country Name:	Isle of Man
Region:	Europe
Population:	73,117
Language(s):	English, Manx Gaelic
Literacy Rate:	NA

Broadly speaking, the Isle of Man's educational system is similar to that of Wales and England. The Department of Education is funded by Tynwald (the legislative assembly on the Isle of Man) and operates independently of the United Kingdom's educational authorities. The goals of the Department of Education are to provide the nation with the skills needed to survive, prosper, and increase economic growth. The goal is to educate Manx children so that they can secure employment locally or globally.

The ages of compulsory education are 5 through 16. There are 35 primary schools and 5 secondary schools. In 2000, there were 6,250 students enrolled in primary schools and 4,110 11- to 16-year-olds in secondary schools. The French language is taught to all students beginning at age seven, and the native Manx language is optionally taught at this age.

Students aged 16 though 18 who wish to enter college or university enter into Advanced ''A'' levels. Approximately 35 percent of all students enter into sixth form. At this level, some courses are taught through modern computer and video telecommunications. In late 2000, to expand educational opportunities, the secondary schools and the Isle of Man College were being updated so that a common network could be formed.

In 1996, the Isle of Man Government joined forces with the University of Liverpool to enhance higher education. A long range plan is for Isle of Man College to become part of Liverpool University and eventually create the Isle of Man University.

—LeAnna DeAngelo

ISRAEL

BASIC DATA

Official Country Name:	State of Israel
Region:	Middle East
Population:	5,842,454
Language(s):	Hebrew, Arabic, English
Literacy Rate:	95%
Compulsory Schooling:	11 years
Public Expenditure on Education:	7.6%
Libraries:	1,180
Educational Enrollment:	Primary: 631,916 Secondary: 541,737 Higher: 198,766
Educational Enrollment Rate:	Primary: 98% Secondary: 88% Higher: 41%
Female Enrollment Rate:	Secondary: 87%

HISTORY & BACKGROUND

The history of the Israeli educational system reflects a consistent need to address diversity of population, conflicting points of view, and varying needs, while adhering to essential principles of excellence in curriculum and student development. The State of Israel was founded on May 15, 1948, under the auspices of the United Nations, ending a long period of British Mandate. During the past half century, Israel has fought a number of wars with neighboring countries.

Immigrants have reshaped Israeli society and its educational needs and system. Although Jews have been in Israel for centuries, settlement of the modern state has occurred through six major waves of immigration. The first of these in the late nineteenth century included mostly Jews from eastern Europe, followed by a largely Russian group who went to Israel following the 1905 Russian Revolution, and the pogroms in Russia. These immigrants were particularly interested in establishing a collective and collaborative society, thus, they were the force behind the formation of *kibbutzim,* or collective settlements.

The first third of the twentieth century also brought additional Jews from Europe, particularly following World War I, as antisemitism there escalated. This immigration was supported by Britain's Balfour Declaration in 1917, which committed Britain to help create a Jewish homeland in Palestine. Britain received a mandate from the League of Nations in 1923 to govern Palestine, further enhancing immigration. However, Arab residents of the area resisted the growing immigration pattern and the British then attempted to limit the numbers of immigrants.

Large numbers of German Jews arrived in Israel in the period immediately preceding World War II, as many sought to escape the Nazi regime and its persecution of Jews. These immigrants were generally wealthier than most of those who moved to Israel before them, and so brought capital, trade, and industry. Modern Israel has considerable ethnic diversity, because current inhabitants consist of both *Ashkenazim* (i.e., Jews from European countries), and *Sephardim* (i.e., Jews from the Mediterranean, Africa, and other parts of the Middle East). Additional immigration from a variety of source countries followed the war, particularly after the independence of the state of Israel in 1948. The last major wave of immigrants arrived in the early 1990s, coming from Russia and Ethiopia.

Contemporary Israel is a country of about 8,000 square miles and almost 6 million people. More than 80 percent of the population is Jewish, though they are not homogeneously religious. The rest of the population consists of other groups, mostly Arab. There is a separate Arabic educational system, in which Arabic is the language of instruction.

In addition to the capital city of Jerusalem, there are four other major cities: Tel Aviv, Haifa, Holon, and Petach Tikva. The government, headed by a Prime Minister, is a parliamentary democracy, with leadership in the *Knesset* (Parliament) achieved through a coalition of various parties and factions. Elections are held every four years unless the government is dissolved and elections occur sooner.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The formation of the educational system of Israel has come about through a series of laws setting up the system and making changes within it to address diversity issues and problems. It is a highly centralized system, overseen by the Ministry of Education, and Culture and Sport, including separate schools for the Arab and Druze segments of the population. The school system has two major goals: providing equal educational opportunities to all segments of the population, and integrating the large numbers and varied groups of immigrants into the country and the culture.

The basic arrangement of primary and secondary schools and a variety of institutions of higher education, both academic and vocational, has been in place for most of the twentieth century. In addition, the laws provided structure for compulsory education and unified some aspects of the curriculum. Five major pieces of legislation have contributed to the formation of modern Israeli education, along with a variety of other regulations adopted by the Knesset. In 1949, the Compulsory Education Law provided free and required primary education for children between the ages of 5 and 13, requiring 1 year of kindergarten and 8 years of primary school. It was later amended to expand the program to children beginning at age 3.

Subsequently, the government has extended compulsory education through grade 10 and offered free public education through grade 12. Schools may be state schools or state religious schools, as provided for in 1953, through the State Education Law. Among the state schools are the Arab state schools that use Arabic as the language of instruction. This law also allows for nonstate education, mostly through private religious schools, both Orthodox Jewish schools and Christian schools of various denominations.

In 1958, the Council for Higher Education Law centralized and formalized higher education in Israel through the creation of the Council for Higher Education, the central authority for all forms of higher education. It is chaired by the Minister of Education and Culture. The Council oversees the funding, planning, accreditation, degree offerings, academic freedom, and levels of autonomy for all institutions of higher education in the country.

In 1968, the School Reform Act revised the structure of the education system. This Act was intended to replace the eight years of primary education and four years of secondary education with a new structure. As a result of the change, students have six years of primary education, three years of junior high school or intermediate education, and three years of high school. For various sociopolitical reasons, the new structure has only been partially implemented, so that some students still receive the eight-year primary education before moving to grade 9 in junior high (Iram and Schmida). A second goal of the Reform Act was to provide a secondary education for all, partly through expansion of vocational education. There was also a greater need for vocational training in the areas of technology, mechanics, and related areas (Iram and Schmida).

In 1990, the Long School Day Law extended the school day to 8 a.m. to 4 p.m. for schools where students were doing inferior work in comparison to students in other parts of Israel. The extended hours made it possible for the schools to provide additional small-group instruction, particularly in Hebrew and in mathematics, to help students learn more effectively.

EDUCATIONAL SYSTEM—OVERVIEW

There are four levels of education in Israel, beginning with a preprimary or nursery school level and continuing through primary and secondary levels to higher education of several different types. Free and compulsory education begins with two years of nursery school starting at age three, and a year of kindergarten at age five. The addition of two years of nursery school was instituted with a change to the Compulsory Education Law in 1984 (Iram and Schmida). Also the primary school years are free and compulsory (grades 1-8). Since about 1963, grades 9 and 10 have also been free and compulsory. Secondary education continues through grade 12 and is free, though not compulsory.

There are three types of high schools: the academic high school prepares students for higher education and culminates in a matriculation certificate; the vocational technical high school prepares students for technical or practical careers in engineering and other fields; and the comprehensive high school offers both types of programs. At the postsecondary level, there are training institutions of several different kinds, offering preparation for primary school teaching, nursing, and other technical and semiprofessional careers. There are seven universities offering bachelor's, master's, and Ph.D. degrees. Admission to a university requires that students pass the *bagrut,* or national matriculation examination.

The academic year runs from September through July, 6 days per week, with about 35 hours per week devoted to school. The language of instruction in Jewish schools is Hebrew; the Arab schools use Arabic. All students study English beginning in the primary school years, either in grade 5 or grade 6. Several strategies have been used to support computer use in the schools, beginning in 1998 with the installation of computers into virtually all primary schools across the country (Schramm). The second step is intended to assist with connections to the Internet and to in-service training for teachers.

The curriculum throughout the Israeli educational system is highly standardized and centralized through the Ministry of Education and Culture. The Ministry oversees all levels including higher education; the latter is controlled by the Council for Higher Education. The curriculum addresses the diversity of the population in a number of different ways above and beyond the basic divisions among the state and state-religious schools and private schools.

PREPRIMARY & PRIMARY EDUCATION

The preprimary educational program developed from the traditional Jewish *Heder* (translated from Hebrew as room), a form of early childhood education com-

mon among Jews in the Middle Ages. In the Heder, boys from age 3 to 13 would study Hebrew and learn religion from a single teacher. By the beginning of the twentieth century, Israeli schools had begun to develop kindergarten and nursery school programs consistent with modern concepts of early child development. These programs entail general preparation for school in three areas: social skills, Hebrew language and cultural study, and some academic preparation for reading and writing. The goal of both nursery school and kindergarten is to help unify the country by offering equal educational opportunities to all students and to help improve children's chances of success in all their education.

The primary school system ranges from six to eight years, depending on whether a particular school has changed from the old (eight/four) pattern of longer primary and shorter secondary schooling to the newer one (six/six). Historically, prior to Israel's independence as a country, there were several competing approaches to primary education. The chief difference among these approaches concerned the amount of time devoted to religious studies as opposed to secular subjects. A secondary issue concerned the use of Hebrew as the language of instruction, a matter settled by the end of World War I with the widespread use of modern Hebrew as the language of instruction in the schools. The State Education Law of 1953 created the configuration of state or state- religious schools, and private religious schools.

The primary schools address issues that arise from the diverse population of Israel and its large immigrant groups. The dual goals of equality of opportunity and integration into Israeli society provide the focus of instruction in the primary school system. Failure to achieve these goals created a need for major reform of the educational system. The reform began in 1968 with the School Reform Act. Parental involvement in the schools has also shifted over time, with some parents seeking a greater degree of choice in terms of their children's enrollment in a particular school. Parents also sought control over curriculum, requesting enrichment in both creative and academic areas. By the 1990s, some specialized schools with enhanced curricula had begun to develop as a result of parental involvement. There was also significant opposition to such arrangements by other Israelis and by professional educator groups, because they were perceived as giving rise to segregated schools and to an elitist form of education; thus, the government provided no additional support for them.

The curriculum of the primary schools is set by the Ministry of Education and Culture. It includes the usual school academic subjects: science, math, geography, history, and so forth. In all schools, students also study the Bible and *Talmud* (Jewish tradition), with more time allocated to these subjects in the state religious schools than in the state schools. In language study, children are taught Hebrew language and literature, because among immigrant groups Hebrew may not be the native language. The study of English as a first foreign language is required beginning in grade 5 or grade 6, though in a few schools French is required in place of or in addition to English (Bentwich). Two other areas included in the curriculum are manual training (woodwork or metalwork for boys, domestic science for girls, and agriculture for all) and social education (current affairs, proper behavior, respect for property, etc.). There are additional co-curricular activities such as field trips and clubs to give students opportunities for social education; co-curricular activities thus address the goal of helping immigrants become integrated into Israeli society.

Students generally proceed together through the education system as part of a cohesive group. Each school year, they are not rearranged into different classes, but instead, stay together with the same group through their entire education. Considerable emphasis is placed on making sure that everyone stays with the group (i.e., remediation for slower students as necessary); less emphasis is given to enhancing opportunities for the more able students.

This strategy is used deliberately as a form of preparation for compulsory military service for all Israelis at the age of 18. When young people enter the military, they are already part of a unit with others they have known for many years, creating a sense of equality, community, and mutual responsibility. Once in the army, they will function more effectively as a unit. In addition, and of necessity, primary schools in Israel provide instruction for all students in how to respond to a security emergency (Garfinkle).

Primary education is widespread. It provides students with basic instruction in conventional school subjects, languages, and religious studies while it builds group cohesion. The diversity that is the result of Israel's immigrant population is addressed through the curriculum and supplemental activities, allowing new citizens to be integrated into the society through equality of opportunity within the educational system.

SECONDARY EDUCATION

Prior to Israel's independence and in the first years of its existence as a country, secondary education was funded by tuition and was not mandatory. Following the educational reforms of 1968, all students were required to attend school through grade 10 and there were no tuition charges. These changes came about as a result of a perceived failure of the schools to provide equal opportunity, especially for disadvantaged students, and as a result

of the failure of the schools to assist with the integration of the various immigrant groups into Israeli society. Another aspect of the educational reform of 1968 was to abolish a previously used screening test that identified students who qualified for the academic high school. Primary school students were then able to move to one of the three forms of secondary education without any selection process.

The academic high school consists of a three or four year program of study that prepares students to take the *Bagrut* exam (which translates from Hebrew as matriculation); passing this examination is required for admission to any university in Israel. The curriculum of the academic high schools is highly structured and focused on the subjects and skills needed to perform well on the matriculation examination. The examination system has been revised a number of times and in a number of ways, including changes to the numbers of subjects on which students are examined, the use of term papers in some subjects in place of formal written tests, and the use of varied levels of achievement on the exams instead of a simple pass-fail system. Despite its disadvantages and problems, the system remains in place and is considered to be the highest standard for academic educational achievement. Students who succeed in the academic high school are those most likely to go on to a university and be successful members of Israeli society.

A second type of high school program is vocational in nature. Like the academic high school, students complete a three or four year program of study that prepares them for semiprofessional careers in electronics, other technological areas, practical engineering, data processing, and so on. Because of changes in technology resulting from the development of computers, a special committee recommended substantive changes to vocational education to the Ministry of Education and Culture in 1992 (Iram and Schmida). The proposals include a broader preparation in science, a more academic curriculum to prepare for the matriculation examination, and a general focus on technology for all students.

The third type of high school program is centered in the comprehensive high schools. These schools have developed over time and through a series of reforms and modifications to their structure and curriculum. The present configuration consists of a six-year program of study, including both junior high and high school, and is most commonly found in the new towns and settlements rather than in the major cities of Israel. In these schools, both academic and vocational programs of study are offered, and they are considered to be equal in value. The student population is more heterogeneous, supporting the integrative function of the schools in Israeli society more generally. The comprehensive schools make a concerted effort to prepare all students to pass matriculation exams successfully, regardless of their chosen curricula.

Language & Literacy Issues: Israel's educational system has taken a unique approach to language and literacy learning that arises at least partly from the history of the country and from the history of Hebrew as a language. The development of modern Hebrew results from the efforts of one man to transform the language of rabbis and scholars from a language of prayer and sacred text to a living language suitable for a growing country. Eliezer Perlman, who adopted Ben-Yehuda as his last name, a Russian Jewish immigrant and philologist, took it upon himself to revive Hebrew. In 1881, Ben-Yehuda and his wife emigrated to Palestine; Ben-Yehuda felt that the absence of a national language there was an important problem pertinent to the development of a national sense of identity. Arabic, Turkish, French, Russian, and other languages were used by various groups within the region of Palestine, but no one language was widely used. Ben-Yehuda thus resolved to help develop Hebrew as the national language.

Besides the absence of a national language in Palestine, there were two other problems that contributed to Ben-Yehuda's work. In the developing Jewish community within Palestine, Hebrew was used as the common language among Jewish immigrants from a variety of countries. It was apparently not used in a reduced, pidgin form, because these speakers could use the full form of the language, but it was not yet exactly a common language because it was not being used as the language of government, business, and education. In addition, Hebrew was the ancient language of the region and so had a kind of authority enjoyed by no other language spoken in the region.

Linguistically, the problem with Hebrew was not in the syntax or sentence structure, but in the vocabulary. The syntax did change some as the language was revived, with Ben-Yehuda changing the basic structure of simple sentences so that they began with a verb rather than the subject, following the syntactic pattern of Arabic. The phonology and orthography were also acceptable, though there were some irregularities in the spelling system that Ben-Yehuda tried to address with mixed success. The major need, though, was for a greatly expanded vocabulary that would allow speakers to discuss contemporary issues and various aspects of modern life. By the end of World War I, Hebrew had become the predominant language in Palestine and it would be important in the founding of the independent state as well, including a specific role in the educational system.

Ben-Yehuda was not an educator, but a writer and editor of small newspapers and other publications. His

major strategy for enhancing and updating the vocabulary of Hebrew was to research the Semitic roots of words and use those roots to create contemporary forms. In 1904, Ben-Yehuda published the first volume of what would ultimately be a 17-volume comprehensive dictionary of Hebrew (Sachar 83). In order to spread the newly created language, though, Ben-Yehuda needed the help of the educational system in Israel. With intensive efforts he achieved ultimate success.

The various waves of immigration brought speakers of many different languages. The schools they established or attended used the native language of the local immigrant group, German, Russian, and so on. Many of the immigrants spoke Yiddish and it, too, was used in the schools in some places. By 1903, there was a Hebrew Teachers' Association, supporting teachers across the country who wanted to use Hebrew as the language of instruction in the schools. Zionist settlers began using Hebrew exclusively in their schools.

A crisis over the language issue was prompted by the development of the first institution of higher education, the Technion, in Haifa. The Technion's origin was supported by donations from Russian and German sources prior to its official founding, and overseen by German administrators who wanted, naturally, to use German as the language of instruction. Moreover, German had a full vocabulary for dealing with technical subjects, whereas Hebrew's vocabulary was still quite limited. Zionist settlers were dissatisfied, and Ben-Yehuda was infuriated by this move. The Hebrew Teachers' Association went on strike over the issue, and ultimately, the directors of the Technion agreed in 1914 that all courses would be taught in Hebrew (Sachar). By the time of the 1916 census, 40 percent of the population spoke modern Hebrew as their first language (Sachar). The schools and the teachers played a key role in establishing Hebrew as the national language and language of instruction in the schools of Israel.

In modern Israel, Hebrew is the language of instruction and English or French is the required second language in all schools, beginning in the primary years (grade 5 or 6). Literacy rates are very high in Israel; the World Almanac estimates the literacy rate at about 96 percent as of 2001. There are large numbers of publications of all kinds, including more than 24 daily newspapers and many periodicals, mostly in Hebrew (Sachar). Book publishers and libraries abound in the country.

For the purposes of supporting new immigrants and fostering their integration into Israeli culture and society, there are a number of *ulpanim* or intensive Hebrew language schools. Although there are fewer such schools now than in the late 1970s when immigration to Israel was very high, these programs still offer intensive study of Hebrew, either for six months in a day program or for a year in a less intensive evening program. An ulpan may also be offered on a kibbutz, in combination with a work program or as part of an overall longer residential resettlement program for new immigrants.

Vocational Education: The picture of vocational education in Israel is quite complex, both in terms of the development of the system and its position in the overall educational system. In general, the goal of vocational education is like the goal of the education system overall: to offer equality of opportunity while addressing diverse needs in the population, and in the economy. The complexity of the situation is further reflected in a general trend toward more academic education for all students and a trend away from vocational training of any kind in the schools.

The vocational schools have a mixed sponsorship and an assortment of different configurations in their programming. Some schools are sponsored by voluntary organizations such as the Organization of Labor and Vocation (ORT) or the Women's Organization for Israel and Torah (Amit). Others are sponsored by the cities or by the government. Although the curriculum is under the control of the Ministry of Education and Culture, some programs are overseen by the Ministry of Labor and Welfare. There are also the comprehensive high schools within the state system, which offer vocational programs in combination with more traditional academic programs.

There are four different arrangements of vocational programs. The first of these leads to the matriculation exams and certificate described above, with qualifications in technological subjects. Students who successfully complete the matriculation exams of this kind are eligible for higher education. A second arrangement leads to a final certificate and trade diploma. Students who complete this course are then qualified to work in their specialized field. A practical vocational course comprises the third plan; this type of study leads to certification by the Ministry of Labor and Welfare. The last possibility is a ''guidance'' course for the least able student population. The most sophisticated technological training is available only to the students in the higher levels of the system. Increasing numbers of students have been enrolling at this higher level of study and very few students now enroll at the lower levels.

In addition to these varied arrangements within the regular secondary education program, there are part-time vocational schools. These are closer to an in-service kind of program, offering practical occupational training without the academic preparation. A different approach is offered by the industrial schools, jointly run by the government and individual industries. The courses of study in the industrial schools provide a form of on-the-

job training but lead to certificates at three levels: technical, regular, and practical tracks.

The net impact of the vocational system has been to separate the more academically talented students, who are generally of European/Ashkenazic background from the Oriental/Sephardic students who tend to be less talented academically and less capable as students, according to Daniel Elazar. At the same time, offering universal secondary education opened the door to greater equity of treatment of the two groups, giving rise to the expanded curricula that lead to the matriculation exams and opened the possibility of higher education to this segment of the population. Increasingly, students with vocational interests are enrolling in comprehensive high schools where vocational and academic preparation are combined; these programs enable more students to succeed in the matriculation examinations and then to proceed to higher education.

The vocational education offered in Israel continues to struggle with the various competing needs of students and society, attempting to offer a variety of kinds of programs and situations to respond to changing needs.

Arab Education/Multicultural Issues:

Arab Education: One of the key problems facing Israel's educational system is addressing the needs of its Arab students. On the whole, the schools that Arabs attend are not as good as those that Jewish students attend in Israel, resulting in fewer students in the preschool and kindergarten classes, lower overall attendance rates, and fewer graduates. According to Schramm, the enrollment of Arabs in the twelfth grade is 57.8 percent compared to an 87.5 percent enrollment among Jews. Arab education is one area where Israel has not met the needs of a diverse population very effectively. Although the government has made some effort to improve the Arab schools, they lack services considered routine in Jewish schools such as psychological counseling and routine medical services, extracurricular activities of various kinds, library facilities, and additional instruction in reading.

Part of the difficulty with Arab education lies in the teaching staff. The teachers in Arab schools are not nearly as well trained as those in Jewish schools. Their preparation was generally shorter than that of Jewish teachers. The teacher training institutions for Arab teachers did not have as high a level of expertise as the Jewish teachers' colleges. One result of these weaknesses has been that there has been a teacher shortage in the Arab schools. The weakness in teachers and their training plays out in the schools, in that the student/teacher ratio is higher than it is in Jewish schools and Arab schools are also larger in terms of total enrollment than Jewish schools.

Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

Another aspect of the difficulty in Arab schools has to do with relationships within the school itself. Teachers have absolute authority, so that students seldom express views different from those of their teachers. The teachers are locked into an authoritarian hierarchical structure, supervised by inspectors who ultimately report of the Ministry of Education and Culture. Teachers have little incentive for creativity because of the controlled structure in which they work. Their relationship outside of school to a *hamula* (Arab kinship group) may affect their work. The tensions between or among different kinship groups of this kind also sometimes carry over into the schools and impinge on teachers' effectiveness.

The Arab schools underwent major curriculum review and reform from the mid-1970s to about 1990. Among the changes put into place were additional attention to Arabic language and literature along with Hebrew language and literature, study of the history of the state as well as its culture, and more focus on religious studies including the history of Islam and its key beliefs. However, Arab education still falls far behind Jewish education in Israel and requires additional reform and improvement.

Multicultural issues: The Arab group within Israel is not the only significant group in the total population. As a result of the various waves of immigration both before and after Israel's independence, its society is highly diverse in terms of culture, ethnicity, and national origins. The schools are the major resource for integration of these diverse groups into Israeli society, particularly through the teaching of Hebrew and through the mandatory curriculum followed in the primary schools. Since

the early 1980s, the school system has taken a multicultural approach to fostering integration of diverse groups.

Presently, the schools focus on trying to find common ground between Jews of the Orient and Jews from the West, between religious and nonreligious Jews of various types, and between Arabs and Jews. Although promoting integration and unity, school programs also support individual preferences and recognition of each distinct group's contribution to the society. Parents have also been granted the right to choose schools for their children, and some distinctive schools that offer specific experimental or diverse curricula are available.

As with the Arab schools, some problems persist. The government has attempted to address some of the difficulties through additional funding, focused in part on bringing Oriental Jews' socioeconomic conditions closer to those of European and Ashkenazi Jews. Neighborhood renovation projects and additional funding for the schools have been only partly successful in addressing the persistent inequities between these groups. Efforts to address the differences between the religious, and notably the ultraorthodox groups and nonreligious Jews have also been problematic. One example of the kinds of problems that persist is reflected in the continuing use of ability grouping in the junior high school level; this strategy resegregates classes, a move contrary to the goal of building an equal and cohesive group of students. Thus, as in the Arab schools, much work remains to be done.

HIGHER EDUCATION

Higher education in Israel consists of universities, other degree-granting institutions, teacher-training institutions, regional colleges, and academic institutions from abroad that offer programs but confer degrees in their country of origin. The universities have an independent legal status as mentioned previously, under the administration of the Council for Higher Education.

There are seven major universities in Israel. The first three of these were founded before Israel's independence as a nation in 1948, including the Technion or Israel Institute of Technology founded in 1924 in Haifa, Hebrew University in Jerusalem, founded in 1925, and the Weizmann Institute of Science in Rehovot founded in 1934. Since 1948, four other institutions have been established: Bar-Ilan University in 1955, Tel Aviv University in 1956, Haifa University in 1963, and Ben-Gurion University in 1969 (Iram and Schmida).

In addition to the universities, there are other types of higher education in Israel, including an Open University, teachers' colleges, vocational institutions, and other tertiary educational institutions. The universities form a separate and distinct category from the ''other'' institutions. The distinctions are made in terms of the degrees offered by the various institutions and in terms of how each type of institution is funded. Thus, the seven universities grant bachelor's, master's, and doctoral degrees in a variety of areas, including humanities, social sciences, law, medicine, engineering, and so on. They are funded exclusively by the Council of Higher Education.

The Open University offers only the bachelor's degree in humanities, social sciences, mathematics, and natural sciences. It operates under the authority of the Council for Higher Education and, according to the Council, enrolls more than 30,000 students (Schramm). The programs include individual study through written textbooks and other media, or alternatively, group study. Under the individual study approach, students work on materials as convenient and attend tutorial sessions every three weeks at centers located throughout the country. Under the group study approach, students do a considerable amount of work on their own using Open University texts and materials, but also attend weekly meetings at regional and municipal colleges or at sites associated with the seven major universities. The Open University draws students from every age group and sector of the population.

The Open University also offers college-level courses to students still in high school. A program approved by the Ministry of Education and Culture in 1999 allows high school students to enroll for university courses leading to an advanced high school diploma (Watzman). The additional work yields college credit and will demonstrate a student's ability to do college work. For this reason, advanced courses through the Open University may be used in place of the national Bagrut examinations for college admission. An important advantage to this program is that courses from the Open University do not require computer access as they are completed through special materials and telephone connections or the periodic meetings described above. Thus, these courses are available to everyone and offer equal opportunities to students regardless of their socioeconomic background. Moreover, there is financial aid available to high school students for enrollment in Open University classes, both through the Ministry of Education and Culture and through private foundations supporting the program.

The rest of the nonuniversity category, in addition to the Open University, includes seven institutions of higher education that award professional bachelor's degrees. There are also nine teachers' colleges, accredited by the Council for Higher Education, that offer the bachelor's degree in education. These two types of institutions are funded by the Ministry of Education and Culture, like the state and state-religious schools at the primary and sec-

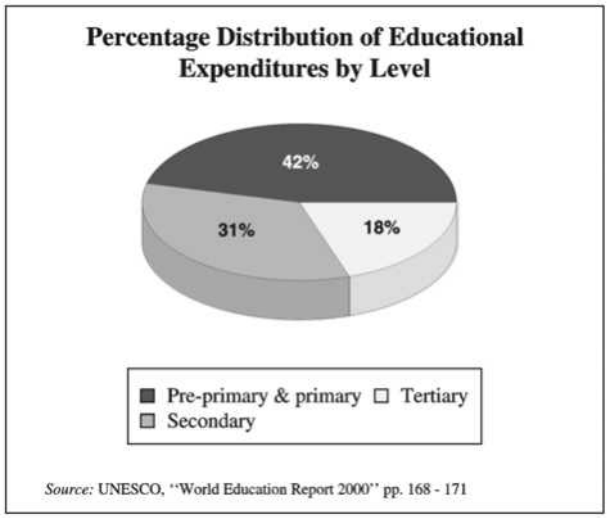
ondary levels. Finally, there are 11 regional colleges supervised by the Ministry and the Council for Higher Education.

These regional institutions offer bachelor's degrees in particular areas of study. Their academic offerings are the parts of their programs supervised by the Council. They are intended to be centers for adult and continuing education and are part of an attempt to make higher education more accessible to the entire population of Israel. They are funded by the Ministry of Education and Culture, by local authorities, and by the Ministry of the Interior. From outside the country, there are extension programs offered by at least three institutions under the auspices of the Council for Higher Education. These programs award degrees outside Israel and are not essentially part of the national system of higher education.

The whole of the Israeli system of higher education cannot be easily compared to the systems of most western countries because of the nature of the student population and because the way programs are structured. Most students attend an institution of higher education after they serve in the military immediately following the completion of secondary education; the compulsory military service entails a term of three years for men and two years for women. As a result, typical undergraduates at colleges and universities in Israel are in their 20s. Almost half the population in this age range enrolls in some kind of higher education, a higher rate than that of many developed countries according to Iram and Schmida.

The structure of the programs also makes comparison difficult. Most bachelor's degree programs require three years of study and involve study in two departments selected by the students, providing they are admissible by department criteria. Professional studies in fields such as law and medicine begin immediately in the undergraduate program and require three to five years for completion, with the master's degree requiring three additional years, and the Ph.D. three years beyond that. Students seeking doctoral degrees typically plan their own programs of research and study.

There are a number of changes occurring in the system of higher education in Israel, focusing on the key issues confronting the other levels of education: equality of opportunity, excellence, and diversity. On the one hand, the goal is provide high quality of education and to have a structure that is efficient and effective. Both internal and external reviews have suggested the need for reform and rethinking of programs, as well as changes to the funding structure and control by the government. On the other hand, the goal of higher education in Israel is to make advanced education available to as much of the population as possible, a shift from a view of higher education as properly ''elite'' to a more egalitarian view of universal access to postsecondary education. This newer view requires changes in the government's role in higher education, the types of institutions that exist or that can be started and supported, and the amount of autonomy various institutions might have within the system. A number of proposals to address both goals are under discussion.



ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The diversity of Israel's educational system is further reflected in its overall structure and financing, which allows for centralized leadership and structure balanced by some aspects of local control. Thus, the Ministry of Education and Culture establishes the curriculum, oversees most aspects of the system of state and state-religious schools, and pays teacher salaries. Local authorities supervise buildings, equipment, and maintenance, and can impose a local tax for particular services they provide.

The local authorities provide some financing; they also enforce the compulsory education law. They see to the construction and maintenance of school buildings. They also provide equipment and whatever support services are needed. The state does not impose an education tax, though local authorities may do so. Israel spent 7 percent of its Gross Domestic Product on education in 1999 (Schramm).

The Ministry divides its work into two parts: a pedagogical secretariat that controls the curriculum and policies and that supervises the system, and a pedagogical administration that implements policy for teachers and staff, students, and that deals with buildings and financial matters. The structure is tied to the various levels within the overall system: preprimary, primary, secondary, and

higher education. In addition, the country is divided into six regions and a nationwide rural region for the purposes of overall administration.

NONFORMAL EDUCATION

Nonformal education includes both activities outside of school programs and unrelated to them, and those sponsored by the schools in addition to regular instruction, for instance, extracurricular activities. Israel's informal education outside of the schools consists mainly of the youth movements sponsored by the various political parties. These youth groups are funded and supported by the parties who provide the national leadership that keeps them unified. These are not educational groups in the academic sense, but do encourage knowledge of national and international issues as well as political ideology. Youth who join are usually older children and teens. The youth movements offer a variety of activities and programs including games and sports, arts activities, and social events. Some movements also offer academic support programs for students who need help with school work. There are some nonpolitical youth movements along with other informal educational programs targeting youth who get in trouble with the law, those with special health needs, and similar groups.

Extracurricular activities are sponsored by the schools to offer students enrichment beyond the academic curriculum. These activities allow students to develop their interests and talents in areas beyond academic subjects. The activities offered do not presume any political affiliation; their unstructured nature offers students opportunities to excel in areas other than the strictly academic ones offered in the formal school programs. There are clubs for arts, entertainment, student councils or committees, newspapers, and yearbooks.

According to Cohen and Schmida, the schools' programs of ''complementary education'' were developed to address the increasing diversity of the student body after the founding of the state of Israel. In addition, the schools developed informal programs as part of their overall goal of helping large numbers of immigrants feel comfortable in Israeli society. A variety of different agencies within the Ministry of Education and Culture oversee the programs that are offered in conjunction with the schools.

With respect to distance learning, the major developments in Israel have been in higher education. Bar-Ilan University offers courses through its Virtual Jewish University via the Internet. These courses are part of the regular credit offerings at Bar-Ilan, but are also open to students around the world through the World Wide Web. Bar-Ilan is working to also offer these courses through universities in both the United States and Canada.

The Open University has been the other main source of distance learning in Israel, offering courses through computer connections since 1994, according to Sopova. The Open University uses satellite connections, video systems, and computers to offer courses across Israel. Its course materials are developed by faculty of the Open University and other institutions, and its regional or local study centers are located in public schools across the country, making it a highly cost-effective and efficient system. The further advantage of distance education of this kind that makes use of interactive computer technology (chat rooms, bulletin boards, and other similar devices) is that it allows students in various countries and across otherwise closed borders to meet and exchange ideas, albeit in a virtual setting.

TEACHING PROFESSION

Teachers in the state schools are generally trained in teachers' colleges. The state hires and supervises primary school teachers, while at the secondary level, teachers may be hired by the state, by local authorities, or by public agencies. All teachers are supervised by the Ministry of Education and Culture. Teachers in the state-religious schools are supervised by the state's religious council. Increasing numbers of teachers at the preschool level have certification through training programs at the teachers' colleges. Relatively few teachers lack certification at the primary level and beyond.

SUMMARY

Despite the clear goals for education established by Israel's founders, the system has not been very successful in achieving either the high level of excellence in curricular achievement or the full integration of a diverse population into a cohesive society. There are still strong divisions between Ashkenazi and Sephardic segments of the population, between religious and nonreligious Jews, and between Jews and non-Jews. There are also increasing differences and tensions across socioeconomic classes as Israeli society becomes more segregated and socially stratified. Widespread agreement within a pluralistic and democratic society has been difficult to achieve. Although the central Ministry of Education and Culture has responsibility for all the schools, local authorities, more responsive to needs of particular groups, do not always comply with Ministry programs and reforms.

The difficulties are particularly clear with respect to vocational education. In vocational education, there are competing needs: first, to serve a population of students who come from lower socioeconomic backgrounds and who are not strong students; second, to provide a solid academic preparation in addition to vocational training; and third, to prepare students to work in a variety of settings in the absence of on-the-job training in Israeli industry. These competing needs have resulted in greater

distinctions and separations among groups, rather than greater integration. The system of tracking students into vocational or academic education has not promoted the greater social integration that is the overall goal of the education system. A number of recommendations have been made for reform of the vocational system, including moving all vocational training to business and industry, allowing the schools to focus on academic preparation of students.

One set of developments in the educational system in Israel is a byproduct of the work of a committee appointed by the government and chaired by Professor Aliza Shenhar of Haifa University. The committee was established in 1991 in response to two general trends observed in the matriculation examinations and subsequent studies of university students; the trends entailed, first, a decreasing number of students taking exams in any area of Jewish studies, and second, a similar declining number of students preparing to teach in these subject areas. The committee is referred to as the Shenhar Committee after its chair. It was broadly constituted, including people from all levels of the education system as well as those outside it, providing a range of viewpoints. The findings and report of the committee, entitled ''A Nation and the World: Jewish Culture in a Changing World,'' were presented to the government in 1994.

According to Walter Ackerman (Making Jews, 1997), the report makes recommendations that address the fundamental goals of Israeli education. In particular, it suggests new curricula in four areas: Jewish culture in a universal context, Hebrew, Zionism, and study of the land of Israel. In making these recommendations, the report supports the key concepts of identity, pluralism, interdisciplinary study, and culture. Among other developments, the report has spawned changes within the Ministry of Education and Culture and in new programs offered by outside groups, including interaction with Jewish studies departments of universities, development of Internet sites, and connections between Israeli schools and other Jewish schools worldwide. There is also now an ongoing in-service program for teachers in the area of Jewish studies through a center established in 1995. The report and changes in curriculum seem also to have changed student behavior, resulting in larger numbers of students preparing for Jewish studies subjects in the matriculation exams and then enrolling in courses in Jewish studies at universities.

Further changes are difficult to predict because of Israel's internal and external political situation. Within the government, internal changes in the coalitions of parties holding a majority in the *Knesset* (parliament) inevitably have an impact on the Ministry of Education and Culture. Frequent changes in leadership lead to changes in programs. Externally, until Israel makes peace with its neighbors, there will always be a threat to its overall security. Educational goals are necessarily affected by the pressures of external forces. In general, the diverse demands of immigration, ethnicity, socialization, and religion all compete for attention in the educational system in the primary and secondary schools.

In higher education, some of these problems also exist. However, one general trend that is clear is that increasing numbers of Israeli students are going on to some form of higher education. According to Iram and Schmida, 90 percent of students were attending through grade 12 in high school. Increasing numbers of these students take the Bagrut exams; the percentage of such students eligible for college has also been growing. In response to this trend, Israel has been creating a system of regional colleges to cope with the growing demand for higher education. There were 22 such colleges in 1999, according to Schramm. Many students also attend foreign universities awarding academic degrees in Israel. These trends all contribute to the increasing democratization of higher education, enhancing the equality of education, one of the key goals of the system.

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—Alice S. Horning

ITALY

BASIC DATA

Official Country Name:	Italian Republic
Region:	Europe
Population:	57,634,327
Language(s):	Italian, German, French, Slovene
Literacy Rate:	98%
Academic Year:	September-June
Number of Primary Schools:	20,361
Compulsory Schooling:	8 years
Public Expenditure on Education:	4.9%
Foreign Students in National Universities:	24,858
Libraries:	2,155
Educational Enrollment:	Primary: 2,816,128 Secondary: 4,708,406 Higher: 1,775,186
Educational Enrollment Rate:	Primary: 101% Secondary: 95% Higher: 47%
Teachers:	Primary: 251,827 Secondary: 461,776 Higher: 70,342
Student-Teacher Ratio:	Primary: 11:1 Secondary: 11:1
Female Enrollment Rate:	Primary: 100% Secondary: 95% Higher: 52%

HISTORY & BACKGROUND

Italy is a parliamentary republic divided into 20 autonomous territorial regions. Each region is divided into provinces. Italian is the official language for the majority of Italy's 57.6 million inhabitants; however, regions with localized languages are considered ''special status regions,'' and resources are provided to meet the educational needs of those living in these areas. Roman Catholicism is the most popular religion, but there is no official state religion. After experiencing political disunity from the fifth to the nineteenth century, Italy began unification in 1859 with the seizing of Lombardy from Austria.

As a member of the European community, Italy has become increasingly globalized and its population reflects the diversity of immigrant cultures and languages. The role of schools has expanded to accommodate the needs of changing demographics. In the nineteenth century there was a high degree of illiteracy among the Italian population, especially in the southern region, notably in Sicily. As Italy shifted from agricultural to industrial society, schools became increasingly more important to the socioeconomic and cultural development of the country in the twentieth century. In the new millennium, Italian schools are emphasizing literacy skills for a post-industrial global democracy.

Educational institutions, including religious, Catholic based and other private schools, had always been available to the ruling classes. The oldest university in Europe was established in Bologna in 1158.

Italian public education can be traced to 1859 when law 3725 mandated four years of free, compulsory elementary education and the Casati Law centralized the Italian educational system. In 1904, law 407 extended compulsory education, mandating all children through age twelve to attend schools. At the same time, the Italian governments recognized the needs of a more industrialized society and implemented vocational training.

In 1923, the sixth, seventh, and eighth grades were separated from elementary school and became *scuole di avviamento* (technical schools). Compulsory education was extended by two years. Elementary schooling, which was divided into three lower grades and two upper grades, continued until approximately 1957. *Giardini d'infanzia* (kindergartens) were established by a 1923 royal decree, but they were not officially operated until 1968.

During the fascist era (1922-1943), Ministry of Education and *provveditori* (provincial inspectors) controlled Italy's educational system and dictated the rigid curriculum and policy. Municipalities had very limited power. Elementary schools were allowed a more creative curric-

ulum and upper secondary students were encouraged to engage in historical-critical inquiry, but the main emphasis was on standardized curriculum and methodology.

Since the 1950s, the Italian school system has undergone profound changes. Decentralization of administration has increased. Syllabi and curriculum have been revised, and teaching methodology has improved. Teachers have greater roles as instructional leaders in the educational process. Inservice training and other means of professional development provide educators with current information in their fields of specialization.

CONSTITUTIONAL & LEGAL FOUNDATIONS

In 1859, before the unification of Italy, the *Legge Casati* (Casati Law) established the provisions for the organization of state education. The law included five sets of regulations dealing with higher education, upper secondary classical education, technical education, primary education and normal schools (for elementary teacher preparation). This system called for highly centralized administration and a clear division of upper secondary education between the *liceo classico* (a pre-university requirement) and vocational, ''utilitarian'' secondary schools for practical job training. The Coppino law introduced compulsory schooling in lower primary grades.

The 1923 Gentile reform legislation made the following provisions: preschool (nursery school) was neither compulsory nor free; five-year-olds must attend primary schools, which were divided into two groups or cycles; lower secondary education had six different institutions; upper secondary education had five different institutions; and higher education included state-funded universities and private universities.

Radical school reform occurred as a result of the fall of fascism and the 1948 constitution that espoused democratic principles. The basic principles of education were established by the Italian Constitution, which emphasizes freedom of education; the nation/state's responsibility for providing educational institutions at various levels; education for all individuals regardless of background; parental responsibility for educating children; and financial resources for needy students to pursue higher education. Article 33 states that teaching about arts and sciences shall be free and open to all and that the republic shall establish the general educational principles and create state [public] schools of all levels. Article 33 reaffirms that schooling must be compulsory and free, but it allows private schools to be established as long as they meet all requirements and standards of public schools. This article also allows institutions of higher learning to be established autonomously within the limits of the law.

The first paragraph of Article 34 ensures that schools shall be open to all citizens and, like a portion of Article 33, emphasizes educational equality. This article provides for government scholarships for needy students. Article 117 establishes regional authority over vocational education (except those requiring higher education).

Some laws governing Italian education include law 1054, which relates to nursery school education (*giardini d'infanzia, scuole materne*); law 653, which addresses school exams; and law 503, which is concerned the elementary school curriculum for *scuole elementari.* During the 1960s, a number of laws reformed Italy's educational system: law 444 applied to preschool education; law 1895 established middle schools (*scuole media*); law 119 modified school examples; law 910 opened universities to upper secondary (*liceum*) students, including those attending non-university track upper secondary institutions; and in 1961 a law made technical colleges more flexible so they could more easily adapt to technology advances.

Legislation passed in the 1970s led to significant educational reforms. Law 477 provided for the legal status of state school personnel, the establishment of school assemblies, and the implementation of experimental educational methodologies. Law 517 regulated teaching in elementary and secondary schools, student assessment, and integration of special needs students. Because of this legislation, evaluation of students' progress no longer relied exclusively on exam grades; teachers' analyses of students' progress and development were also included. Teacher-designed lessons were required to accommodate the needs of individual students and include remediation for special needs students.

Additional reforms in the 1970s focused on the structuring of schools and schooling to meet the needs of a growing global labor market. Curricula included the study of science, math, and languages. Student exchange programs were initiated and expanded. Teaching pedagogy and content, program criteria, and modes of student assessment were revised and updated. Inservice training for teachers encouraged them to become ''transformational leaders.''

Two key pieces of reform legislation were passed in the 1980s. Law 270 provided regulation regarding the legal status of teachers, recruitment, and training, and Law 168 established the Ministry for University of Scientific and Technological Research.

In the 1990s there were a number of new laws and presidential decrees relating to education. Law 148 reformed elementary education. Law 341 reformed the university teaching. Law 104 continued to emphasize the integration of handicapped students in school. Law 59, passed in 1997, reformed public administration and simplified school administrative procedures; implemented in 2000-2001, these regulations granted wider educational, organizational, and research autonomy to schools.

Several presidential decrees directly related to portions of Law 59: decree 275 established strict regulations concerning the number of students per class; decree 233 regulated territorial organization of schools; decree 258 ordered reorganization of the Educational Documentation library in Florence and the European Center for Education; decree 300 provided for the reform of Regional Institutes for Research, Experimentation and In-Service Training (IRRSAE); and decree 112 introduced strong education decentralization from the Ministry of Education to provincial and local authorities.

University autonomy has also been widened. Law 425 reformed state exams for higher education, and Law 9, passed in 1999, re-emphasized the need for compulsory education and extended it to 10 years.

In 2000, some legislative issues addressed the equity and equality of education between public and private schooling. Other legislative concerns targeted changes in Italy's education system that would better prepared its citizens to enter the twenty-first century job market.

EDUCATIONAL SYSTEM—OVERVIEW

Basic Italian educational principles are constitutionally founded and ensure free, compulsory educational opportunity for all children. The Italian educational system's philosophy of education varies from teacher centered to student centered. The highly standardized curriculum was designed to facilitate school transfer in both public and private schools. There has been a gradual shift from rote memory assignments and assessments to less formal methods, which stress creativity and the application of critical inquiry and higher order thinking skills. In 1989 all issues related to higher education were transferred to the Ministry for Universities and Scientific Research.

The Italian educational system provides nursery school for 3- to 5-year-olds; elementary school for 6- to 11-year-olds; lower secondary or middle school for 11- to 14-year-olds; upper secondary school or vocational training for 15- to 18- or 19-year-olds; and university, university institutes, or Fine Arts academies for those 19 and older. Upper secondary schools include classic or scientific high schools (five years) leading to higher education/university studies; artistic (four years); technical school (five years); vocational school (five years or more); nursery school and primary teacher training (three years); and higher/university education (three to five years).

The overall responsibility for education in Italy rests with two bodies: the Ministry of Public Instruction for preschool, primary, and secondary education and the Ministry for Universities and Scientific Research. There are close links between these two ministries and the Finance Ministry regarding budget matters and the Labor and Social Security Ministry for connecting schooling with the world of work. Educational reform continues in Italy with its main focus on the role of the ministries regarding policy, budget, curriculum, pedagogy, and administration or distribution of responsibilities.

Since the late 1950s, educational responsibilities and services have become gradually decentralized, and in 1972 many of the Ministry of Public Instruction's administrative powers were transferred to regional and local authorities. Since 1975 regions have had the primary responsibility for vocational education and training; they have consulted with the Ministry of Labor to ensure the appropriate programs and training are being provided. In 1985 pedagogical and programs guidelines were established for elementary and lower elementary school. Since 1999, all citizens aged 6 to 16 years must attend a compulsory education program. Parents have the option of sending their children to school or providing compulsory education themselves or employing a tutor. Those parents who assume direct responsibility for their children's education must file yearly reports with the Provincial Director of Education documenting their compliance with the established curriculum, and the children must pass state exams. A very small percentage of parents select for this type of education.

Student attendance is the responsibility of head teachers (*direttore didattico*) who are the equivalent of school principals in the United States. The mayor of each comune or township provides head teachers with lists of all children who, according to the General Registry Office, should be enrolled in school. When children complete their elementary education, head teachers are responsible for transferring students to lower secondary or middle schools. Head teachers contact parents of children not attending schools; non-compliance with attendance policies can result in punishment for parents or guardians.

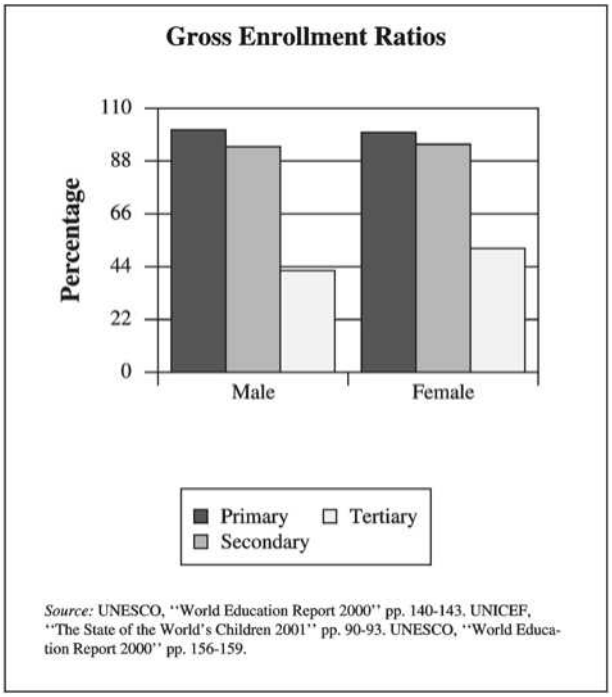
Major reforms have taken place within the Italian school system to meet the needs of global education in the European Community and find educational compatibility within member nations. A Ministry of Public Instruction decree states that the study of other languages is essential for educational and professional development. Elementary schools were reorganized to include the study of modern languages, which are essential for effective communication and educational mobility within the European community. Middle and upper secondary school curricula include the study of foreign languages. Italians also realize that the study of languages and cultures are essential to meet the needs of immigrant populations as well as to encourage active, participatory citizenship in a global democracy.

This European dimension of education can be traced to Comenius (1592-1670), the Czech philosopher of education, who was concerned with schools as democratic arenas of intellectual discourse. His philosophy emphasized political unity, religious reconciliation, and educational cooperation. Initiatives of the European dimension on education include promoting equivalence of academic diplomas and mobility; fostering cooperation in education and research among universities; re-examining school curriculum, organization, exit exams, guidance and counseling, and extra-curricular activities.

A resolution from the European Community outlined objectives for strengthening the European dimension in education: to give young people a sense of European identity in the context of history and culture, and especially in safeguarding universal values of democracy, social justice, and human rights; to encourage youth to become full participants and contributing members in the European Community; and to point out the advantages and the challenges of European citizenship and cooperation in intercultural understanding The European dimension in education includes awareness of European citizenship in an interdependent world; the importance of building relationships; the involvement of extra-curricular activities.

Educational legislative provisions are made within member countries of the European Community. EURYDICE, the Italian agency at the Library of Pedagogical Documentation, has strengthened its commitment for an integrative effort to publish and disseminate international information and documentation to benefit members of the European community. Italy cooperates with member countries on exchanges of classes, students, and teachers, as well as other educational initiatives and cultural agreements. Students who are citizens of the European community may attend school in Italy for professional education and training. The Office of Cultural Exchange at the Ministry of Public Instruction had directed its efforts to activities toward wide-ranging cooperative projects. A pilot project connected 300 territorial schools to the Internet so students would have international access to information and educational opportunities.

Educational cooperative efforts include implementing instructional reform, establishing school age levels of entry and exit, providing professional training courses for secondary students, reinforcing language acquisition, reducing the number of dropouts, providing student guidance and orientation, and organizing programs of equivalency, mobility, and exchange. Programs like SOCRATES, ERASMUS, and LEONARDO are essential to the development of quality education across members of the European Community. The ministries of education have increased a financial commitment to participate in the European education dimension.



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93. UNESCO, ''World Education Report 2000'' pp. 156-159.

An efficient service of pedagogical documentation, information, and research is needed to promote and develop autonomous projects within existing cooperative networks. Important aspects of the European dimension of education are to facilitate and integrate the process of communication, to provide for the service of information, and to ensure the dissemination of research results throughout regions, provinces, and countries in the European Community.

Intercultural education has become an essential component of the Italian educational system at all levels of schooling to create a new awareness of the European dimension in citizenship. These school programs define the dimensions of socialization by providing opportunities for students to come into contact with cultures and languages different from Italian society and to learn to become world citizens. The Italian educational system promotes cultural pluralism in the curriculum by encouraging students to develop a healthy sense of respect for cultural differences and to approach the study of issues from a multiple perspective, while maintaining universal values of social justice and equity.

Since 1985 primary schools have stressed instructional objectives that deal with the importance of intercultural education emphasizing the need for understanding and cooperating with culturally different persons to prevent the danger of stereotyping and prejudice.

In 1991 these objectives became part of nursery school education where the term multicultural education was introduced and stressed the importance of identifying, recognizing, and valuing cultural diversity in school and global, democratic societies.

Secondary schools have had less direction from the state in incorporating multicultural awareness in the curriculum; however, there are initiatives included in educational objectives and curriculum to integrate intercultural communication and understanding, as well as develop multiples ways of thinking critically. A 1994 ministry educational decree emphasizes the need for providing multicultural awareness and activities as a global response to a society that is becoming increasingly multicultural. This decree also reinforces the rights of immigrant and migrant children to equal opportunity and equity of access to education and training.

Italy participates in European network projects created for intercultural and multicultural education. Many of these programs, coordinated by the Office of Cultural Exchange, are specifically designed for teacher training in intercultural and teaching and learning for a multicultural society, including bilingual education and teaching of Italian to immigrant students. The Office of Cultural Exchange published a report, ''Intercultural Education: Experiences and Prospects,'' which gives an overall picture of the theoretical and practical aspects of intercultural and multicultural education and highlighting the importance of cross-cultural communication for global democracies.

In 1996 the central role of the European dimension in education was reaffirmed; schools will continue stressing intercultural awareness and understanding for a global society. Information and experiential opportunities for intercultural education issues and opportunity for international educational exchanges and multilateral school partnerships within the European Community are exemplified in programs like SOCRATES, LEONARDO, and ERASMUS. An increasing number of students participate in these programs throughout Europe. For example, Italian students enrolled in an agricultural course may be permitted to study in France or Portugal for one year and receive equivalency in mobility, credits, and grades.

A 1998 educational decree ensures that immigrant children in Italy must receive compulsory education, have access to information, and have all the rights to education services in the school and community. The school community respects the cultural and linguistic diversity of its members, encourages the sharing of cultural differences, and promotes mutual respect and tolerance. The school community promotes and encourages initiatives to respect and protect the culture and language diversity and provides opportunities for intercultural experiences and activities.

PREPRIMARY & PRIMARY EDUCATION

Schooling usually begins with noncompulsory early childhood education or nursery school for children aged three to five. Nursery school education is free for public institutions. As more women enter the workforce, more government sponsored and private childcare facilities are available for infants and young children. In 2000, approximately 96 percent of three to five year olds attended public or private nursery schools (*Scuola Materna, Scuola dell'Infanzia,* and *Giardini d'Infanzia*). At age six, children enter free, compulsory elementary schools (*Scuola Elementare* or *Scuola Primaria*), which last five years.

Nursery school teachers emphasize activities that enhance creativity skills, social attitudes, autonomy, and the learning process; children are readied for elementary school. Often children are placed in classes by developmental level, rather than age. Schools must accommodate students with special needs. Most classes have 25 students. Teachers are responsible for allocating the necessary hours and activities to meet the educational objectives. In 1992-1993 there were 27,274 preschools with approximately 1,569,811 students and 75,601 teachers. In September 2000, preprimary schools were given the autonomy in terms of organization, pedagogy, and curriculum, as long as the schools complied with the general objectives of the national educational system. Educational objectives for early childhood education include the interaction of culture and language with identity, autonomy, and competence. Curriculum includes body and movement; language (speech and words); spatial orientation and order of things; time and nature; and the self and relationship to others. There is a similarity between Italian and American early childhood curriculum and pedagogy; both have the goal of preparing children to become members of a democratic society.

Early childhood education in Italy has become world famous. The Reggio Emilia schools have become ''laboratories'' studied and modeled by teachers from many countries, especially the United States. The philosophical model of Reggio Emilia nursery schools and kindergartens focuses on constructivist theoretical foundations that emphasize a learner-centered curriculum and teaching methodology. These preschools link their practices to the theoretical perspectives of John Dewey, a progressive American educator.

The Reggio Emilia schools create an educational world in which children work and play in communities and learn to respect other persons and divergent points of view. Teachers guide children through critical inquiry. Many of the activities include building structural art objects that require critical thinking skills using linguistic and mathematical processes and the ability to work in cooperative groups. The curriculum includes long-term

projects in a variety of media that foster connections between school and the home, family, and community and develop awareness and appreciation for regional, national, global cultural heritage.

Another influential early childhood theorist was Maria Montessori, the well-known Italian educator, who believed that children could learn math and language skills by applying knowledge. Her philosophy, curriculum and teaching methods have given impetus to Montessori schools in the United States and other countries. Montessori concentrated on the goal and process of education, rather than its methods. She defined the educational process as the development of the total human being in relationship to the environment and cultural context. Montessori believed that schooling should correspond to each child's developmental stage. She wrote that children begin exploring the world around them at birth, gradually moving from sensory to cognitive awareness.

In Montessori schools, children are introduced to materials in a sequential and logical progression. They are taught that freedom implies responsibility, self-discipline and working cooperatively with others. Montessori educational materials are designed for exploration and self-discovery. Academic study must have long, uninterrupted blocks of time to allow students to explore, reflect, and problem solve. For Montessori, the ultimate goal of education for a young adult is to develop within the individual the desire for life-long learning.

In 1985 and 1990 there were educational reforms regarding the curriculum and structure of primary education and its connection to preschool. Legislation in 1985 promoted early literacy and the development of the individual child. A 1990 law called for curricular connections between primary school activities with those of preschool and lower secondary school. These links encourage consistency of curriculum, pedagogy, and student cognitive development.

In 1999, compulsory education was extended to 10 years. Students begin the mandatory program when they are six-years-old. Primary/elementary schools (*Scuola Elementare* or *Scuola Primaria*), which can be public or private, must follow some national educational regulations; however, the 1997 Bassanini law 59 allows some freedom in curricular and pedagogical structure. The number of number of hours spent in class varies; students may attend classes for 27, 30, or 40 hours per week. Teachers have the autonomy and opportunity to design flexible curricula that meet student needs and national educational objectives. They ensure that the curricula includes examples from the European perspective, develop cross-cultural activities with a European focus, and establish contacts with other schools via pen pal and other programs.

Schools are required to provide students' families with an instructional plan describing subjects and activities for regular and optional curriculum; student assessment methods; research and experimentation activities; and the role of teachers in the school organization. Support is given to special needs students. The inclusion of learning disabled students provides all children with an opportunity for understanding and respecting differences.

Children usually attend schools closest to their home. Most classes have 25 students, but schools are established when there are 10 or more children of compulsory education age. The school year has a total of 200 days per year. It begins in September and ends June 30 with holidays at Christmas, Easter, and in the summer. Classes are usually from 8:30 a.m. until 4:30 p.m. with a lunch break of approximately 90 minutes. In 1992-1993 there were 22,710 primary schools with approximately 2,959,564 students and 264,615 teachers.

Elementary education is divided into two cycles. Cycle one is two years, and cycle two is three years. Students pass automatically from cycle one to two. During cycle one, teachers play a dominant role in the classroom and use a multidisciplinary curriculum. At times various classes may be grouped together and team-taught. Classroom activities are the responsibility of the Teachers Assembly (*Collegio dei Docenti*). During the second cycle, teaching is divided into subject areas and different teachers teach the various subjects according to their specialty. Teaching is organized into modules around three main areas: linguistic expression, scientific-logical-mathematical, and historic-geographic-social. Teachers coordinate activities to ensure coherence and uniformity. Textbooks are chosen by individual teachers. Primary school curriculum includes Italian language, foreign language (French, German, or other) depending on the region of the Italian border, mathematics, science, history, geography, social studies, art, music, physical education, and Catholic religion (optional).

Student assessment and progress are tracked throughout the year by teacher observations; homework; and written work, oral work, and presentations. Parents or guardians received non-numerical reports (*scheda*) about three times per year that emphasize the student's overall development commitment to learn. Parents are allowed to meet with teachers for an explanation of the report. At the end of the fifth grade students must pass written and oral exit examinations (*Esami di Licenza Elementare*), which will allow them to enter compulsory lower secondary or middle school (*Scuola Media*).

SECONDARY EDUCATION

Secondary schools (*Scuola Secundaria*) are divided into lower and upper secondary education. Lower sec-

ondary or middle school is compulsory, lasts three years, and is for students 11- to 14-years-old. In 1992-1993 there were 9,857 lower secondary school with approximately 2,059,044 students and 233,034 teachers. The goal of these schools is to prepare students for life and careers. Individual subjects are taught by teachers with specialty in the field; however, teachers use cooperative, interdisciplinary planning and curricular connections to ensure coherence and uniformity. The curriculum includes Italian, history, civics, geography, foreign language, mathematics, sciences (physics, chemistry, and natural sciences), technical education, art, music, physical education, and catholic religion (optional). Teachers use non-prescribed, commercial textbooks.

Student assessment no longer includes marks from 1 through 10 or remedial exams. Each teacher enters narrative comments on the learning progress and maturity level of the student. The personal report card (*Sheda Personale*) is prepared by each teacher and presented to the class council (*Consiglio di Classe*) where all teachers agree on a written final assessment with explanatory notes that is sent to parents. The class council decides on the student promotion to the following academic year. At the end of the third year, all students take an exam consisting of three written tests in the subject areas of Italian, mathematics, and a foreign language and a multidisciplinary oral test. Students who fail must repeat the academic year. Passing students earn an overall assessment of excellent, good, or satisfactory and receive a middle school certificate (*Diploma di Licenza Media*). This enables them to enter upper secondary education.

Upper secondary education is available for students aged 14 to 19. Most upper secondary schools are public and require a fee that may be waived according to the family financial need and the student assessment at the end of the year. The school year is from September until the end of June. Programs vary from three to five years. The majority of Italian teenagers attend *Liceo Classico* and *Liceo Scientifico* to prepare for university studies. Others attend art schools (*Liceo Artistico* or *Istituto d'arte*); music school (*Conservatorio di Musica*); elementary teacher preparatory programs (*Istituto Magistrale*) or nursery school preparatory programs (*Scuola Magistrale*). Some students attend the *Liceo Linguistico,* a privately funded and operated upper secondary institution. Those students who do not wish to pursue a university education may enroll in technical or vocational schools (*Istituti Tecnici* or *Istituti Professionali*) after middle school for three years or more of training and education in applied fields.

The classical type education includes the classic liceum and the scientific liceum. The classical liceum prepares students for the university and other types of higher education. Liceum studies take five years and consist of two cycles: the lower cycle of two years and the upper cycle of three years. Students attend school six days per week and lessons are one hour per subject. Curriculum includes Italian language and literature, Latin language and literature, Greek language and literature, foreign language and literature, history, philosophy, natural sciences, chemistry, geography, mathematics, physics, history of art, and physical education. Catholic religion is optional. The scientific liceum prepares students for university education with emphasis in the sciences. Curriculum includes Italian language and literature, Latin language and literature, foreign language and literature, history, philosophy, geography, natural sciences, chemistry, astronomy, mathematics, physics, drawing, and physical education. Catholic religion is optional.

Teacher Training (*Istituto Magistrale*) for primary school teaching provides access to further study at schools of education at the university level. This program requires four years of coursework and may include a fifth year leading to university studies in the field of education. Curriculum includes Italian language and literature, Latin language and literature, foreign language and literature, philosophy, courses on teaching methods and educational psychology, history, civics, geography, natural sciences, chemistry, mathematics, physics, drawing, history of art, choral music, and physical education. Students may elect to study the Catholic religion or a musical instrument.

Nursery school teacher training (*Scuola Magistrale*) is a three-year course of study. Curriculum includes Italian language and literature, education courses, history, geography, accounting, mathematics, natural sciences, hygiene and pediatrics, music and choral singing, home economics, theory and application of physical education, handicrafts, drawing, and teaching methods. Catholic religion is optional.

Assessment for all types of classical, upper secondary schooling is done by individual teachers according to each subject. At the end of the year the Class Council determines each student's final assessment. Students must earn marks between a six and a ten for each subject; those with lower marks must repeat exams in September prior to entering a new school year. At the end of upper secondary school, students must take an exam consisting of two written tests and an oral test. The oral portion of the exam is given by an examining board, which asks questions based on the written exams. Students are expected to demonstrate expressive and critical ability. Those passing the exam receive a certificate of completion (*Maturita*). In 1992-1993 there were 753 classical liceums with 231,064 students and teachers; 1,038 scientific

liceums with 472,950 students and teachers; 541 primary teacher training schools with 159,518 students and 57,370 faculty; and 165 nursery teacher training schools with 21,522 students and teachers.

Artistic liceum provides students with specialization in painting, sculpture, stage design, and architecture. Coursework lasts for four years with access to higher education at the Fine Arts Academy (*Academia di Belle Arti*) or schools of architecture at the university. Following a fifth year, students may obtain a certificate of art (Diploma di Maturita Artistica). General curriculum includes Italian language and literature, history, history of art, mathematics, physics, natural sciences, chemistry, physical geography, and physical education. Art curriculum includes life drawing, still life, figure modeling, ornamental modeling, geometric drawing, perspective, elements of architecture, and anatomy for artists.

Art schools (*Istituti d'Arte*) prepare students for traditional craftwork in industry, such as in ceramics, textiles, printing, glass, or gems. Courses last approximately three years and lead to the master of art diploma (*Diploma di Maestro d'Arte Applicata*). Students who complete two additional years of coursework obtain the upper secondary certificate (*Diploma di Maturita di Arte Applicata*). Curriculum for art schools includes general subjects (Italian language and literature, history, civics, history of art and applied arts, mathematics, natural sciences, chemistry, and geography) and art curriculum (geometric and architectural drawing, life drawing, and plastic arts). Catholic religion is optional.

Special education is provided for by law and is available for special needs students, including the handicapped. Special students attend regular classrooms; however there also self-contained classrooms for students who are not able to be included in regular classroom instruction. There are also institutes for the blind and the deaf. Teachers at these institutes receive special training so they can work with these students. Classes for the blind include physical therapy, telephone switchboard, and basket weaving.

The handicap law of 1992 provides for special education for nursery school, elementary, and middle school students. Some classes are also held in rehabilitation centers and hospitals for children unable to come to school. These classes are set up by the provincial directorates of education in coordination with health services, as well as public and private centers under contract to the Health Ministry and the Ministry of Labor. Teachers with specific training in psychology and associated pedagogy are hired for these centers. Teachers with a specialized credential in special education become support teachers (*Insegnanti di Sostegno*) in local school groups (*Circolo Didattici*) for nursery and primary schools and in individual secondary schools. Special education teachers often work alongside a regular teacher, providing support to the special needs students.

Students between the ages of 14 and 17 may enroll in three-year technical or vocational programs that have an optional additional two years of education and training. Technical Schools (*Istituto Tecnico*) prepare students to work in jobs in agriculture, industry, business, tourism, surveying, foreign trade, laboratory technicians, and many other practical professional occupations. Vocational Schools (*Istituto Profesionale*) prepare students for work in industry, agriculture, trade, hotel business, and other skilled work in the labor market.

Technical and vocational schools have similar curricula, which include general classes (Italian language and literature, history, civics, geography, foreign languages, mathematics, physics, natural sciences, chemistry, drawing, and physical education) and coursework within the field of specialization. Catholic religion is optional. Assessment for these schools is similar to that of upper secondary schools. In 1992-1993 there were 2,962 technical schools with 1,273,682 students and 111,334 teachers and 1,702 vocational schools with 534,044 students and 51,852 teachers.

HIGHER EDUCATION

Italy has the two oldest universities in Europe. The School of Medicine in Salerno was founded in the ninth century, and the University of Bologna was founded in the eleventh century. A number of other universities were founded by the end of the sixteenth century. The University of Padua and the University of Modena were founded in 1200. The universities of Rome, Perugia, Pisa, Florence, Naples, and Siena were founded in 1300. The universities of Turin, Parma and Catania were founded in 1400, and Messina was founded in 1500.

Article 33 of the Italian constitution allows public and private entities to establish institutions of higher education: universities, academies, and non-university higher education, such as art institutes. Other higher education institutions include the Higher Institutes of Physical Education, higher institutions with special statutes (Oriental Institute of Naples, the Higher Naval Institute of Naples, the College of Education of Pisa), schools of postgraduate and specialist studies, and other university level institutions. These institutions function fairly autonomously and are overseen by the Ministry for University of Scientific and Technological Research, which ensures some uniformity of curricula, standards, and examinations.

In 2000, university education was provided by 76 universities: 51 national universities, three polytechnic

institutes, 12 free universities, 5 university institutes, 2 universities for foreign students, and 3 high schools (upper secondary). More than 1.0 million students attend Italian universities that employ more than 65,000 faculty members. Levels of university coursework include first level programs leading to a university diploma (*Diploma Universitario*), which has been eliminated under current reform law and Special professional Training Schools (*Scuole Dirette a Fini Speciali*). Second level programs lead to a university degree (*Diploma di Laurea*). Third level programs lead to a specialization degree (*Diploma di Specializzazione*) and research doctorate (Dottorato di Ricerca). Admission to third level degrees requires a (*Diploma di Laurea*).

Students who complete the liceum may go directly to the university. Admission to the university requires candidates to have an upper secondary school certificate (*Maturita* or *Diploma di Istruzione Secundaria Superiore*) earned after five years of study. Entrance exams are required for certain university programs and count for 70 percent of the admission, while grades from the *Maturita* count for 30 percent. Students are given numbers and placed on waiting lists according to their grades. Those with higher marks will be admitted to the university. Some candidates retake exams to achieve the higher marks needed for entering the university. The most crowded university programs are medicine, veterinary school, international studies, and environmental sciences. Other programs are less competitive and do not limit admissions.

Candidates apply directly to the institution they wish to attend. University students may pay registration and other fees. Needy students may apply and qualify for grants and loans; they may also hold part-time jobs. The academic year, which may be divided into semesters, starts in early November and ends in mid-June with final yearly exams in July. University degrees (*Diploma di Laurea*) can be earned in the following professional fields: science, medicine, engineering, agriculture, economics, political-social law, literature (humanities). For each area of specialty there are compulsory and elective courses.

The average time for completing university coursework is from four to six years. A 1990 reform allows student to earn a university degree in a specialized working field (*diploma di specialista*) within two to three years of coursework. Higher non-university education is under the jurisdiction of the Ministry of Public Instruction or Ministry of Education.

In November 1999, regulation 509 established criteria for a new university structure that allows universities to plan courses of study and provide teaching autonomy. In 2000, reforms were underway to integrate the Italian educational system within the structure of the European community. The plan calls for two university cycles of study to allow for student transfers and mobility among universities in Europe. Additional reforms focus on student requirements and credits (*Credito Formativo Universitario* or *CFU*) and the three-year *Laurea* (*L*) degree and five-year *Laurea Specialistica* (*LS*) degree. To enroll in *L* courses, students must have a *Diploma di Istruzione Secundaria Superiore;* to enroll in *LS* courses, students must have a *Diploma di Superamento dell'Esame di Stato.*

The Ministry of the University and Scientific and Technological Research has reorganized university studies into five main areas: medicine; science and technology; humanities; law, politics, social sciences, and economics; and engineering and architecture. The *Diploma di Laurea* is designed to prepare students a high level of professional competency in their chosen field. The *Laurea Specialistica* provides additional advanced understanding and skills in the specialized profession. Written and oral exams are administered before students are allowed to advance within the university.

The university president confers university degrees and diplomas, which also reflect the higher education requirements of the European community. Each diploma reflects the student's course of study and the specific curriculum in the field of professional specialization. Some universities, in conjunction with national, local, public and private entities, may offer one year finishing courses in certain fields of specialization.

Non-university education includes Academies of Fine-Arts (*Academia di belle Arti*), Higher Institutes for Art Industry (*Istituto Superiore per le Industrie Artistiche*), National Academy of Dramatic Arts (*Academia di Arte Drammatica*), National Academy of Dance (*Academia di Danza*), and Academy of Music (*Conservatoria di Musica*).

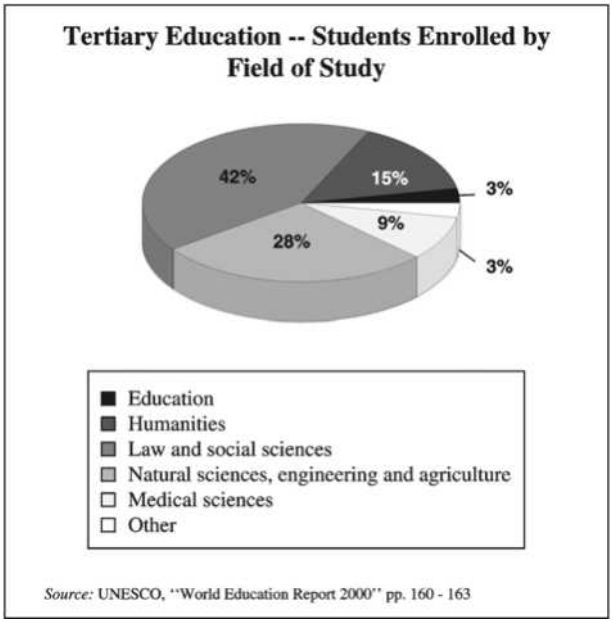
Vocational education and training are also part of non-university education. Initial vocational training is intended to promote employment and to allow individuals to keep abreast of new scientific and technological developments in the labor force. Vocational training is offered to young people who completed compulsory education and wish to earn a vocational certificate. This training is usually provided throughout the year by the following regional authorities: *Ente Nazionale Istruzione Professionale* (ENAIP); *Associazione Cattolica Lavoratori Italiani* (ACLI); *Centro Nazionale Opere Salesiane* (CNOS); *Istituto Addestramento Lavoratori-Confederazione Italiana Sindacati Lavoratori* (IAL-CISL); and *Ente Nazionale Formazione Addestramento Professionale dell'Unione Italiana Lavoratori* (ENFAP-UIL).

Initial vocational training covers agriculture, industry, crafts, and services and includes courses leading to

a first certificate; integration courses for completing secondary education; post-certificate courses for those requiring specialized certificates; courses and post-certification activities; and level two courses for additional certificates of specialization. During vocational education, students are often required to train in the workplace.

Some individuals between the ages of 15 and 25 have apprenticeships (*Apprendistati*). Apprenticeships are based on a contract in which employers teach the student apprentice the necessary technical expertise to become a skilled worker. Apprentices receive financial compensation as they take theoretical courses and apply this knowledge in the workplace. At the end of the apprenticeship contract, these working students must pass a qualification exam in the particular apprenticeship field. There are approximately 605,000 young people involved in apprenticeship contracts; 53 percent are in the crafts sector. Approximately 80 percent of these apprenticeship enterprises are in Northern Italy.

Employment training contracts (*Contratti di Formazione-Lavoro*) are covered by a 1983 law which provides for private and public companies and their consortia to take on a certain number of individuals between the ages of 15 and 30 for a period of 2 years. Enterprises must submit specific training plans and make a commitment to train and teach these individuals and assist them in transition to the world of work. The Italian government offers financial incentives to the companies that participate in this program.



ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Administration of the Italian Educational system was at one time highly centralized. Since the end of the 1950s, there has been a trend toward decentralization, from the Ministries to the regional and provincial offices. Presidential decrees in 1972 and 1977 transferred more educational responsibility to the regions, provinces, and communes; however, finance, personnel, curriculum, and scientific research, and other specialized areas remained centralized. In 1989 the Ministry of the University and Scientific and Technological Research was created to guide, regulate, finance, and help with the administration of universities and research. Other responsibilities of this university ministry include coordination with the European community and international integration of the university system, admission requirements, monitoring and assessment. The Ministry for Public Instruction continues to be responsible for elementary, secondary, and tertiary, non-university education.

A 1997 law continued to delegate some educational responsibilities to regional and local governments, but major decisions still remain centralized. A 1999 presidential decree provided additional regional educational autonomy in terms of administration and management, school time and classes, and some curricular decisions. The 1999 decree also created an agency for vocational training and education that will work in conjunction with the Ministry of Public Instruction and the Ministry of Labor for effective coordination of vocational education and training. Law Decree 300 also called for the merger of the Ministry of Public Instruction with the Ministry of the University and Scientific and Technological Research; the merger should be completed by 2003.

National education authorities include the Ministry of Education based in Rome; central offices; regional schools superintendents (*Sovrintendenza Scolastica Regionale*); and the Provincial Director of Education (*Provveditorato agli Studi*). Within the Ministry of Public Instruction, the minister is assisted by one or more undersecretaries. The organizational units within the Ministry of Public Instruction deal with different levels and types of schools, teacher education and training, cultural exchanges, personnel administration. The Ministry issues general guidelines, legislation and directives for schools and schooling. There is a special service for preschool education, and three inspectors are responsible for physical education, art education, and employee pensions.

The minister may call upon certain individuals for advice, tasks, and budget. These persons include the Secretariat, members of the minister's cabinet and offices working with the Minister of Public Instruction; regional and provincial undersecretaries of state appointed directly by the Minister; and ministerial advisers. Directors

general, inspectors, and departments may also be called for expert advice.

The Higher Council for Education (*Consiglio Superiore della Pubblica Istruzione*) has replaced the National Education Council. This council assists the Minister of Public Instruction with planning and supervision of education policy. The central general administration of nursery schools (*Servicio per la Scuola Materna*) assists the Minister in policy making and the implementation of educational activities (*Orientamenti dell'Acttivita Educativa*). The central general administration of elementary and secondary education (*Directorates*) deal with primary and lower and upper secondary schooling. These directors submit regulations to the Minister of Public Instruction regarding curricular implementation, teacher recruitment, non-teaching staff, student assessment, funding, and other school issues.

Central general administration of higher education under the *Ministero dell'Universita e della Ricerca Scientifica e Tecnologica* is responsible for the implementation and evaluation of the university strategic plan; ensures the autonomy of individual universities; enhances university research; supervises and monitors university research plans; allocates funds according to specific, designated criteria; coordinates educational activities and research projects at the national and international level, especially within the countries in the European community; works in conjunction with the *Ministero della Istruzione Pubblica* in coordinating education at various levels in terms of inservice training of school personnel; fosters research in the field of education; and promotes cultural exchanges among schools and universities. The Ministry of University and Scientific and Technical Research is assisted by three departments: the Department of University and Student Autonomy (*Dipartimento per l'Autonomia Universitaria e gli Studenti*), the Department for the Development and Promotion of Research (*Dipartimento per lo Sviluppo e il Potenziamento del'Attivita di Ricerca*), and the Department for Economic Affairs (*Dipartimento per agli Affari Economici*).

Additional councils assist the Ministry in matters of university education and administration. The *Consiglio Universitario Nazionale* (CUN) oversees university planning, the appointment of professors and researchers, and teaching regulations. The council is composed by 15 professors, 3 of whom representing 3 scientific disciplines; 8 student representatives; 4 technical and administrative staff representatives; and 3 members of the *Conferenza Permanente dei Rettori della Universita Italiana* (CRUI). These representatives are all elected members who remain in office for four years. CRUI is involved in the development of objectives for the university, the allocation of financial resources, and in the administration of didactic and scientific regulations regarding research.

The *Commissione di Esperti per il Coordinamento tra l'Istruzione Universitaria e gli Gradi di Istruzione* (Commission of Experts for the Coordination of University Instruction) is composed of three members appointed by the Consiglio Nazionale della Pubblica Istruzione, three members appointed by the CUN, two members appointed by the *Consiglio Nazionale dell'Economia e del Lavoro* (CNEL) representing employers and employees, one representative from the Regional Institute for Research and Refresher Courses (IRRSAE) which coordinates in-service teacher training, three experts nominated by the *Ministero della Pubblica Istruzione,* and three experts nominated by the *Ministero dell' Universita e della Ricerca Scientifica e Tecnologica.* This commission concerns itself with students following university education and preparation for teaching.

Two new councils will be formed after 2000: the *Consulta Nazionale per il Diritto agli Studi Universitari* (National Council for the Rights of University Students) and *Consiglio Nazionale degli Studenti Universitari* (National Council of University Students). The National Council for the Rights of University Students will be composed of five university representatives, five regional representatives, and five students. The National Council of University Students will be comprised of 28 student members, elected by their peers, who are enrolled in degree or diploma programs. This council will be concerned with general criteria and teaching guidelines.

In Italy, local school administration includes provinces and communes. Education power at the provincial level includes the *Provveditore agli studi* and the *Assessore Provinciale alla Pubblica Istruzione.* These individuals are responsible for state and local administration of schools. The *Provveditore* is in charge of the promotion, coordination, supervision, and monitoring of provincial schools, except for the Fine Arts Institutes. He interprets the central laws and regulations for primary and secondary education in regional schools. The Provincial Director of Education establishes relationships among provincial andlocal school authorities. The *Provveditore* is also responsible for inservice education for teachers, special education, and health education. The Provincial Scholastic Council (*Consiglio Scolastico Provinciale*) serves as a consulting body to the *Provveditore.* The *Assessore alla Pubblica Istruzione* is responsible for upper secondary education in terms of establishing and annexing schools and other aspects of physical facilities, including the integration of handicapped students, school networking, and school safety.

Commune offices and authorities, often representing small residential communities, are distributed throughout

Italy and are concerned with the performance of functions and services needed in the daily operation of schools and student attendance. Additional responsibilities include subsidized student transportation, cafeterias, textbooks, and financial assistance for needy families. Communes have similar responsibilities as provincial bodies.

Specific administration and management of schools have become increasingly decentralized and grant schools autonomy in teaching, administration, research, and development. Schools are viewed as expressions of functional autonomy aimed at determining and providing educational opportunity. Schools are seen as institutions that assist with the cognitive, sociocultural, and moral development of citizens in a pluralistic society. Each school prepares a *Piano dell'Oferta Formativa* (POF), a plan that includes the philosophy, missions, and goals consistent with the general educational objectives and national standards. Schools are expected to reflect the cultural, social and economical realities of each community and provide equal opportunity in education for all citizens. The POF includes different teaching strategies that consider teaching and learning styles, especially the needs of culturally diverse students.

The *Collegio del Docenti* (Teacher Council) makes decisions regarding teaching and learning on the basis of general objectives defined by the *Consiglio di Circolo* (Cycle Council) or *Consiglio di Istituto* (Institutional or School Council). Parents and students have input in the decision-making process. School goals, regulations and decisions are distributed to students and parents during enrollment at the start of each academic year. Statutory rule of law concerning school autonomy makes it clear that schools must take into account cultural pluralism; provide equal opportunity for students; foster academic freedom in teaching and learning; as well as plan and implement educational and training interventions, which assist in the development of all learners. School decentralized decision-making includes teaching autonomy, organizational autonomy, and research autonomy. Teaching autonomy means that schools must carry out a plan that includes national objectives leading to an educational environment conducive to learning for all students.

Class schedules and lessons are flexible and arranged into modules, according to subject areas, which best meet student needs. Students are grouped for enhanced learning and teaching opportunity. In terms of organizational autonomy, schools are allowed to decide how to best allocate teaching resources and adapt teaching methodologies and curriculum according to student needs, as long as the schools follow their POF. Autonomy of research, experimentation, and development provides for curricular planning and assessment; training and professional development of school personnel; innovation of curricula and pedagogy; theoretical and experiential teaching and learning; and interdisciplinary curricular integration, including vocational education and training.

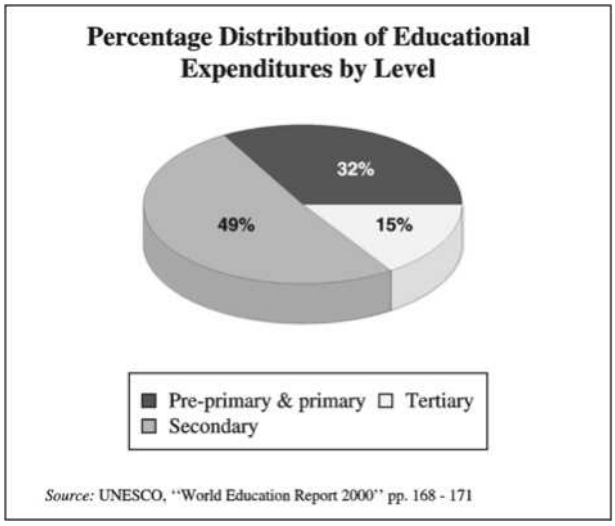
School autonomy also allows individual schools to increase course offerings and educational activities that take into account the social and cultural needs of the community. Schools are encouraged to build networks with other schools, universities, and private corporations and associations. These community network relationships encourage curriculum innovation, a variety of methods and strategies, collaborative research opportunities, cooperation in educational resources, and teacher exchanges.

Schools are given administrative and financial autonomy in staff recruitment, hiring, and teaching assignments. The Ministry of Education establishes guidelines for school autonomy to ensure some uniformity within the Italian educational system. This guiding framework includes specific educational objectives, minimum curriculum standards, compulsory curricular timetables, general criteria for student assessment, and general organization of adult education. Universities function under the guidelines of the Ministry of the University and Scientific and Technological Research, but they also have some provincial and regional autonomy in terms of staffing, curriculum, and research.

The Ministry of Public Instruction allocates funds directly to technical and vocational schools to use for materials and laboratories and other facilities needed for experiential education. Regions have specific powers and needs regarding school buildings, vocational education, school transportation, school meals, and providing textbooks free of charge. Provinces and communes are usually given freedom to use resources and finances to meet the needs of individual communities, while still maintain standards and requirements of the Ministry of Public Instruction. Provincial authorities cover the building cost of primary and lower secondary schools, as well as technical and scientific upper secondary schools. The communes cover the cost of upper secondary classical schools.

The Ministry of Universities and Scientific and Technological Research disperses financial resources among state and private universities that meet state level requirements. Private universities also received funding from private organizations, associations, or foundations. State universities are allowed to accept private funding contributions for resources and research. Additional income for universities comes from student tuition.

Evaluation of educational institutions is a concern. In 1999 the government established the National Institute for the Evaluation of the Educational System, which is responsible for the administration of institutional evalua-



tion, documentation, and educational research. This institute monitors institutional evaluation and provides technical guidance and support. Inspectors from the Ministry of Education pay regular visits to schools to ensure educational quality and equity and implementation of ministerial directives. Inspectors' responsibilities include giving educational assistance in terms of planning, organization, and implementation of programs; technical assistance and advice for experimental and research activities; and defining and implementing in-service training for faculty and staff.

Article 33 of the Italian constitution establishes educational policy, which states that the government must establish a state school system for all children, providing opportunities commensurate with their aspirations, regardless of economic status and social situation, such as ethnic or linguistic background. Private bodies and individuals are entitled to establish schools and colleges of education. These schools may get state funding if they follow rules and guidelines, including health regulations, similar to those of public schools and ensure equal opportunity to students.

Nationally recognized private schools are also authorized to provide certificates of completion. Provincial Directors of Education supervise private schools at the preschool level. Private elementary schools include officially recognized schools (*Scuole Parificate*) also supervised by the Provincial Director of Education (*Provveditore agli Studi*); and authorized private schools run by persons with a Primary Teaching Training Certificate, or a classical or technical diploma (*Magistrale from the Scuola Magistrale*). Teachers at these private schools may be asked to articulate a faith and morality statement.

Private education at the secondary level includes legally recognized schools (*Scuole Legalment Risonosciute*) and state authorized schools (*Scuole Pareggiate*). These schools have the same validity as state schools and can award a middle school certificate (*Diploma di Licenza Media*). In recognized schools, curriculum, student assessment, and teacher qualifications are similar to public schools. Private schools may receive public funding in terms of government grants. Private education at a higher level include universities and other higher education institutions, as well as non-university higher level education for high levels of specialization, such as art institutes. If these institutes follow state guidelines, they may award certificates. The Ministry of Education's art inspector supervises the private art institutes.

NONFORMAL EDUCATION

At one time the primary goal of nonformal adult education was to eliminate illiteracy. Since the level and quality of literacy have risen, adult education has been focusing on preparing adults to enter the workforce and preparing individuals to continue their own educational attainment. Many of the students enrolled in adult education include housewives, unemployed persons, and immigrants seeking newer opportunities for employment and further education.

Scuole Populari were first established in 1947 to help eliminate illiteracy. These schools abolished in 1982. However, there are literacy courses for elementary and secondary school certificates of achievement for those who did not follow all prior educational steps. Management of adult schools is the function of territorial centers, which decide on the specific needs of communities. Adult education is planned and coordinated at the district level. Adult education centers usually function within an established school. The school principal is the coordinator for the adult education center.

Activities in adult centers include counseling and guidance for applicants; literacy education at various levels, including preparation for higher education; language (Italian) education and special language training for immigrants and others; vocational education and training; and preparation for certificates of achievement in compulsory elementary education and secondary school certificate. Many adults return to school for retraining and changing career paths. Most classes are offered in the evening to meet the needs of the working student population. Certification includes *Diploma di Licenza Elementare, Diploma di Licenza Medi,* and statement of vocational training and similar certificates of achievement for secondary education.

Italy is part of EDUVINET, Education via networks, a partner team of European Community member countries for Internet-supported teaching and learning and distance education in and among schools in Europe.

Objectives of EDUVINET include training teachers, administrators, and students in using internet resources effectively; preparing young people and adults for the information age in interdependent democracies; extending educational European content available on the internet; and using educational resources more efficiently throughout European schools.

The EDUVINET Web site includes discussion forums, like EDUTALK; teaching, methodology, and curriculum; full text teaching resources; exemplary teaching content; teacher training opportunities; links to schools, teaching subjects, curriculum and pedagogy, and European information; opportunities for publishing with EDUVINET; and searching engines. EDUVINET is supported financially by the SOCRATES Open and Distance Learning Program. EDUVINET can also be a support network for distance education available through the Open University, which started in the England and has expanded through many European countries. Adult students find the Open University Distance Education opportunity a flexible means of continuing educational goals.

TEACHING PROFESSION

Teachers have always been considered government employees; however, they have their own collective bargaining unit at school level. Educational reforms have lead to increased decentralization. Individual schools are becoming the groups primarily responsible for the administration and management of the teaching staff. The Ministry of Public Instruction continues to be responsible for orientation, coordination, and verification of teaching status.

Until 1997-1998 primary school teachers were trained at upper secondary schools (*Istitutos Magistrales*) for four years where the curriculum included academic courses on teacher training that included theory, methods, and teaching practice. Since 1998 nursery school and elementary teacher education are required to complete a four-year university degree (*Laurea*).

Secondary school teachers always had been required to attend and earn a university degree in a specialized field. They may obtain the designation of Abilitazione from two-year specialization schools (*Scuole di Specializzazione*). Those wishing to take the teaching exam (*cattedre*) must have this designation. Teachers must pass another exam (*concorso*) to obtain professional teaching status. Teachers also receive training on the integration of special needs students, such handicapped students; some teachers have a specialization in areas of special education. Teachers in recognized private schools must meet the same qualifications as public school teachers.

School principals or head teachers (*Preside, Direttore Didattico,* or *Dirigente Scolastici*) are responsible for the overall management of the school, including instructional, financial, and personnel issues and represent the school within the community. They report directly to the Provincial Director of Education. The principals or head teachers coordinate all school activities and are responsible for meeting legislative provisions. They must guarantee equal opportunity and equity of resources to all students, taking into account the sociocultural needs of the community. These school leaders implement School Council decisions; organize the school internally, promoting and coordinating activities for faculty and staff; and develop class schedules, teacher assignments, and student disciplinary action. Other teachers or administrative directors may assist the principal or head teacher.

The recruitment of new *Dirigente Scolastici* is done through a course-competition announced by the Ministry of Public Instruction. Teachers with a university degree (*Laurea*) who have been teaching for at least seven years can be admitted to this competition. Teachers who complete the general training course-competition satisfactorily and who meet placement qualifications can be placed in primary and middle schools. Teachers who complete specific secondary training can be placed as head teachers in upper secondary schools.

The School Council (*Consiglio di Istituto*) is responsible for budgetary methods and the organization and planning of non-educational extra curricular activities. The council decides on the purchase of school equipment, teaching materials, and other resources; on the use of school facilities for curricular and extra curricular activities, including sports; on the remedial and support courses to be offered, and on the cooperative efforts with other schools and community groups. The council includes teachers, parents, and students. The chair of the council is an elected parent representative, and the principal serves an ex-officio member.

Teaching and educational activities are the responsibility of the principal, the Teachers' Assembly (*Collegio dei Docenti*), the Interclass Council (*Consiglio d'Interclasse*) for primary schools and Class Council (*Consiglio de Classe*) for secondary schools. The Teachers' Assembly is composed of all the permanent and temporary teachers of each primary school group or individual primary or secondary school and is chaired by the school principal. The Teachers' Assembly is responsible for teaching and educational plans for each school year. The group must follow national legislation and guidelines and be cognizant of community needs and concerns. It encourages academic freedom and interdisciplinary teaching and learning. The Teachers Assembly is also responsible for evaluating teacher performance, selecting textbooks and other resources in consultation with teachers and parents, and for providing inservice for teachers and staff.

Rectors are univerisities' legal representatives. The faculty members at each university select someone among them to serve as rector or president. The rector carries out the decisions of the academic senate (*Senato Academico*), the university decision-making body regarding academics and other educational issues. The president also works with the *Consiglio di Administrazione,* the board responsible for administrative and financial management. Various faculties within departments carry out instructional and research activities in fields of specialization. University teaching requires a doctorate in a field of specialization. The Faculty Committee, comprised of deans, professors and researchers, coordinates and carries out the academic responsibilities of the university related to curriculum, scholarship, and student advising. The committee makes decisions about teaching and research. Students may be a part of this committee. Inspectors visit schools to ensure that educational objectives are being met.

The federal government finances public education by providing salaries for teachers and staff and purchasing textbooks and other instructional materials and resources. Most funding is sent directly to regional and provincial offices for schools to use as they deem appropriate following guidelines from the Ministry of Public Instruction. The School Council is responsible for allocating funding for school maintenance, facilities, equipment, library expenditures, and academic resources. Preliminary budgets are prepared by an Executive Board elected by the School Council and chaired by the school principal. The school secretary, an ex-officio member of the board, is responsible for recording accounting and expenses.

University rectors are responsible for posting recruitment needs, procedures, and competitive exams for the posts of full, associate, and research professor. University faculty includes full professors and associate professors. Full professors are professors with tenure of first level (*Professori di Prima Fascia or Ordinari*), and associate professors have tenure of second level (*Professori di Seconda Fascia*). Professorial levels are assured academic freedom in teaching and research. Research professors (*Professori di Ricerca*) contribute to the development of research and integrate and apply it to their teaching.

Contract professors are hired according to Ministry for Universities for Scientific and Technical Research (MURST) regulations for one- to six-year contracts to teach and assist in scholarship activities with professors and university students within specific fields of specialization. Budget considerations may limit these contracts. Native language collaborators and linguistic experts who have earned a *Laurea* may be hired to work on specific research projects with faculty and students for a specific time period. Lecturers from other countries are also hired for their areas of expertise and work for a limited contract period.

SUMMARY

The Italian school system is divided into three tiers: primary, secondary, and higher education. School reform was introduced in the early 1960s and continues. The primary or elementary school is compulsory and free; elementary education starts at 6 years of age and lasts until a student is 11 years old. Students are required to pass an aptitude exam at the end of elementary school before entering secondary school.

Compulsory education has been extended to lower secondary education or middle school and, in 1999, to the first year of upper secondary school. At the end of middle school, students take another aptitude test before entering upper secondary school. At the end of upper secondary education, students must pass a final exam (*Esame di Stato*) that allows them to earn a certificate (*Diploma di Maturita*) to enter the world of work or gain access to universities and non-university higher education schools. Upper secondary schools, sometimes also referred to as higher education, include the classic, linguistic, and scientific schools (*liceos*); education schools for nursery and elementary teachers; and technical, vocational, and professional schools.

There are private schools for all levels of education. Funding for private schools is primarily from private organizations; however, private schools may receive state funds if they follow the same guidelines as state public schools in terms of curriculum, personnel, and management.

Adult education exists for those who wish to acquire job skills, improve literacy levels, and continue their education. The Italian educational system recognizes the importance of cultural and linguistic pluralism and in schools. Accommodations are made for students with special needs. Italy, as a member of the European Community, is engaged in the European dimension of education and participate in a network of international initiatives.

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—Maria A. Pacino

J

JAMAICA

BASIC DATA

Official Country Name:	Jamaica
Region:	North & Central America
Population:	2,652,689
Language(s):	English, Creole
Literacy Rate:	85%
Academic Year:	September-August
Number of Primary Schools:	793
Compulsory Schooling:	6 years
Public Expenditure on Education:	7.4%
Educational Enrollment:	Primary: 300,931 Secondary: 235,071 Higher: 8,191
Educational Enrollment Rate:	Primary: 100% Higher: 8%
Teachers:	Primary: 9,265 Secondary: 10,931 Higher: 418
Female Enrollment Rate:	Primary: 99% Higher: 7%

HISTORY & BACKGROUND

The history of education in Jamaica is perhaps best understood in the context of the island's colonial past. The education system and its administration were fashioned after the British system; and many of the developments in the history of Jamaican education can be seen as responses to events such as the abolition of slavery 1834, the advent of suffrage in 1944, and the achievement of independence in 1962. Much of the recent history of education in Jamaica has been driven by the perceived need to develop ''homegrown'' responses to economic, social, and political pressures on the island and in the Caribbean region (Whiteman 1994).

Before the Act of Emancipation went into effect in 1834 there appears to have been little in the way of a formal education system for whites and no system for educating indigenous people and slaves. White colonists who could afford it sent their sons back to the ''mother country'' for schooling, while others hired private tutors. Those who were less affluent sent their sons to one of the few free schools that were established through bequests from wealthy planters and merchants. The curriculum in the free schools was based on that offered by similar schools in Great Britain and was intended ''to offer a classical education to young gentlemen so that they would be properly fitted to take their place in society'' (Hamilton 1997). A few slave children received some schooling at plantation schools established by foreign missionaries, but their education dealt mostly with religion and the virtues of submission (Wilkins & Gamble 2000). At least some of these plantation schools provided education for girls as well as boys (Bailey 1997).

There is little documented about the education of girls in the colony before 1770 when Wolmer's Free School initiated a modified curriculum for girls that was designed to prepare them for running a home or for employment as seamstresses and mantuamakers. Hamilton (1997) states that some girls were able to get teaching positions.

Once slavery was abolished in 1834, the British saw education as an important way to integrate ex-slaves into

the colonial economy and to ensure a peaceful lower class (Morrison & Milner 1995). In the years following emancipation, missionary societies developed a system of elementary education for the newly freed slaves. This system was taken over by the colonial government beginning in the 1860s. Cogan and Thompson (1988) see the eventual government sponsorship of a system of secular education as a response to the conflicts between propertied classes that led to the Morant Bay Rebellion of 1865. Schooling emphasized skills that would prepare children for eventual employment as estate workers. The elementary curriculum focused on reading, writing and arithmetic with some religious training and occasional geography and history instruction. In addition, boys were given training in agriculture and other manual arts, and girls received lessons in sewing and domestic science. These separate tracks for boys and girls were formalized in the Lumb Report of 1898 (Hamilton 1997). The report emphasized the need for agricultural training in order to counteract trends seen as threatening to the colonial economy and society: students were developing a distaste for manual labor and were moving from the countryside to the cities and towns to take up clerkships and other similar occupations.

The school system continued to expand at the beginning of the twentieth century but nonetheless continued to be guided by the nineteenth century colonial practice of educating children to fit their station in life (Hamilton 1997, Whiteman 1994). As the relative number of British people in Jamaica began to decrease, it became necessary to move native Jamaicans into certain intermediate occupations, and this resulted in growth in the secondary school system and the creation of government scholarships for university study abroad (Wilkins & Gamble 2000). Elementary schools began to hold annual scholarship examinations in order to allow some children who would not have been able to afford the fees to attend secondary school. Burchell Whiteman (Minister of Education and Culture of Jamaica) characterizes these movements as the beginnings of the struggle to change the secondary schools from ''being comprised of students with the 'ability to pay' to students with the 'ability to benefit from' the education offered'' (1994). During the 1930s economic pressures associated with the Depression and the colonial system in general resulted in widespread unemployment among Jamaicans. This, coupled with chronically low wages and endemic poverty and with the growing desire among Jamaicans for self-rule, led to the formation of groups such as the Jamaica Workers' and Tradesmen's Union (in 1934) and the Peoples' National Party (in 1938). Mass protests and marches among the working poor and the unemployed became common and frequently ended in rioting. The British responded with the Orde Brown Inquiry into labor conditions in the colony and the formation of the West India Royal Commission under Lord Moyne which was charged with inquiring into the social, economic, and educational conditions underlying the unrest.

The Kandel Report and the associated Plan for Post-Primary Education in Jamaica of 1943-1944 addressed the educational, social, and economic conditions in the colony once again. It focused on establishing a system of post-primary education ''so as to ameliorate the existing harsh socially segregated education with its class and color configurations'' (Whiteman 1994). The report and plan also addressed curricula at the secondary level, establishing a common literary core for both boys and girls but further solidifying the gendered vocational training ''tracks'' originally formalized in the Lumb Report (Hamilton 1997).

Much of the reform and restructuring that took place from this time up until independence is described by Sherlock and Bennett (1998) as ''a period of tutelage . . .[in which what] was granted was diluted self-government in doses graduated to suit the imperial interests.'' There was much to do because ''the colonial system of education bred a lack of self-confidence among blacks in their own ability to manage their own affairs'' (Sherlock & Bennett 1998). As part of this general trend toward the self-sufficiency of the island (and of the whole British Caribbean), the University of the West Indies (UWI) was founded in 1948 at Mona, Jamaica. This was an important step in establishing educational independence because Jamaica had been forced to import university graduates from Great Britain to serve as senior staff in secondary schools. The birth of the Department of Education at UWI in 1952 was a major step toward a completely ''home-grown'' educational system.

The processes leading toward self-rule and eventual independence for Jamaica were accelerated by the complex events and forces that arose during and after World War II. Sherlock and Bennett (1998) argue that the rejection of Nazi anti-Semitism and Aryan superiority led the British to see as untenable ''the concepts of empire and of the trusteeship of a superior race.'' The Jamaican Constitution was revised in 1944 to grant voting rights to all adults, and the British also started the process of ending colonial economic exploitation by setting up a colonial development fund.

The Moyne report's conclusions with regard to education noted that a lack of central control over the primary schools resulted in inefficiency in administration. It also pointed out that there was a lack of correspondence between the schools' curricula and the needs of those living in Jamaica. The report recommended, among other things, that the curriculum be modified to include courses in health and hygiene, that preschools be established

(even though many community-based preschools already existed and Rev. Ward had recently addressed the government on this matter, that schools be organized into levels (Primary for six- to twelve-year-olds, and Junior for twelve- to-fifteen-year-olds), and that schools be brought up to modern standards with respect to buildings, sanitation, water purity, and school equipment. It is generally agreed that the Moyne Report also contributed impetus toward the granting of universal adult suffrage and (limited) self-rule in the colony.

CONSTITUTIONAL & LEGAL FOUNDATIONS

A bipartisan commission of the Jamaica Legislature drafted Jamaica's constitution during 1961-1962. It was approved in Great Britain and went into effect when Jamaica achieved full independence on August 6, 1962. It provides for a parliamentary/ministerial form of government. The Governor-General, who serves as the Queen's representative, has the authority to appoint ministers and to call elections, among other powers. The Governor-General is appointed by the Queen upon the Prime Minister's recommendation. The constitution stipulates that there be a minimum of eleven ministries; ministers are appointed and assigned their portfolios by the Governor-General in consultation with the Prime Minister. The constitutional head of each ministry is the minister, and the executive head is the Permanent Secretary, who provides continuity despite changes of government and sees to the day-to-day operations of the ministry. Ministers can introduce bills in Parliament. Bills become law once they have been approved by Parliament and have received the Governor-General's approval.

The education system in Jamaica falls under the purview of the Ministry of Education and Culture (MOE&C). The MOE&C administers the Education Regulations which govern the operation and management of schools at all levels. These include such things as the dissemination of the results of school assessments, the licensing and employment of teachers, the establishment of standards and requirements for continuing professional development of teachers, development of curricula, and the setting of the minimum number of school days. The ministry also oversees the activities of a variety of agencies that intersect with its educational mission and programs: the Jamaica Library Service, Nutrition Products Limited (in-school feeding programs), the Human Employment & Resources Training trust/National Training Agency (HEART/NTA), the Jamaica Movement for the Advancement of Literacy (JAMAL), the National Heritage Trust, the Institute of Jamaica, and the University Council of Jamaica.

The activities of various private and nongovernmental organizations (NGOs) engaged in projects for improving education in the country are coordinated and administered through the MOE&C. The ministry also serves as liaison between the government and such world-wide and regional agencies as UNESCO and CARICOM, preparing necessary reports on education and implementing reforms and initiatives emanating from those organizations.

Since Jamaica became an independent nation in 1962 there have been a number of cycles of reform and one major period of retrenchment in education. The first set of reforms took place as part of the Independence Plan of 1963. The plan set forth the goal of increasing the number of teachers at both the primary and secondary levels. Expansion of teacher training facilities was directed toward increasing the annual output of primary teachers to over 500 by 1972; and an increase in the number of teachers' scholarships to UWI was intended to increase the number of qualified secondary school teachers (Miller 1992). The selection process for admission to secondary schools was also a target of reform. Admission to secondary schools was determined by either a child's parents' ability to pay fees or the child's ability to gain a free place on the basis of his/her performance on the Common Entrance (CE) Examination. The overwhelming number of free places in secondary schools had been going to children from private or church-sponsored primary preparatory schools, while children from government primary schools, who were almost entirely from the lower social strata, qualified for only a few. This resulted in the ''70/30 Plan'' in which the Ministry of Education decided to allocate free places on the basis of a child's performance on the CE exam and the type of primary school she/he attended. Because 70 percent of children on the island attended government primary schools, 70 percent of the free places were reserved for children from these schools. The idea was that this scheme would result in increased opportunities for a secondary education for poor children and that this, in turn, would ameliorate some of the socioeconomic, racial, and class inequities that persisted in the former colony.

The Independence Plan was superceded by the New Deal for Education in Independent Jamaica (generally referred to as the ''New Deal'') in 1966. This effort was funded by the World Bank, the Canadian International Development Agency (CIDA), and the United States Agency for International Development (USAID). It was, according to Cogan and Thompson (1988) ''the first comprehensive and systematic attempt by the government to formulate long-range planning in education that would result in a unified system open to all.'' Specific proposals were designed to restructure the education system in order to encourage and enable all students to get a secondary-school education. In fact, the primary motivation behind these reforms was the idea that education

should break down class and racial boundaries that it should be a unifying rather than a stratifying force in Jamaican society.

Under the New Deal the number of primary teachers being trained reached almost 1,000 per annum in 1969; however, this was partly accomplished by reducing the teacher training program from three years in college to two years in college plus one year of internship in local schools. All teachers' colleges were expanded, one new teachers' college was established in rural Jamaica, and for the first time all teachers' colleges were equipped and staffed for training secondary-school teachers. The number of scholarships to UWI was further increased, and in-service training for teachers was expanded and intensified.

The New Deal gave way to the Education Thrust in 1973. The formulation of this program began after the election of the People's National Party (PNP) in 1972. The Education Thrust was formulated coincident with the completion of the Jamaica Education Sector Survey, a comprehensive look at the whole educational system that included specialists from various external agencies, including USAID and CIDA, along with members of the Jamaican Ministry of Education. The Survey was meant to provide the basis for educational planning in the future.

The Education Thrust was intended to be a comprehensive program for dealing with education at all levels. In order to ensure that reforms were working, the plan included rolling three-year qualitative and quantitative assessments of the various programs implemented under the plan. A complete reorganization of the Ministry of Education was to result in improved planning and administration that would filter down to all levels of the education system. Free and compulsory education was to be made available to all children up to age 14, that is, up to the secondary school level. The newly established Caribbean Examinations Council (CXC) was to set the standards for the school examination system. And, in order to promote social (including educational development) and public works programs, students who had been educated at government expense were to take part in a proposed ''National Service Corps of Graduates.''

The Education Thrust also sought to increase the number of teachers produced by the colleges to 1,700 per year. (The target year was 1975, but the goal was not reached until 1979.) An effort to provide in-service training for primary school teachers led to the establishment of the In-service Teacher Education Thrust in 1973 and to the In-service Diploma in Education in 1975. Additional teacher education training programs were set up at the College of Arts, Science, and Technology (CAST) and the Jamaica School of Agriculture (JSA) in 1975, a goal that was originally part of the New Deal program.

Cogan and Thompson (1988) argued that the three major reform programs described above ''had a negligible effect on the eradication of class stratification within the larger society;'' they argued further that primary education was ''largely inefficient under the sheer numbers of the system'' (1988). Miller (1992), however, points out that there were quite a few positive results that grew out of these programs. He observes that teacher education was expanded and reformed in accordance with set development targets. The number of and types of teachers to be trained, the modalities to be employed, and the number and location of training institutions were all carefully planned. Each plan built upon the achievements and targets previously set, despite the fact that different governments of different political parties and ideologies were involved. One result of all this was that Jamaica's capacity to train teachers had developed to the point that the government was able in 1976 to phase out recruitment of secondary school teachers from abroad. More importantly, Miller argues, the efforts to improve the number and quality of teachers at both the primary and secondary levels had paid off in terms of student performance. The 70/30 Plan, which was established because private preparatory students were winning the bulk of the free places awarded for high school, was abolished in 1974 because public primary school students' performance on entrance exams now resulted in their obtaining more than 70 percent of those places based strictly on merit (1992). The period from 1977-1987, however, marked a period of retrenchment. During this decade Jamaica and the International Monetary Fund (IMF) entered into a series of austerity agreements that implemented IMF strictures requiring adjustments to the Jamaican economy. During this period expenditure on education (expressed in 1974 dollars) declined by 33.8 percent (Miller 1992). The student-teacher ratio for primary schools was increased by the Ministry of Education from 40:1 to 55:1. Two teachers' colleges were closed, and the In-service Education Thrust and the In-service Diploma programs were done away with. Teacher education was hardest hit, experiencing a decline in real expenditure of 66.2 percent between 1977 and 1987 (Miller 1992). Miller also states that one result of all these cut-backs was ''a fracturing of the relationship between the major stakeholders'' in the education process and the growth of ''skepticism and suspicion concerning planned developments in the sector'' which left managers of the sector ''with the major problem of motivating and inspiring effort, even among themselves.''

Jamaica's financial difficulties have not abated. Debt service continues to consume a larger and larger portion of the government's budget, rising from 45.3 percent of the budget (25.9 percent of the country's Gross Domestic Product or GDP) in 1996 to 58.2 percent (38.4 percent

of GDP) in 1999 (Ministry of Education and Culture 2001). However, the government continues to place a high priority on educational development.

Jamaica participated in the 1990 World Conference on Education for All (EFA) and formulated a pair of five-year educational development plans during the 1990s that coincided with the goals and targets defined by the EFA program. These plans focused on improving access to and the quality of early childhood education, providing universal access to basic/primary education, improving attendance and completion rates at the primary level, improving curricula and instruction at the primary level, reducing the adult illiteracy rate, and establishing a variety of media outlets for disseminating information for the public good.

These efforts have paid off in some areas. Participation in early childhood programs has increased, and instruction has been improved through the development of curriculum guides. The national curricula for grades 1-9 have been revised, and the National Assessment Programme has resulted in the development of a battery of standardized tests that will enable officials to monitor performance at the primary level. The government now provides free textbooks in Language Arts, Mathematics, Science, and Social Studies to all pupils in grades 1-6; and a textbook rental program has begun for students in grades 7-9 (UNESCO 2000).

There has been some improvement in providing teacher training, but the percentage of primary teachers with certification has dropped during the 1990s. Economic difficulties continue to result in inadequate facilities and in major inequalities in education at the secondary level. And, while enrollment rates at the preprimary and primary school levels have been boosted, attendance rates are disappointing and many children exit the system without being literate and/or numerate (UNESCO 2000). A series of new initiatives that will address these and other problems have been proposed in two recent Ministry of Education and Culture policy statements: Education: the Way Upward, A Green Paper for the Year 2000 (1999) and White Paper I: A Path for Jamaica's Education at the start of the new Millennium (2001).

EDUCATIONAL SYSTEM—OVERVIEW

The educational system in Jamaica is outlined below and described in more detail in the following sections. Education through the six years of primary school is compulsory and is free in government-sponsored schools. The age of entry into primary school is six years, and children generally complete primary school at age twelve. The academic year runs from September to July (with some local variation), and the Education Regulations prescribe a minimum of 195 days of instruction in the school year. The language of instruction is English.

The Ministry has pushed for the remodeling and construction of school buildings and has paid particular attention to library facilities. By the end of the 1990s a little over one hundred school libraries had been refurbished and their stocks of books increased. The Ministry has also set the goal of placing at least one computer with Internet access (where available) in every school on the island by the end of the year 2002. As of 1999, the Ministry had supplied more than 100 schools with computers and had trained almost 350 teachers in the use of computer systems and the Internet. Funding for these initiatives is uncertain, however, because the national debt continues to consume a larger portion of the government's budget each year. Success in these areas may depend on the success of the Ministry's efforts to form partnerships with businesses and manufacturers and on the largesse of foreign governments, granting agencies, and foundations.

Curriculum: Up until independence, the curriculum in Jamaica's schools mirrored that of schools in Great Britain. Curricular development since then has focused on fashioning a better fit between the educational system and the development needs of the ex-colony. This has been looked upon as both a local and a regional imperative, since many of the ex-colonies in the Caribbean Basin have experienced similar problems with educational systems that were ''not geared towards enhancing the knowledge, skills, and values which helped students live more productive lives in their own societies'' (Whiteman 1994). One criticism of the system was that it seemed that education at each level was primarily geared to preparing students for entry to the next level; that is, ''[u]sefulness or relevance of curriculum content was seen in terms of its value in helping students pass the examinations which lead to the next stage up the educational ladder'' (Whiteman 1994). Many of the earlier reforms in curriculum content were directed toward doing such things as making primary school education clearly useful in itself and not simply a means to getting into secondary school.

Such concerns are still addressed, but curricular development increasingly has been driven by economic and development pressures that require higher levels and standards of literacy and mathematical skills among the citizenry. In recent years the government has attempted to rationalize the curriculum at both primary and secondary levels in order to respond to social and manpower needs and to improve access to and encourage enrollment in secondary-level schools.

A major part of curricular reform since the 1990s has been related to the provision of textbooks. Textbooks are the main teaching materials used in the schools, and until fairly recently most of these texts were produced in other countries, primarily Great Britain and North America. This presented a number of problems. The first is that

these texts were written from the perspective of the highly industrialized societies that produced them and did not reflect many aspects of the life and values of Jamaicans or West Indians. Another factor was cost. As the value of the Jamaican Dollar declined in relation to U.S. and Canadian Dollars and the British Pound, procurement of textbooks put quite a strain on government foreign currency reserves; and, because parents were required to buy these increasingly expensive textbooks for their children, many children ended up without textbooks. This resulted in a decline in children's performance and achievement in school, an increase in absentee and dropout rates, and a decline in literacy.

The MOE&C now produces textbooks for all subjects taught in grades one through six. The content in these books is linked directly to the cultural and historical development of Jamaica and reflects the experience of Jamaican children. More importantly, these texts are reprinted every year and presented free of cost to each child in the primary grades. This not only gives all children access to needed textbooks, but officials also see other benefits. They argue that the children's ownership of books will lead them to value literacy and learning more and that the continued presence of books in children's homes will generate more interest in education among younger siblings and even parents and other adults.

MOE&C has also developed and distributed textbooks for secondary-level subjects and has implemented a textbook rental program at all secondary schools. The curriculum at the secondary level has been ''caribbeanized'' and made more responsive to regional concerns through Jamaica's participation in the Caribbean Examinations Council programs.

Special Education: The government defines special education programs as those programs ''designed to meet the educational needs of children (4-18 years) who are identified as having mental, physical, and intellectual capabilities which deviate significantly from the norm expected of their age cohort'' (Ministry of Education and Culture 2001). In 2000 there were 2,200 students aged four through eighteen and a little over 300 special education teachers in government-run and government-aided special schools and units. About 300 learning disabled, hearing impaired, and other disabled students are in privately run schools.

Prior to the 1970s Jamaica's capabilities to identify and manage learning disabilities in children was very limited. The educational system as a whole was also unable to deal with the special education needs of physically and mentally exceptional children. Most special education services were provided by voluntary organizations until the government in 1974 took financial responsibility for the care of exceptional children. These children now have access to special education programs in many government schools, often aided greatly by the activities and support of a number of voluntary agencies. Mico Teachers' College runs a program that provides clinical assessments and diagnostic and prescriptive teaching services. The Lister-Mair-Gilby High School, the Jamaica Association for the Deaf, and the School of Hope provide vocational training for students with disabilities within the formal school system.

The government intends to continue to appoint special education teachers to primary and all-age schools until all students who need such services have access to them. The idea is to mainstream as many students as possible, but the special education program suffers from insufficient numbers of appropriately trained teachers and inadequate facilities and equipment. The MOE&C (2001) notes that the demand for special education services ''far outstrips'' its ability to meet them.

Vocational training for young adults with disabilities is provided by private voluntary organizations and NGOs, including the Jamaica Association for the deaf, Woodside Clarendon School for the Deaf, School of Hope, the 3D Projects Private Voluntary Organization Limited (PVO), and the Abilities Foundation. The PVO provides home-based training with a parent education component; another program with a parent education component is run by the Clarendon Group for the Disabled, funded by Lilianne Fone of the Netherlands. The PVO also runs community-based projects which provide training in horticulture, paper making, and other skills.

PREPRIMARY & PRIMARY EDUCATION

In the 1960s Jamaican educators became interested in the ideas on compensatory education that were embodied in the Head Start program that was being implemented in the United States. D.R.B. Grant organized a team from UWI to strengthen the educational program in the basic schools. Supported by a grant from the Bernard Van Leer Foundation in The Netherlands, the team focused on enhancing the education and skill of teachers, improving the curriculum, developing teaching materials, and improving school facilities. The teacher training program the team developed ''still serves as the model for Jamaica's community-based programs, and several other developing countries have adopted it'' (Morrison and Milner 1995). It was not until 1977, however, that it became possible to earn a bachelor's degree in Early Childhood Education in Jamaica.

All childcare services were organized under the MOE&C in 1998 when Day Care Services was moved out of the Ministry of Health. The consolidation of services for children aged zero to five years was formalized

in the comprehensive Early Childhood Education and Development Programme, established in1999 (UNESCO 2000).

Early childhood education is delivered through community-based, government-supported basic schools, government-run infant departments in primary and all-age, and kindergartens in privately owned preparatory schools. The government has demonstrated an increasing commitment to ensuring the readiness of children entering primary school by encouraging participation in early childhood programs. The number of government-recognized basic schools rose from 1,251 in 1990 to 1,980 in 1998 (UNESCO 2000). There was an increase in the percentage of the education budget going to early childhood education over the four years from 1996 (2.8 percent) to 2000 (4.5 percent), and this portion of the budget is slated for another increase in the 2001-2002 budget. Even children in privately owned facilities benefit from government subsidies for teacher salaries, class materials, and school meals. The MOE&C develops the early childhood curriculum and trains teachers in regular workshops; these endeavors have often been supported by grants and technical support from sources such as UNICEF and the Bernard Van Leer Foundation.

MOE&C (2001) reports that the preschool enrollment rate of children in the four- to five-year-old age group is 91 percent, which is one of the highest rates in the Caribbean region. Just over 80 percent of the children are enrolled in the community-operated basic schools, approximately 16 percent are in public infant departments, and the remaining 4 percent or so are in private kindergartens. Based on 1998 figures, the MOE&C (2001) reports that only 3.6 percent of children under age four are in supervised care, with more than 90 percent in private day care.

While enrollment rates are quite high, the overall effectiveness of the early childhood programs in preparing preschoolers for primary school is hard to gauge. Although the government in cooperation with UWI and the Van Leer Foundation embarked on a number of initiatives in the 1990s to increase the number of trained preschool teachers, there is still a large number (possible a majority) of para-professionals working in the system (UNESCO 2000). One of the goals of the MOE&C for the 2000 decade is to place at least one trained teacher in each basic school with a minimum enrollment of over one hundred. In addition, it is unclear whether the high enrollment rates reported accurately reflect participation in the programs. Absenteeism has been a problem in the primary schools. The government reports both gross and net enrollment levels for primary schools, but such figures for pre-primary schools are difficult to obtain.

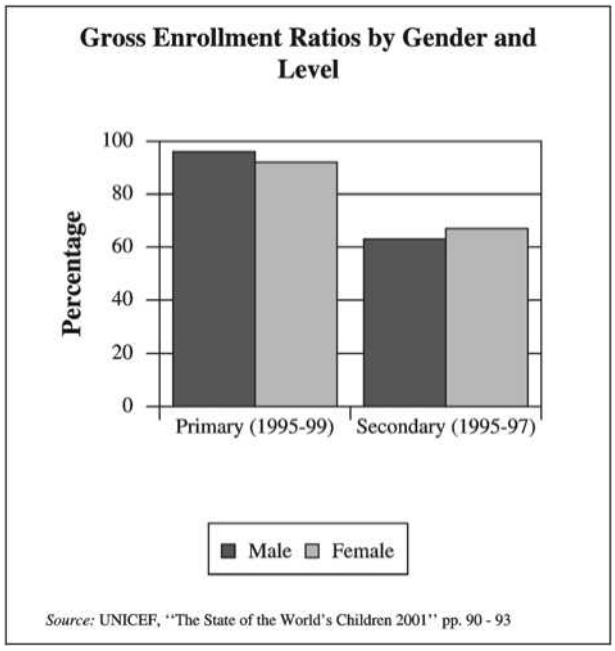
The main focus during the 1990s has been on assessment. The National Assessment Programme (NAP), designed to monitor and assess learning outcomes, was developed during this period. After a two-year pilot program involving 32 schools, it was implemented in 1999. The NAP is made up of standardized measurement instruments designed to assess student readiness and performance at four points during the primary school years. A readiness inventory is given to all students entering grade one. A set of reading and mathematics diagnostics is administered at grade three. A literacy test is given at the fourth grade level, and the Grade Six Achievement Tests (GSAT) complete the battery. As of March 1999, over 2,000 teachers had been trained in the new methodologies associated with the NAP (UNESCO 2000).

The literacy test is intended to play a crucial role in regulating the flow of students through the system and in eliminating the practice of social promotion. Promotion from grade four to grade five will become contingent on mastery of reading skills rather than on age. The hope is that this will increase literacy rates and raise overall performance on the GSAT, which has replaced the Comprehensive Entrance Examination as the mechanism for placing students in secondary school.

Primary education covers grades one through six (roughly ages six through twelve years) and is offered in public primary schools and all-age schools, as well as private schools. All-age schools offer schooling from the primary level into first-cycle secondary school, that is, grades one through nine or one through eleven; many also include so-called infant departments that offer preschool programs. Considerable effort has been put into improving primary education after the island became independent in 1962. Access to primary education is universal and free from fees for all children enrolled in public schools. All primary students receive textbooks for all their subjects free of charge from the government each year. Despite this achievement in the provision of access, the main challenge facing Jamaica is improving the quality of education at this level.

The MOE&C states that ''[i]t is at the primary grades that the foundation for the acquisition of knowledge, skills and values for further development and continuing education is laid'' (Ministry of Education and Culture 2001). The government had been concerned with ensuring that the primary curriculum could stand on its own without necessarily being seen as simply a way of gaining access to secondary education, but recent policy statements from the MOE&C indicate that an eventual goal is to have all children complete at least the first cycle of secondary school. The secondary system is being reformed, and much consideration is being given to again revising the primary school curriculum in order to more adequately prepare children for entry into that system.

In the six to eleven age group, 2001 reports indicate that 99 percent are enrolled in school. However, average



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

attendance at the primary level is relatively low at 78 percent; attendance rates for girls have been consistently three to four percentage points higher than those for boys, but the gap appears to have been narrowing during the decade of the nineties (UNESCO 2000). Attendance rates also tend to be higher in urban rather than in rural areas. The current literacy rate at the end of the primary level is 70 percent; a male-female asymmetry somewhat larger than that existing in attendance also exists in this area, but the gap here has also been narrowing. There is also a rural-urban literacy gap. Approximately 96 percent of enrolled students complete primary school. The national average teacher-to-student ratio is 1:32, but 14 percent of schools have a ratio of 1:42 or worse. Some 81 percent of teachers in the primary school system are qualified/certified, but rural and remote schools generally have a higher proportion of inadequately trained teachers. Approximately 52 percent of the schools are in ''good'' to ''satisfactory'' condition, and 86 percent of the students have satisfactory seating arrangements.

Efforts to improve the quality of primary education have centered on revising the primary curriculum, implementing an assessment system, increasing the number of qualified teachers in the system, and increasing the availability of support materials such as library books and computers. The language arts component of the curriculum has been revised to incorporate a development component, the goal being to equip all teachers of grades four and six with the means and the skills to diagnose and remediate reading difficulties. There is also an effort to establish performance standards in all areas of the curriculum at the end of each grade.

Preschool education is universally available for children aged four to six in both government-sponsored (basic schools) and private facilities (kindergarten departments at private preparatory schools). The MOE&C develops the preschool curriculum and sponsors regular workshops for training teachers in the basic schools. In order to promote school-readiness for children entering primary school, the government encourages parents to enroll their children in preschools. The MOE&C has also launched parent education initiatives that are aimed at encouraging conceptual and social development in children from ages zero to four.

Primary education covers six grades/years. Children ordinarily enter at age six and exit the system at age twelve. Promotion from grade to grade has been determined largely by age, but the MOE&C is putting in place mechanisms that are intended to end the policy of social promotion. At the end of primary school children take the Grade Six Achievement Tests (GSAT). The GSAT is part of the set of standardized instruments that form the National Assessment Program (NAP). It replaces the Common Entrance Examination as the measure used to place graduates from primary schools into secondary schools.

SECONDARY EDUCATION

Secondary education covers five years (grades seven to eleven) with an additional two years (grades twelve and thirteen) for those who want to move on to higher education. The years in secondary school are divided into two cycles: first-cycle (grades seven and eight) and second cycle (grades nine through eleven). The five-year program leads to the Caribbean Examinations Council (CXC) Secondary Education Certificate after grade 11. Upon completion of an additional two years (grade thirteen) students may take the General Certificate of Education (GCE) Advanced A levels. The A-level exam is terminal and is the standard criterion used for entry into university-level studies.

Secondary education in Jamaica has been quite complex, in large part because the system originally was extremely selective and elitist. As demand for secondary education grew over the years, a variety of institutions evolved to meet varying and changing needs. At the beginning of the 1990s there were seven different types of secondary schools. Each type of school had a program of instruction, and levels of accomplishment and academic and vocational skills varied among graduates. One of the objectives of the MOE&C during the 1990s was to develop some sort of curricular uniformity across the different types in order to ensure equity and quality. The Reform of Secondary Education (ROSE) project resulted in the construction of a common curriculum for grades seven through nine in all schools. It is hoped that the introduc-

tion of this junior high school curriculum will equalize educational opportunities for secondary students. The MOE&C is also developing and distributing secondary school textbooks.

Traditional high schools and comprehensive high schools both have offered five years of secondary education, and admission to both types was selective, determined by performance on the GSAT. Comprehensive schools, however, also accepted students from local primary feeder schools. There was a perception that the comprehensive high schools were inferior to the high schools even though the curricula in the two were virtually identical. In May of 2000 the category comprehensive high school was abolished, and all of these institutions are now simply called high schools. The feeder system has been done away with, and all students must meet minimum scores on the GSAT in order to gain admission. Students who fail to gain admission to high school may gain admission after they complete grade nine (and the new standardized junior high curriculum) by performing satisfactorily on the Junior High School Examination.

The curriculum in the high schools is primarily academic and is intended to prepare students for the CXC (after grade eleven) and GCE exams (after grade thirteen). New secondary schools have a two-track system, offering continuing and vocational courses of study. Students in the academically-centered continuing course pursue a curriculum leading to the CXC examination, and many go on to enter teachers' colleges. Vocational students concentrate on technical and vocational courses in addition to the common junior high school curriculum. Curricula vary quite a bit in the other secondary schools, but all students in all schools now take the junior high school curriculum. A small percentage of students attend independent high schools (which also must offer the junior high curriculum); most of these schools are sponsored by religious organizations.

In 1999-2000 approximately 42 percent of teachers in high schools were university graduates and 20 percent of comprehensive high school teachers had university degrees; other secondary-school teachers usually have a certificate or diploma granted by a teachers' college. Government figures (MOE&C 2001) indicate that 81 percent of high-school-age children have access to five years of secondary-level schooling, a level which the MOE&C would like to see increased. Note that this does not mean that all of the 81 percent have access to five years of high-school level education; the 2001-2002 budget, however, includes money for the construction of three new high schools (Ministry of Finance 2001), which will provide additional spaces in high school. The MOE&C reports that Jamaican students' performance on the CXC exams is ''satisfactory'' in a range of subjects, particularly in technologies, business, and social science subjects. However, performance on English and mathematics is still ''below desirable levels.'' Scores have increased in these areas over the years 1996-2000, and the Ministry expects the trend to continue as students who have benefited from the new primary curriculum and the NAP make their way into the secondary system.

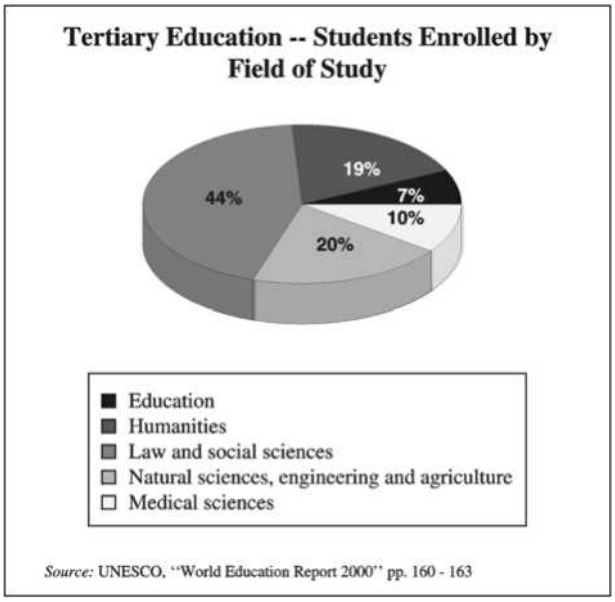
As mentioned above, the MOE&C has developed and distributed textbooks for use in secondary schools, but it does not have the resources to dispense them free of charge as it does in the primary schools. A textbook rental program does operate in all secondary schools, however. Education at this level is not free. The government has introduced ''cost sharing'' at this level, and most students and/or their parents are expected to contribute at least a nominal amount toward the cost of their education. Fees are set by each school, but all fees must be approved by the MOE&C. The Ministry has a program that helps needy students with all or a portion of their fees so that no child misses out on an education because of financial hardship. Ministry funding for secondary schools covers teachers' salaries and related expenses, but little else. The cost-sharing program has resulted in a significant increase in the amount of money that schools have for instructional materials and equipment.

The Ministry also started the Income Generating Project in 1993. This is a revolving loan system that helps individual schools to develop and implement projects that will generate additional income. Profits from the ventures that have been funded so far have been used for such things as subsidizing examination fees and providing uniforms for poorer students.

HIGHER EDUCATION

Jamaica is affiliated with the University of the West Indies (UWI), which has campuses in Jamaica, Barbados, and Trinidad. This regional institution is headquartered at the Mona campus located in Kingston, Jamaica. The University of Technology (Jamaica Utech), which was previously known as the College of Arts, Science, and Technology (CAST) and received university status in 1995, is Jamaica's only national university.

The University Council of Jamaica (an agency of the MOE&C) serves as the accreditation body for higher education in Jamaica. Three private institutions are recognized and accredited by the University Council: the Jamaica Theological Seminary, which offers a four-year Bachelor of Theology program, the Caribbean Graduate School of Theology, which offers a Master's degree in theology, and the West Indies College/Northern Caribbean University, which offers associate and bachelor's degrees in biological sciences and business studies but will expand its degree programs with its newly-granted university status.



Admission to bachelor's degree programs in government-associated universities (UWI and Utech) requires students to pass in five CXC General Certificate of Education (GCE) subjects, including two or three subjects at the advanced level. (The GCE exams are ordinarily taken at the completion of grade thirteen.) Students may also be admitted with the CXC Secondary Education Certificate (taken after grade eleven) or its equivalent after a preliminary year of probationary study. Some students also elect to attend community colleges where they can earn a two-year degree that can be used to transfer to a university. Foreign students must meet the same requirements (or their equivalents) as Jamaican citizens and must demonstrate competence in English; they must also obtain a visa and present certification of good health from a medical practitioner along with proof of vaccination against yellow fever and diphtheria. At UWI there are limitations on the number of spaces available to non-Jamaicans in engineering, law, and medicine.

Undergraduate degrees (either bachelor's or professional) normally take a minimum of three years of full-time study. Postgraduate study that leads to the master's degree requires two years of study and the submission of a thesis or a research paper, as in the case of professional degrees such as the Master's of Social Work. Medical specialization leading to a master's degree is also offered in a variety of specialties after four years of approved internship. The length of time it takes to obtain a doctoral degree (Ph.D.) varies from program to program but most take three years of study beyond the master's level. A thesis is required. Professional qualifications may be obtained one year after completing certain degrees or qualifications.

The two government-aided universities and the three university-council accredited private institutions draw students from throughout the Caribbean and from around the world. A number of programs, in particular some graduate programs and faculties at UWI, have earned international recognition and serve as magnets for students and scholars in certain areas of study. Many Jamaicans pursue university-level studies abroad, the majority in the USA, Canada, and Great Britain.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Funds for all agencies and ministries come through the Ministry of Finance, which is also responsible for collecting all taxes, overseeing financial institutions, and for managing the country's debt. The MOE&C receives funds from general revenues and from certain taxes that are earmarked for education and/or for specific programs. For example, the HEART/NTA programs receive direct funding via a payroll tax levied on employers whose monthly payrolls exceed a certain amount. A host of international funding agencies, including UNESCO, OAS, the Inter-American Development Bank (IADB), assist the government with projects involving construction of new facilities, the development of curricula, monitoring of student performance, and grants and fellowships for students to study both at home and abroad.

The government has made education its main priority, and this is reflected in the budget allocation given to the MOE&C. The Ministry's allotment has steadily increased since 1996, and projections for the 2001-2002 budget give the Ministry just under thirty percent of the non-debt portion of the budget. Debt service continues to eat up larger portions of the government purse, rising from 45.3 percent in 1996 to 58.2 percent in 2000 and to a projected 62.4 percent in 2001. The allocations given by the MOE&C to the different levels within the educational system also reflect changing needs and priorities. In the 1996 budgetary year early childhood education received 2.8 percent of ministry funds, primary education 34.3 percent, secondary 31.3 percent, and tertiary 20.2 percent. In 2000 early childhood received 4.5 percent, primary 36.9 percent, secondary 32.9 percent, and tertiary 18.3 percent. The proposed 2001 budget includes real dollar increases for all levels but allocates slightly more to early childhood, secondary, and tertiary education.

Traditionally, the management strategy of the MOE&C has been based on central control over all administrative matters. As the system expanded and grew more diverse, it was recognized that administrative reform was needed in order to provide a more effective way of managing the system at the local level. As part of the government's Administrative Reform Programme, the

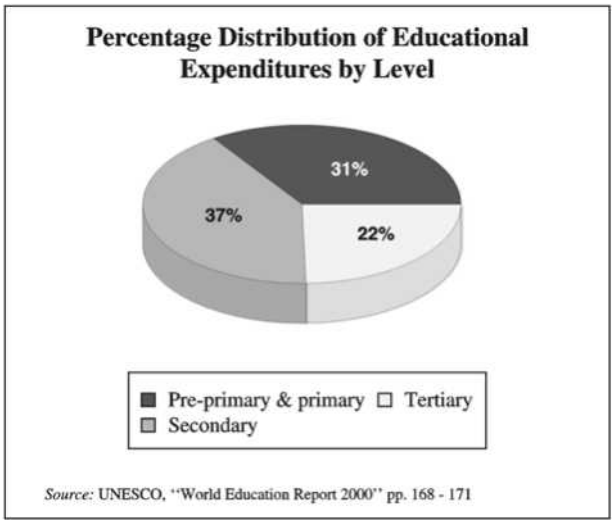
MOE&C was reorganized into a less centralized structure. Regional offices with clearly defined delegated authority and responsibility were (re)introduced with an eye to ensuring more efficient use of human and material resources. Six regional administrators have the responsibility for monitoring and managing systems in their geographic areas. The National Council on Education was established and charged with appointing and training members of individual school boards; it is also charged with finding ways to increase community participation in policy formation. Previously the members of individual school boards were appointed directly by the Minister of Education upon the recommendations of members of Parliament and the principals of the individual schools. The Boards of Management are directly responsible to the Minister for the smooth functioning of their schools, and each is required to formulate and implement a development plan in which annual targets are set and resources managed in accordance with that plan. Incentive funds are supposed to become available in 2003; these will be made available to schools and school boards that demonstrate excellence in organization, development, and academic performance. Each school also has an Education Officer whose job is to carry out Ministry directives and to ensure that the school is run in compliance with the government's code of regulations.

The Planning and Development Section of the MOE&C is responsible for research projects, planning and sitting schools, disseminating information about curricula to teachers, and organizing in-service and continuing teacher education. A variety of demonstration/pilot projects are supported by outside granting agencies; one example is the on-going Teenage Mothers Project operated by the van Leer Foundation and the Center for Early Childhood Education at UWI. Various other research centers at UWI engage in education and education-related research, as do Utech and Mico Teachers' College, among others.

NONFORMAL EDUCATION

Jamaica continues to be plagued by high unemployment. Part of this is because there simply are not enough jobs, and part of it is due to relatively low literacy rates and the lack of appropriate job skills among Jamaicans. The government has decided that investing in education will provide the best routes to solving the problem. Raising literacy rates and providing job skills is expected to enable more people to qualify for existing jobs, and it is also hoped that a literate, educated, and skilled populace will result in the creation of more home-grown jobs and attract enterprises that will bring jobs to the island.

The literacy problem has been attacked on two fronts. Reform of the primary-school curriculum and the end of social promotion policies is supposed to ensure that no student leaves the system without basic literacy and numerical skills. And, the Jamaica Movement for the Advancement of Adult Literacy (JAMAL) was established in 1974 to eradicate illiteracy in those aged fifteen and over through nonformal education channels. The program is organized by a core of literacy specialists who are supported by a large network of volunteers who conduct classes in workplaces and community centers throughout the island. Government figures show that almost 114,000 people enrolled in JAMAL's programs in the years 1994 to 2000. The MOE&C points to the results of the National Literacy Survey done in 1994 as evidence of JAMAL's success. In 1994, approximately 75.4 percent of the population over fifteen was literate, with rates being 81.3 percent for females and 69.4 percent for males. There was also an inverse relationship between age and literacy: the rate for the fifteen-to-nineteen age group was 86.5 percent whereas that for the sixty-five-and-over group was 47.9 percent. JAMAL has stepped up efforts to establish workplace literacy programs in an effort to close the gap between men and women.



There are a variety of programs that are intended to reach those who normally are not served by the standard educational system. Some of these programs are based in community colleges, evening institutes, and community centers. These include the HEART/NTA and JAMAL programs. The MOE&C has vigorously encouraged the formation of partnership programs between private and public sector companies and the established educational institutions. This has led to a variety of non-traditional training schemes, including a special program offered by Utech for personnel of Air Jamaica. Utech also has partnership training programs with a number of companies that lead to a diploma or certificate.

The MOE&C has stressed the need for development of distance education programs and implementation of other educational delivery systems such as computer-based instruction and internet-based courses, but the necessary infrastructure for these is not widely available. The ministry has set a goal of placing at least one computer with Internet access in each school on the island by the end of 2002. This may provide a base from which to develop such a program, as may the formation of partnership programs with businesses and NGOs.

The other major program addresses employment skills. The Human Employment and Resource Training trust/National Training Agency (HEART/NTA) is a statutory program set up in 1982 that was intended to administer and equip all public sector vocational training programs. It is funded by a three-percent training levy on private sector payrolls over a certain amount (originally about US $7,200). HEART/NTA programs are available to those over seventeen years of age, but there are programs for younger persons such as the Learning for Earning Activity Programme. Pre-vocational training is also offered at Vocational Training Centers (VTCs) for those who do not qualify for specific HEART/NTA programs. Most HEART/NTA programs have some kind of entry requirements, and VTCs provide a sort of feeder system for these programs. Some HEART/NTA programs have been articulated with programs at Utech and the College of Arts, Science, and Education, thus offering graduates of these programs admission to formal/degree-level educational programs.

The program offers institutionally based training in eight HEART/NTA Academies and sixteen VTCs spread across the island. On-the-job training is offered through the School-Leaver's Training Opportunities Programme and also through apprenticeship programs. Community-based programs are offered through the Skills 2000 Project and the Special Needs Programme.

Average enrollment in HEART/NTA programs during the years 1993 through 1998, the most recent years for which figures are available, was 12,373 per annum, with the largest annual enrollment coming in 1998; 58.7 percent of enrollees were female. Apparel and sewn products, commercial skills, hospitality, and construction skills programs were the most popular. An average of 6,868 graduated per annum during 1993-1998, with the highest number of graduates (10,996) coming in 1998; females accounted for 66.6 percent of all graduates. Reflecting the enrollment profile, the majority of graduates were in the areas of apparel and sewn product, building, and commercial skills.

The Social Development Commission (SDC), a joint responsibility of the MOE&C and the Ministry of Local Government, Youth, and Community Development, is responsible for structuring services for youth and communities. Its Community Center Programme has trained approximately 2000 young people in home making and crafts. National Youth Services and Operation Strive, also SDC initiatives, provide training and services to youth in mostly urban areas. Other, non-SDC, organizations provide vocational and other job-related programs for youth; these include the Jamaica 4-H Clubs, the Peer Counseling Association, Youth Opportunity Unlimited, the Mel Nathan Institute, the Kingston Restoration Company, the Youth Educational and Support System, and the Lift Up Jamaica Programme.

The Integrated Community Development Programme is the most extensive and innovative of the SDC's efforts. It is a community-based self-help program. As of 1998, almost 11,000 people had benefited from training and assistance that resulted in community-organized income-generating projects such as the Meylersfield Food Fish Project, Mile Gully Coffee Farms, Waltham Basket Weaving, Bromley Vegetable Farms, and Highgate Dolls. The Government of Jamaica Bee-Keeping Project has also trained and set up apiaries for about 1,200 individuals in rural areas. The MOE&C has also formulated more broad-based nonformal educational initiatives under the rubric of ''Education for Better Living.'' Its objectives include the encouragement and propagation of values and attitudes generally within the society and particularly regarding respect for fundamental rights and freedoms and the responsibilities of the individual to society; respect for observance of legal and social codes and stability in social life, the imperative to positively influence youth and family and to strive for the proper education and ideas on matters of general public interest. . .(UNESCO 2000, Part II, 20). To date, much of this effort has focused on establishing the Public Service Broadcasting System and on a weekly full-page weekly bulletin that appears in *The Gleaner*, Jamaica's largest circulation newspaper. The MOE&C, along with all other government agencies and ministries, is developing a website that is intended to serve as a portal for all sorts of educational resources for all of its constituencies.

Distance learning experiments have been undertaken throughout the last three decades but have been crippled by a lack of infrastructure and the expense of the equipment needed for such efforts. One must keep in mind that telephones and cable television and even electricity may be rarities in rural areas, and these things are prohibitively expensive for many individuals in both rural and urban areas. And, one must also keep in mind that many schools do not have enough desks and chairs for students and teachers or buildings that meet minimum standards.

The effort to supply computers and Internet access to all primary schools and computer laboratories in all

secondary schools may result in most of the island becoming ''wired'', and such things as broadband transmission and/or fiber optic lines may open things up further in the distance learning arena. UWI's three regional campuses have been linked via various forms of video transmission since the 1980s, and experimental links have been established from time to time between UWI and teachers' colleges. Advances (and eventual decreases in costs) in wireless and other technologies may lead to broader use of distance learning in all sectors of the educational system, and all indications are that Jamaicans and their government will enthusiastically embrace new technologies when they become accessible.

Other Professional Programs: Nurses are trained in a number of schools that fall under the authority of the Ministry of Health, one dental auxiliary school (also under the Ministry of Health) trains nurses exclusively for dentistry practice. Admission to these programs requires prescribed minimum scores on at least four CXC subjects, with English and Science required. The course of study lasts three years; the final year involves a supervised internship. Courses and certification in other allied health fields are offered at a wide range of both vocational/technical institutions and at the universities.

The Edna Manley School of the Visual and Performing Arts is a rather unique cultural and training institution. The school's aim is to produce creators, performers, and educators who will disseminate knowledge of artistic technique and of Jamaican/Caribbean historical and social development and its relation to local and regional culture. There are two courses of study: certificate (two years) and diploma (four years); certificates and/or diplomas are granted in music, dance, drama, and art. The curriculum is structured so that all students take a common set of foundation courses in their first year. In the second year they rotate through all of the subject areas; the third and fourth years are for specialized training. Graduates find employment in all sorts of cultural and artistic organizations and in the primary and secondary schools. Some primary and secondary teachers use the Manley School's diploma and certificate programs to get specialized training in arts and cultural education. The school was originally founded in 1995 by the government of Jamaica for Jamaicans, but it now draws students from the whole Caribbean basin and beyond.

The College of Agriculture, Science, and Education and the G.C. Foster College of Physical Education and Sports offer teacher training in specialized areas as well as a range of certificate, diploma, and degree programs. These institutions also serve students from both the island and the region.

TEACHING PROFESSION

The post-emancipation formation of an educational system led to the obvious need for teachers and to the recognition that primary school teachers must be trained locally, since the supply of foreign missionaries and British-trained ''imports'' could not possibly keep up with demand. It appears that most ''homegrown'' teachers in the early years after emancipation gained access to the profession through a kind of apprenticeship system in which they served as ''pupil-teachers'' or ''monitors'' in local schools. This seems to have grown out of the missionaries' practice of singling out promising young men and training them as class leaders and lay preachers (cf. Sherlock & Bennett 1998). In 1836 the Mico Charity established the Mico Institute (now Mico College) ''for the benefit of African slaves made free and engaged in the work [of teaching]'' (Sherlock & Bennett 1998). The Institute was coeducational when it opened but soon accepted only men. Initially, most teachers were male, but by 1900 three teachers' colleges for women had opened (Bethabara Training College in 1861, Shortwood Training College in 1885, and St. Joseph's in 1897), and the proportion of women in the profession had risen to nearly half. By the 1960s the percentage of women in the profession had risen to roughly 75 percent (Hamilton 1997).

A major issue within the profession (and the MOE&C) has been to increase the number of certified teachers in the schools, and there is some evidence that efforts to rectify this are starting to have some effect. There is a high rate of turnover among teachers, however, especially among the best and most highly-qualified ones, partly because salaries are low and teachers reach the top of the pay and rank scale relatively quickly, and partly because the profession has traditionally been a route for upward social and economic mobility, especially for lower-class and rural persons.

Another concern has been the almost complete lack of male teachers at the primary level (and to some extent at the secondary level). In the past males may have been more likely than females to use the profession as a stepping stone to other careers, but since the 1950s fewer and fewer men have entered the teachers' colleges, and those that have tended to concentrate in the upper secondary level. Some feel that lower literacy rates and lower levels of academic achievement along with higher rates of behavior problems among boys may be due to the lack of male role models in the schools. This lack of male role models, in turn, may exacerbate the problem because boys may see the profession as a female domain. Whatever the reason, Jamaica is certainly not alone here, and there seems to be little that can be done to dramatically increase the number of men in the primary schools, although measures meant to encourage participation in sec-

ondary- and tertiary-level education may help to increase the pool of potential male teachers.

The Professional Development Unit of the MOE&C actively promotes in-service education programs for teachers and is an important part of efforts to ensure that all teachers in primary schools meet minimum standards. The Unit also seeks out and disseminates information on fellowships and scholarships that provide teachers and would-be teachers with access to advanced study in education. Some individual primary schools have established arrangements with nearby teachers' colleges and/or UWI and Jtech to provide in-service training and programs similar to the In-service Diploma in Education that existed during the Education Thrust of the 1970s. The MOE&C is constructing a website for primary teachers that will provide information on a variety of things of concern to teachers and may facilitate the flow of information and ideas among teachers throughout the island. Aside from ensuring that all teachers have the necessary training, the biggest problem facing Jamaica is getting adequate numbers of teachers into rural and remote areas of the island in order to overcome the lack of parity between rural and urban schools.

The vast majority of teachers belong to the Jamaica Teachers' Association and its affiliated Jamaica Association of Teacher Educators, whose members come from the teachers' college faculties. Some teachers are represented by the National Union of Democratic Teachers, and there are a host of specialized teachers' organizations like the Jamaica Association of Music Teachers. There are also many non-Jamaican, i.e., Caribbean and Commonwealth, organizations that represent teachers and their interests, including university and college faculty and staff. Teachers also join in formal and informal associations to represent their interests at the school, parish, and regional levels.

The Edna Manley School of the Visual and Performing Arts (formerly the Cultural Training Center) is a rather unique cultural and training institution. The school's aim is to produce creators, performers, and educators who will disseminate knowledge of artistic technique and of Jamaican/Caribbean historical and social development and its relation to local and regional culture. There are two courses of study: certificate (two years) and diploma (four years); certificates and/or diplomas are granted in music, dance, drama, and art. The curriculum is structured so that all students take a common set of foundation courses in their first year. In the second year they rotate through all of the subject areas; the third and fourth years are for specialized training. Graduates find employment in all sorts of cultural and artistic organizations and in the primary and secondary schools. Some primary and secondary teachers use the Manley School's diploma and certificate programs to get specialized training in arts and cultural education. The school was originally founded in 1995 by the government of Jamaica for Jamaicans, but it now draws students from the whole Caribbean basin and beyond.

SUMMARY

The MOE&C engaged in a concerted effort during 1999-2001 to rationalize the educational system in Jamaica and to define more explicitly its role and the role of education in Jamaican society.

The MOE&C defines its mission as ''to provide a system which secures quality education and training for all persons in Jamaica and achieves effective integration of educational and cultural resources in order to optimize individual and national development.'' The mission is further elaborated upon in the seven strategic objectives specified by the MOE&C:

1. To devise and support initiatives striving towards literacy for all in order to extend personal opportunities and contribute to national development.
2. To secure teaching and learning opportunities that will optimize access, equity and relevance throughout the education system.
3. To support student achievement and improve institutional performance in order to ensure that national targets are met.
4. To maximize opportunities throughout the Ministry's purview that promote cultural development, awareness and self-esteem for individuals, communities and the nation as a whole.
5. To devise and implement systems of accountability and performance management in order to improve performance and win public confidence and trust.
6. To optimize the effectiveness and efficiency of staff in all aspects of the service in order to ensure continuous improvement in performance.
7. To enhance student learning by the greater use of information and communication technology as preparation for life in the national and global communities.

The Ministry has also set a number of ''critical targets'' in line with these objectives; among these are the following:

- Full enrollment of the Early Childhood age cohort ages four and five by the year 2003.
- Island-wide public education program by August 2001 in support of Early Childhood Care and Early Stimulation for children between birth and age four.
- Ninety percent attendance by 2005 at the primary level.

- Teacher/student ratio in the primary schools to be standardized at 1:35 by 2003, and at no greater than 1:30 for grades one and two by 2005.
- Eighty percent of all primary school completers to demonstrate full literacy by 2003.
- Five years of secondary education for all students entering grade 7 in 2003 and thereafter.
- Fifteen percent minimum enrollment in tertiary education by 2005.
- Provision of basic infrastructure, i.e., chairs, desks, etc., to meet the needs of all students and teachers by 2003.
- Minimum of one computer linked to the Internet (or with appropriate other software where Internet connection is not possible) in every primary school by the end of 2002.

There appears to be sufficient government resolve and commitment to expect that at least some of these targets will be reached. The government continues to devote the largest share of the budget remaining after debt servicing to education, and recent reports indicate that the primary school computer goal may be reached ahead of schedule.

Debt servicing continues to eat up a larger and larger portion of Jamaica's revenues, and its economy, like most of those in the Caribbean, is fragile. One can only hope that the island is not forced to undergo another round of ''economic restructuring'' and wide-spread retrenchment like that imposed by the IMF in the 1970s and 1980s and from which the island is only now beginning to recover.

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—Edward H. Matthei and Linda Miller Matthei

JAPAN

BASIC DATA

Official Country Name:	Japan
Region:	East & South Asia
Population:	126,549,976
Language(s):	Japanese
Literacy Rate:	99%
Academic Year:	April-March
Number of Primary Schools:	24,376
Compulsory Schooling:	9 years
Public Expenditure on Education:	3.6%
Foreign Students in National Universities:	53,511
Libraries:	3,561
Educational Enrollment:	Primary: 7,855,387 Secondary: 9,878,568 Higher: 3,917,709

Educational Enrollment Rate:	Primary: 101% Secondary: 103% Higher: 40%
Teachers:	Primary: 420,901 Secondary: 702,575 Higher: 401,509
Student-Teacher Ratio:	Primary: 19:1 Secondary: 14:1
Female Enrollment Rate:	Primary: 101% Secondary: 104% Higher: 37%

HISTORY & BACKGROUND

The Japanese people consider the love of learning to be one of life's main virtues. That fact has led to education playing a crucial role in their culture, especially since the Meiji Restoration in 1868. Virtually all Japanese people complete education through the high school (also called upper secondary) level, and most go on to further technical or university training. This emphasis on the value of education has contributed to the success of Japan in the modern world.

Despite its overall exemplary record in education, Japan does face some serious challenges in the new century. For example, minorities such as the native Ainu and the Korean-Japanese still do not participate adequately in the educational system. Also, the system has been criticized for focusing too much on test-taking and not enough on critical-thinking skills. Because many parents believe public school fails to prepare students adequately, they send their students to *juku* (private academies), after school and on weekends, to prepare for the next level within or beyond the public school system. But the Japanese educational system does satisfy the needs of the vast majority of the population and has helped the nation compete on the international scene for over 100 years.

The Ancient Period: Formal education in Japan started when the Chinese language system was introduced into Japan in about 500 A.D. At that time only the aristocracy had access to education through schools that primarily taught Confucianism and Buddhist thought and practice. The first real school, the *Daigakuryo* (the university), was started by Emperor Tenji during this period. Located in the capital of Kyoto, the Daigakuryo focused mainly on providing prospective government officials with a background in Confucian practice that would relate to their future jobs. Later the school became an official institution under the Taiho Code of 701. Young men usually entered the university in their early to mid-teens. When they graduated, they were placed in government positions at levels that corresponded to their success at the university. The Taiho Code also called for establishing colleges called *kokugaku,* located in each of the country's provincial areas. Besides teaching the Chinese classics, these early provincial schools provided training in medicine and in divination.

During the Heian Period (794-1185 A.D.), the height of Japan's aristocratic age, educational institutions continued to be focused on the nobility and were located in the capital of Kyoto. However, the curriculum of the Daigakuryo made a transition from Confucianism to the arts, reflecting the great emphasis on aesthetics during the Heian Period. Perhaps more than any other time in Japanese history, this period placed the highest value on the ideal of courtly love through the medium of poetry, music, visual art, calligraphy, and dance. Such refinements were of course reserved for those privileged to be educated in the court. Education also continued to take place in the Buddhist temples, both in the capital and in the provinces. After completing their training, priests became the primary means for providing education to those who were not among the aristocracy.

Thus education and religion were intertwined during the ancient period. Two of the most prominent figures in religious education were Saicho (767-822) and Kukai (774-835). Saicho established the Enryakuji Temple at Mt. Hiei near Kyoto. Besides being the center during the Heian Period for educating monks in the Tendai sect of Buddhism, it became a focal point for Japanese religious education for hundreds of years. Saicho's friend and rival, Kukai, established a monastery on Mt. Koya, which became the educational center for Shingon Buddhism. Kukai's central role in the history of Japanese education is evidenced by his having invented *Kana,* the Japanese alphabet, and by his effort to establish a school that addressed the needs of commoners, a group not enrolled in the Daigakuryo or the kokugaku. His private academy, the Shugei Shuchiin, did not exclude the lower classes and promoted the personal, moral, spiritual, and intellectual development of its students.

Medieval Period: During the Kamakura Period (1185-1333) and the Muromachi Period (1333-1573), Japanese education paralleled the militarism of the times. With the rise to power of the *bushi* (warrior class, made up of samurai) and the *shogun* (chief lord and military dictator), education in the cities and countryside added skills for warfare to the religious training. A departure from the aesthetics of the Heian Period, the medieval education for warriors included training in weaponry and horseback riding—while still teaching young samurai the importance of good manners and knowledge of their culture.

Schooling revolved around the warrior's home, the estate of his lord, and the local temples. As for the *shogunate* and the ruling families, there continued to be educational opportunities unavailable to commoners.

Rather than start new schools, however, the shogunate established several major learning centers that contained libraries open to scholars and members of the priesthood. A famous one called the Kanazawa Library opened in 1275 and remains open today as a museum. Another medieval Japanese educational center, the Ashikaga School, opened in 1439 and offered curricula in Confucianism and military science. Thus even schools and libraries for the ruling class focused on traditional Confucian values and on military education, matching the cultural themes of the age.

Toward the end of the medieval period, Japan's educational system was subjected to a new influence—Jesuit Catholic missionaries, beginning with the arrival of Francis Xavier in 1549. These missionaries established schools and churches that emphasized general education, vocational training, Western technology, and—of course—Christianity. Although Christianity was banned less than a century after Xavier came to Japan, and wasn't permitted back into the country for more than two centuries, it did help shape education in late medieval Japan.

Early Modern Period: The early modern period in Japan comprises the years of the Tokugawa Period (1600-1868), during most of which Japan remained isolated from the rest of the world. One positive byproduct of this isolation was that the country could focus on the development of its own culture, including the educational system. Although the very best education remained open only to the upper classes, the period did witness the spread of education among the commoners in a way that had not occurred previously in Japan. By the end of the period, about 40 percent of the boys and 10 percent of the girls were provided education outside the home. These figures probably meant Japan's education opportunities and literacy rate were ahead of most countries in the world, with the exception of two or three nations in the West.

The Tokugawa educational system included several main types of schools such as the *hanko, terakoya, Shoheiko,* and *shijuku.* Established in each of the domains of the *daimyo* (lords), the hanko mainly educated the children of the lord's samurai on topics related to Confucianism. Only later in the Tokugawa Period did the schools enroll a wider range of social classes and expand their curriculum to include non-Confucian topics such as medicine, Japanese studies, and Western science.

Unlike the hanko, the terakoya were independent schools intended mainly for the children of the merchants and townspeople—not the samurai. Usually set up in Buddhist temples, they offered instruction in a wide range of basic subjects such as penmanship, reading, and arithmetic. Children entered at the age of seven or eight and stayed for about three or four years. In addition to the terakoya were the shijuku, private academies that often were housed in the homes of the teachers and that focused on subjects usually considered to be the favorite fields of the teacher. Finally, the Tokugawa Period also had an official school of the shogunate called the *Shoheiko,* located in Edo (Tokyo). Here the children of the nation's leaders were educated by Confucian scholars.

Thus far our discussion of educational opportunity in Japan has mostly included only male children. Girls generally were not sent to schools and instead were trained at home in matters of homemaking and etiquette. Although a few girls may have been exposed to education in literature and the arts, most were not. However, opportunities for girls to receive an education did increase in the closing years of the period, with an increase in female students in terakoya and even the start of a few schools exclusively for girls. But the curriculum in these schools was slanted toward nonintellectual subjects such as tea ceremony, flower arranging, and etiquette.

Modern Period: The modern period in Japan began with the restoration of the emperor in 1868, about 15 years after the country had been ''opened'' to the outside world by the expeditionary tour of U.S. Admiral Matthew Perry. This period saw a tremendous amount of educational reform as the country sought to catch up to the West after more than 200 years of virtual isolation. Although World War II, including its prelude and aftermath, certainly devastated Japan's educational system, the country has witnessed unparalleled educational advancement from the Meiji Period to the present.

Educational goals in the modern period were reflected in the *Gokajono Goseimon,* the Imperial Oath of Five Articles (or Charter Oath) issued by the emperor in 1868. Article 5 best articulated Japan's international objectives for education that would become the theme of the modern era: ''knowledge shall be sought all over the world, and the foundations of imperial rule shall be strengthened.'' The document also made it clear that ''the common people... shall all achieve their aspirations,'' thus setting out a second basic theme of education in Japan's modern era: availability of the appropriate level of education to all the people.

Four years into the Meiji Period, the government issued the Educational Order of 1872 (*Gakusei,*) which formed the basis for the modern public system of education in Japan. The Gakusei called for strong control of education by the central government and integrated many

of the Tokugawa-era schools into the new system. For example, the terakoya—previously the schools in the provinces for commoners—were transformed into the new primary schools. These primary schools formed the core of the new public school system and numbered 25,000 by the mid-1870s. Students throughout the nation were required to attend primary school. Although schooling was compulsory, the cost still had to be paid by the students' families. Resentment toward the new system led to several later revisions, including *Kyoikurei,* the Education Order of 1879. It permitted more local control of the curriculum and school policies, and it also relaxed the compulsory requirements.

Despite these revisions, the trend toward national standards for public education continued throughout the rest of the modern era, as did the effort to bring basic education to all the people. The end of the shogunate in 1868 meant an end to the class system that had created significant differences between education for the lords and samurai families and the common people. Now the four former classes—samurai, farmers, artisans, and merchants—were viewed as equal participants in the new schooling.

Besides the new primary (also called elementary) schools, Japan's modern educational system included two other main elements: secondary schools and universities. Secondary school was not yet compulsory and was intended for children deserving of additional training. Then, an even smaller group of highly qualified candidates would proceed on to the university system. The most distinguished university of the period was Tokyo University, which had its roots in the elite shogunate institutions of the past. It became the forerunner of other imperial universities such as those established in Kyoto, Tohohu, Kyusha, Hokkaido, Osaka, and Nagoya. Private universities that began during the period include Keio, Waseda, Doshisha, Meiji Gakuin, and Tsudajuku.

During the early years of the Meiji Period, there was a strong and intentional reliance on Western assistance in the development of all levels of education. The government sent emissaries abroad to learn as much as possible about all elements of Western culture, including education, so that Japan could achieve Western-style success in technological advancement. The most famous group to go abroad was the Iwakura Mission, a large group of high-ranking government officials and students that traveled to the United States and Europe from 1871 to 1873. Such missions had a strong influence over the curricula adopted at all levels of schooling in Japan.

Just as important as the Japanese missions to the West were the Western experts who traveled to Japan in the 1870s and 1880s. David Murray, hired to serve as an advisor to the Ministry of Education, came to Japan in 1873 and worked on a wide range of new educational initiatives, including the Education Order of 1872. He also was instrumental in having the government establish the Tokyo Women's Normal School, as well as being heavily involved in planning Tokyo University. Like other Western experts, Murray faced the challenge of deciding what combination of Western and native Japanese features would produce the best educational system for modern Japan. That's the challenge Japan faced throughout the period during which Western influence was strong.

Another Western contributor to the development of Japanese education was James Curtis Hepburn, a missionary doctor who came to Japan in 1859, just six years after Admiral Perry's arrival. Hepburn founded Meiji Gakuin University, became the university's first president, invented a system of Romanizing the Japanese language, and took part in translating the Bible into Japanese. Many other Western Christians were instrumental in promoting education in Meiji Japan, including those who established the so-called ''Schools of Western Learning.'' The three most famous such schools, or ''bands'' as they were called, were located in Kumamoto, Sapporo, and Yokohama. The Kumamoto Band was led by an American teacher, L. L. Janes, who taught a Western curriculum of mathematics, history, and English, but who also exposed his young sons-of-samurai students to the tenets of Christianity. These young men in the Western bands learned about Western science, technology, and religion. Some of the early leaders of modern Japan were Christian, even though Christianity remained a minority religion in Japan, never gaining more than 1 percent to 2 percent of the population.

Perhaps Japan's best-known private university, Doshisha University, was founded in 1875 by Niijima Jo, a former member of the Kumamoto Band, and by Jerome Davis, a Congregational minister. Niijima was one of the first Japanese to be educated in the United States (at Amherst College). Like some other private universities in Japan, Doshisha adopted curricula similar to that of Western educational institutions. It has six main academic groupings—theology, law, economics, letters, commerce, and engineering—with over 25,000 students enrolled.

Doshisha also was the first university in Japan to admit women. Private universities served an important role in coeducation in that the government, in 1879, restricted coeducation to the primary (or elementary) schools. It was only through the support of private groups that high schools and university-level education became available to women. Christian missionaries were particularly active in supporting coeducational and women's high schools and colleges. Also serving an important role in the development of women's education during the

Meiji Period was Tsuda Umeko, who had been a student member of the Iwakura Mission in 1871 and became one of the first Japanese women to study in the United States. After completing studies at Bryn Mawr College and also working as a tutor and teacher of young women in Japan for many years, Tsuda founded the Women's English School (now called Tsuda College) in Tokyo in 1900. The government did strongly support coeducation in primary schools in the Meiji Period, but it took support from many dedicated individuals and private groups to maintain educational opportunities for women at the high school and postsecondary levels.

Notwithstanding the efforts Japan was making to pattern much of its modern education after Western content and procedures, by 1890 there was strong sense among many leaders that the nation also needed to emphasize ''moral education'' that was unique to Japan. The document that resulted from this concern for morality in education was the Imperial Rescript on Education, issued on October 30, 1890, in the name of the Emperor Meiji. Written with the advice and counsel of the Confucian scholar, Nagazane Motoda, the Rescript made clear the essential connection between the education of the people and the tenets of Confucian thought and loyalty to the emperor. A few excerpts from the 315-word document follow:

> Know ye, Our subjects: Our Imperial Ancestors have founded Our Empire on a broad basis and everlasting... Our subjects, ever united in loyalty and filial piety, have from generation to generation illustrated the beauty thereof. This is the glory of the fundamental character of Our Empire, and herein lies the source of Our education. Ye, Our subjects, be filial to your parents, affectionate to your brothers and sisters; as husbands and wives be harmonious, as friends true; bear yourselves in modesty and moderation; extend your benevolence to all; pursue learning and cultivate arts, and thereby develop intellectual faculties and perfect moral powers; furthermore advance public good and promote common interests; always respect the Constitution and observe the laws... and thus guard and maintain the prosperity of Our Imperial Throne coeval with heaven and earth.

The promulgation of this document served as a corrective measure to the more liberal Western influences on education since the beginning of the Meiji Restoration. Distributed throughout the country by the Ministry of Education, the Rescript reminded the populace that education was inextricably connected to the nation's needs, to traditional Confucian values, and to an Imperial House descended from Heaven. It was read during ceremonial events in schools throughout the nation, with the appropriate bowing required. Though generally accepted by the people, one famous incident of an inappropriate response remains well known in Japan even today. Uchimura Kanzo, a high school teacher who had been educated in Japan and in the United States, apparently failed to bow deferentially enough to the Emperor's signature on the Rescript when it was read at his school. This incident led to his leaving the school, after which he became a famous journalist and religious figure until his death in 1930. In about 1900 Uchimura founded what became the largest branch of indigenous Christianity in Japan, *Mukyokai,* or nonchurch Christianity.

By the end of the 1900s, Japan had seen considerable development of all parts of its education system—both under the influence of Western experts and under the watchful eye of nationalists who made certain the country retained its Confucian and imperial focus. With direction from the Ministry of Education—and its influential first minister, Mori Arinori—the country had a compulsory primary school system throughout the country; about 500 secondary schools throughout the country, with some providing technical training and others providing traditional academic subjects; and an elite system of public and private universities that prepared students for teaching, medicine, law, government service, and other professions.

In the early years of the twentieth century, attendance in primary schools continued to rise to over 90 percent, and in 1907 the years of compulsory education were increased from three to six. From the 1890s to the start of World War I, Japan's rush to industrialize and to create a strong military led to a greater focus on industrial education and training than in the past. Victories in the Sino-Japanese War (1894-1895) and Russo-Japanese War (1904-1905) had stimulated this change in direction. Japanese education came somewhat under the influence of the democratic, socialistic, and related worldwide movements that were ''in the air'' after World War I and after the Russian Revolution. One example was the *Shin Kyoiku Undo* (New Education Movement), which emphasized the individuality of children and encouraged each child's effort to demonstrate initiative in ways that were largely not reflected in conventional Confucian education. Although this movement lost favor when a more conservative climate returned during the militarism of the 1930s, it did significantly influence the direction of Japanese education during the Taisho Period (1912-1926). Another noteworthy trend of the period after World War I was the expansion in the number of colleges and universities. The University Order of 1918 stimulated this growth by extending government recognition to postsecondary institutions that were not associated with the government. Students surged into the private schools as a result of this change.

The militarism of the 1930s and the beginning of World War II ended Japan's brief period during which progressive ideas had been promoted in education. Now

the schools could best be characterized as tools of the state. Even the name of primary schools was changed to *kokumin gakko,* or national people's schools, reflecting their mission of training loyal subjects for the Japanese empire. Graduates of the kokumin gakko were obligated to attend *seinen gakko,* schools that emphasized the kinds of vocational skills that would serve the country in its effort to marshal a major militaristic expansion. Even textbooks were used during the wartime period to reinforce the ultranationalistic objectives of the state. One set of texts, called the *Kokutai No Hongi* (Cardinal Principles of the National Entity), served the government's purpose to control the people's thinking and their access to a full range of historical information.

After its defeat in World War II, Japan was occupied by the Allied Forces under the command of the Supreme Commander for the Allied Powers (SCAP), General Douglas MacArthur. From 1945 until 1952, the Occupation forces aimed to transform Japan into a democracy and to demilitarize the country. A significant part of the plan involved altering the educational system that had been part of the prewar and wartime culture. The so-called ''moral education,'' central to the ultranationalism of the wartime period, was ended. The major catalyst for all changes was the United States Educational Missions to Japan, which took place from 1946 to 1950. The recommendations of these missions formed the plans by which education was reformed after the War.

The centerpiece of the postwar educational transformation in Japan was a series of reforms that took place in 1947. They were overseen by SCAP and by the Education Reform Council, consisting of Japanese civilians. At the core of the reforms was the Fundamental Law of Education, which replaced the 1890 Imperial Rescript on Education that had been issued by the Emperor Meiji. Consisting of a preamble and 11 articles, the law replaced the former emphasis on training to be a loyal subject of the emperor with a new focus on the following principles: equal opportunity to education for all citizens, coeducation, the full development of one's personality, an appreciation and respect for truth and justice, and a new emphasis on academic freedom for faculty. Following are some specific features of the reformed system:

1. The 6-3-3-4 structure with six years of primary school (also called elementary school), three years of lower secondary school (also called middle school or junior high school), three years of upper secondary school (also called high school), and four years of university
2. Compulsory education for nine years—that is, both for primary and lower secondary school
3. Education of handicapped persons
4. Replacement of government-produced textbooks with texts that were published privately, with less involvement by the government than in the past
5. New emphasis on the training of public school teachers at the university level
6. Shift from total central control of education to much greater autonomy in villages, cities, and prefectures
7. Permission to have teacher unions and other support organizations such as parent-teacher groups

Most reforms were retained after the Occupation ended, but there was some backtracking when a conservative government came to power in 1956. For example, the government increased its efforts to review textbooks, influence appointments to local school boards, place restrictions on leftist teachers' unions, and reestablish some level of moral education in the school system.

The decades since the 1950s have brought few structural changes to Japanese education. However, a number of social and political events have related to education, such as the following: criticism of government influence on textbooks in the 1960s; student demonstrations in 1968 against rising costs of a university education; the introduction in 1979 of a common general admission exam for public universities; and concern that private academies are needed to supplement a child's public education if he or she is to have a good chance of being accepted to a university.

Constitutional & Legal Foundations

In 1946, the Allied forces orchestrated the effort to write the new Constitution of Japan, which replaced the Meiji Constitution of 1889. Based on the U.S. and British constitutions, the new document included a level of freedom and democracy that was unprecedented in Japan. Effective May 3, 1947, it perhaps is best known for Article 9, which states that ''the Japanese people forever renounce war as a sovereign right of the nation and the threat of use of force as a means of settling international disputes.'' Also noteworthy is the restriction of the emperor to being only a ''symbol of the State and of the unity of the people, deriving his position from the will of the people with whom resides sovereign power.'' So certainly the new Constitution would never again permit approval of a document like the 1890 Imperial Rescript on Education, which in a sense mainly viewed education as a means of respect for, and praise of, the Japanese emperor.

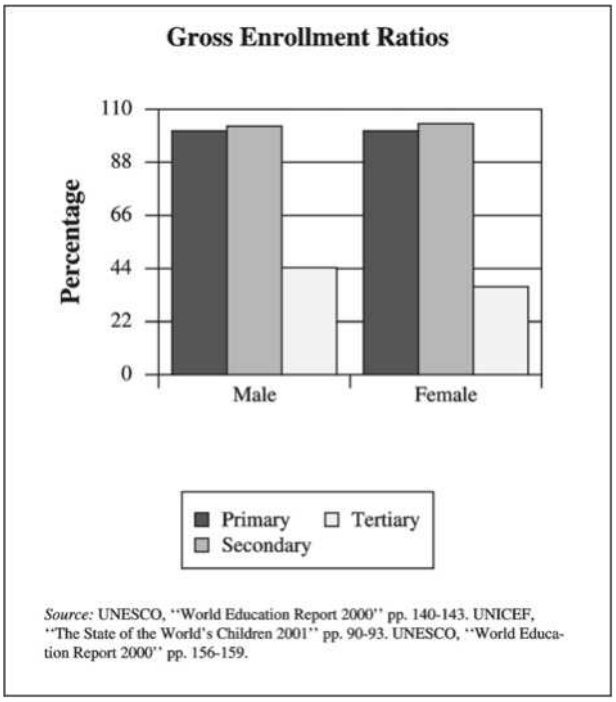
The new Constitution also specifically addressed the rights of children to be educated. Article 26 reads as follows:

> All people shall have the right to receive an equal education correspondent to their ability, as provided by law.

> All people shall be obligated to have all boys and girls under their protection receive ordinary educations as provided for by law. Such compulsory education shall be free.

For the first time in its history, the Japanese people acquired constitutional rights to an education. These rights were further defined by the 1947 Fundamental Law of Education. This law replaced the 1890 Prescript on Education and articulated a variety of legal educational rights in its Preamble and 11 articles.

A related law was the School Education Law of 1947, which outlined the general structure of the Japanese school system. Another law—the 1956 Law Concerning the Organization and Functions of Local Educational Administration—regulates the operations of local schools around the country. For example, it covers operational details related to boards of education, superintendents, attendance policies for students, and the appointment of teachers. It tended to reestablish some of the previous centralized authority over local school districts, though certainly not to the degree of the pre-World War II system.



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93. UNESCO, ''World Education Report 2000'' pp. 156-159.

EDUCATIONAL SYSTEM—OVERVIEW

Since the end of World War II education has been compulsory for all children in Japan for nine years, which includes six years of primary school (also called elementary school) and three years of lower secondary school (also called middle school or junior high school). Children start their schooling at the age of six. After graduating from primary school six years later, and then lower secondary school three years after that, they have completed their compulsory educational period by the age of 15. At that point, most students move along to upper secondary school (high school) for three additional years, followed by four years of university education for an even more select group. Because of changes in the population patterns of Japan, the number of students in primary school has declined steadily since 1980, though the number of students enrolled in universities has increased every year since the end of World War II.

Academic Year: The academic year in Japan begins in April and ends the following March. Students have a summer vacation of several weeks starting in July, as well as a two-week break at New Year's. The year is broken down into three main terms beginning in April, September, and January, respectively. School generally starts at 8:30 a.m. and ends about 3:00 or 3:30 p.m. on weekdays. There was a half day of additional schooling on Saturday morning, but schools have gradually been dropping the Saturday schedule and moving instead to a five-day school week.

Language of Instruction: The language used most predominantly in Japanese schools is, of course, the Japanese language. Dominant features of this language are the high dependence on context to determine meaning, the precise ordering of words in a sentence, and the use of three different types of character systems in the written language (*kanji, hiragana,* and *katakana*). The complexity of the written language means that Japanese students spend many years studying their own language.

Although Japanese is the dominant language of instruction, there is no law declaring it the official language of the country. In fact, a school could use other languages. There are now a few schools that use English to teach science and mathematics classes. Although English is usually not the language of instruction, it is now studied by almost all students in Japan—making it the most commonly used foreign language in the country. The entrance exams for high school and for universities test for English ability.

It appears that the question of the role of English in the school system—and, indeed, in the entire culture—will remain a controversial subject for some years to come. A report entitled ''Japan's Vision for the 21st Century,'' submitted to the Japanese prime minister's office in early 2000, suggests that the government consider establishing English as Japan's official second language. Given the need to increase the ''global literacy'' of the population, the report went on to urge that *all* students should be able to speak English before they start working after their schooling. Although the reading and writing of

English is taught in schools, speaking and listening skills lag behind. So the recommendation of the report would require a significant upgrading of English language training in Japan.

A final point about the language of instruction concerns the minority populations in Japan. Although Japanese remains the dominant language in the classroom, there are significant numbers of Japanese residents whose native language is *not* Japanese. The native Ainu population, located mainly in the northern island of Hokkaido, is not permitted to receive courses in the Ainu language and culture in the public schools. Other linguistic minorities include Chinese and Ryukyuan (Okinawa). The teaching of ethnic languages and cultures remains a politically charged subject in Japan, though the debate has not yet presented any significant challenge to the dominance of Japanese as the language of instruction in the school system.

Use of Technology: Japan continues to emphasize the use of technology in education at all levels. In 1998 the Curriculum Council submitted a major recommendation report to the Ministry of Education, in which it advocated the use of computers throughout the educational system. Apparently that report has brought even more attention to the need to increase the exposure of Japanese students to instructional technology.

Statistics from 1999 suggest that although almost all public schools have computers, many teachers have not yet learned to use them in their teaching. As of March 1999, computers were used in 97.7 percent of primary schools, 99.9 percent of lower secondary schools, and 100 percent of upper secondary schools. The average number per school was 12.9, 32.1, and 76.4, respectively. Contrasted to these figures are the relatively low percentages of teachers who can use the technology effectively: 28.7 percent in primary schools, 26.1 percent in lower secondary, and 26.0 percent for upper secondary.

More traditional audiovisual media are widely used in Japan, especially in the primary schools. Television, audiotapes, and videotapes are common support for teaching. Especially popular is the use of broadcasts of educational programming produced by NHK, the Japan Broadcasting Corporation. Also, in July 1999 the Ministry of Education started a television station devoted exclusively to the education of Japan's children. Called the Children's Broadcasting Station, the channel beams programs by communications satellite to receiving stations that have telephone links. When the station broadcasts programs on the second and fourth Saturdays of each month (school holidays), children can send faxes back to the television guests and take part in videoconferences.

Another technology Japan has started to use is distance education. Although the country is probably behind the United States in the development of distance education, some educational institutions are now becoming quite active in the field. One prestigious institution, Waseda University, has linked up with five universities around the country to offer real-time online classes, as part of a trial program. What has enabled universities like Waseda to begin such programs is the relaxing of previously strict standards for transferring credit from one institution to another. As of 1998 college and junior college students have been allowed to earn up to almost half the credits for a degree from institutions other than their home institution. That change, as well as the spread of Internet and related technology, suggests that Japan will be a major player in distance education in years to come.

Entrance Exams: The Japanese system places great emphasis on the use of exams as qualifiers for all levels of schooling. Exams exist for students entering preschool, primary, lower secondary, upper secondary, and universities. Yet clearly the most crucial tests are those given for entrance to the upper secondary schools (high school) and universities. The high school entrance tests are mainly for determining what type of school students will attend—not *if* they will attend, because well over 90 percent of middle school students go on to high school. Both private and public high schools require such tests and usually test students in five main fields: English, mathematics, Japanese, social studies, and science.

For admission to most public universities and some private ones, students are required to take the University Entrance Examination Center Tests. These standardized tests comprise mostly objective questions in the Japanese language, social studies, mathematics, science, and foreign languages. When students receive the test results, they then have a much better idea of the range of colleges and universities to which they would likely be admitted. The final decision for admission to a particular institution may depend on the standardized test results, the test given by the individual college or university, and the student's high school record.

International Issues: A major international issue related to education in Japan concerns Japanese who are living, or used to live, abroad. The number of children of Japanese who have lived overseas has grown considerably in recent decades because of the large number of government and industry employees who have been assigned to positions outside Japan.

In the 1998 school year, for example, the following number of students lived overseas for at least one year and returned to Japan: 7,700 at the primary school level, 2,908 at middle school level, and 7,700 at the high school level. Returning elementary and middle school students do not have to take entrance exams, but returning high

school students do. Often students are given special consideration in testing, but they also may need to take additional course work—especially in reading and writing Japanese. Language proficiency can be a problem if students did not regularly attend Japanese schools overseas.

Curriculum Reform: It is important to observe that there are serious efforts taking place to analyze and respond to problems with the curriculum in Japanese schools. Of particular note is a recommendation report submitted in 1998 by the Curriculum Council to the Minister of Education. The report suggests that the public school system should do a better job of emphasizing problem-solving activities, independent thinking, the use of computers in all subjects at all levels, and interdisciplinary courses that integrate content from diverse content areas. It also suggests that the school day be reduced to weekdays only. Some of these recommendations, such as the shorter school week, are being implemented. The report reflects the interest of the Japanese to improve an educational system that, overall, has worked well for them.

PREPRIMARY & PRIMARY EDUCATION

Over 95 percent of Japanese students enroll in some form of preschool, which is not compulsory. These schools are intended to develop the cognitive skills of infants from age three and up, and thus to prepare them for the six years of compulsory elementary school that follow. Preschool education is provided either through a kindergarten, which is considered to be an educational institution, or through a day care center, which is considered a type of welfare institution as defined by the Child Welfare Law.

One indication of the extreme competitiveness of Japanese education is a phenomenon called *ojuken.* ''O'' is a prefix that means ''politeness'' or ''childishness,'' and *juken* means ''taking entrance exam.'' The complete term refers to parents who are so eager to have their children be accepted into the most competitive schools at every level that they seek to enroll them in a top-notch preschool. Graduates of these prestigious preschools are usually permitted to go all the way to a prestigious high school without having to take entrance exams. These kindergartens are extremely competitive, in some cases admitting only 1 in every 20 applicants. Parents sometimes pay as much as $10,000 to educate their children so that they can take the entrance test for just private preschools or primary schools.

Ojuken has become a well-publicized issue in the media. Some critics point out that young mothers have equated the success of their infants in being admitted to prestigious private schools with their own success as mothers. Others see it as one more sign that Japan places too much emphasis on testing in the education process. But there are also those who view the ojuken phenomenon as a sign of the mediocrity of public schools, resulting in parents willing to pay heavily for private schooling.

After preschool, children begin six years of compulsory primary (or elementary) school. The curriculum of the elementary school has three main groupings: regular subjects, moral education, and extracurricular activities. Regular subjects comprise the following nine topics: Japanese language, social studies, arithmetic, science, life environmental studies, music, arts and crafts, physical education, and homemaking. Although there is some room for local control in organizing subjects, the actual content of the academic areas flows from national standards that are imposed on the schools. In any particular year, the curriculum is the same for all students in the same grade across the country. Students cannot skip grades, nor are there special groupings of students according to abilities.

Besides academic subjects, elementary school students are taught the importance of personal values through what is called ''moral education.'' For those schools that are funded privately, religious education is permitted to substitute in this area. After academic and moral education, the final emphasis in primary schools is extracurricular work. These include activities such as clubs, festivals, competitions, class trips, athletics, and entrance and graduation ceremonies.

SECONDARY EDUCATION

Secondary education in Japan comprises two main divisions: lower secondary (also called middle school or junior high school) and upper secondary (also called high school or senior high school). Included here is information on juku, the private schools that many students attend in addition to public school.

Junior High School: After completing their six years of elementary school, students shift to the last three years of compulsory education—called variously junior high school, middle school, or lower secondary school—usually when they are between the ages of 12 and 15. One significant change is that their curriculum is now divided by subject matter, creating a more regimented environment than elementary school. Classes last longer than in elementary school—50 minutes as opposed to 45 minutes. Unlike many U.S. schools, the Japanese junior high schools require the teachers to move from classroom to classroom instead of the students. Teachers generally teach only one of the three grade levels. Thus both students and teachers acquire a sense of community in their grade, and students view themselves as part of a homeroom class.

The curriculum of middle school includes four main groupings: required subjects, elective subjects, moral education, and extracurricular activities. The eight required subjects are as follows: Japanese language, social studies, mathematics, science, music, fine arts, health and physical education, and industrial arts or homemaking. Students are exposed to courses that provide vocational and technical classes as well as academic subjects. This feature is especially important because classes at this level include a broad range of students, not just those who are likely to attend college or even high school.

Elective subjects include a foreign language or another special subject such as music or art. But almost all students in middle school choose to take English. Like primary school, the middle school schedule includes one hour of moral education each week, but there is no specific religious education in public schools. The final category of the curriculum—extracurricular activities—includes sports, clubs, assemblies, ceremonies, plays, musical events, field trips away from school, and educational guidance, such as instruction for using the library and safety advice for walking in traffic-congested streets. Such activities may take place on or off the school campus.

A curious phenomenon seen among both primary and middle school Japanese children—but more among the latter—is called ''school allergy.'' This term describes an emotional condition whereby a child develops fever, headaches, nausea, or other medical symptoms that make him or her stay home from school. The numbers of affected students have risen sharply in recent decades. A Ministry of Education survey determined that in 1991, 54,112 middle school children missed 30 or more days of school in a year as a result of emotional problems. That was up from 7,310 students in 1974. The numbers for primary school students were 2,651 in 1974 and 12,637 in 1991. Reasons vary for this ''allergy,'' but three notable ones are as follows: fear of being bullied by other students, which has been a growing problem in Japanese schools; anxiety about entrance examinations; and reaction to the strict administration of the schools. Though physical bullying is said to have decreased since the late 1980s, both physical and verbal bullying and other forms of violence continue to be a larger problem in middle schools that in any other component of the educational system.

Senior High School: The term upper secondary school, also called high school or senior high school, is used to indicate the noncompulsory education beyond middle school. High school provides general or specialized education in three main formats: full-time, part-time, or correspondence. Although the full-time option generally lasts three years, part-time or correspondence school usually takes additional time for completion. Over 95 percent of junior high school graduates enter some form of high school, and about 70 percent of these students attend a public high school.

Admission to high school is based on the results of a test, and competition for acceptance into the best schools is incredibly fierce. To prepare for the exams, many students attend what are called *yobiko* (cram schools) in the evening—to gain admission both to high school and also to the university. With a full school day and evening obligations such as yobiko, many secondary school students have little if any time remaining for personal activities beyond the routine of schooling. This phenomenon worries many Japanese leaders and has led to a reevaluation of the average number of hours students spend in school each year.

Most high school students follow an academic track that prepares them to apply for entrance to universities. Once in an academic high school, students discover that their school day resembles that of junior high in that class periods last 50 minutes, courses are given in essentially the same subjects, and the extracurricular activities are similar. However, students in vocational high schools have a different routine. They often take on part-time employment, and they almost always enter the workplace after graduation.

The curriculum of academic high schools commonly includes courses in the following subjects: Japanese language, geography and history, civics, mathematics, science, health and physical education, the arts, and home economics. The vast majority of students also take English, with a lesser number taking European languages such as French or German. As for the particular content level of the coursework, here is an overview:

- *Japanese language:* The focus in high school is on classical Japanese. Students are expected to enter high school having learned the 1,945 kanji characters known as the *joyo kanji.*
- *Social Studies:* Geography and history are taught as one course in high school, along with a civics course. Students at this level have gone beyond local and regional issues to study Japan and East Asia in an international context.
- *Mathematics:* High school math courses include general math, algebra, geometry, basic analysis, differentiation and integration, and probability and statistics.
- *Science:* High school students are required to take two from the following list of courses: comprehensive science, basic science, physics, chemistry, biology, or earth science.
- *Health and Physical Education:* Options in physical education classes include gymnastics, track and

field, swimming, ball games of different types, kendo, sumo, judo, and dancing. Health classes focus on the prevention of disease and on the cultivation of healthy habits as a young adult.

- *The Arts:* High school students generally select two of the following courses: music, art, calligraphy, or crafts. Art course offerings may include painting, drawing, sculpture, or graphic design.
- *Home Economics:* As in lower schools, high school home economics comprises courses for both boys and girls that stress skills such as cooking, sewing, consumer skills, and computer use. Courses for boys tend to be called ''Industrial Arts.''

As mentioned earlier, the Curriculum Council submitted a report to the Ministry of Education that included a number of substantive recommendations for changing the public school system. This 1998 report suggested that secondary schools should offer a new required course called ''Information Study.'' Such a course would help students learn to think independently, to process and send information via computers, and to fully participate in an information-driven society. Recommendation reports like this one are commissioned by the Ministry of Education as part of its periodic review of the Japanese education system.

Juku: Japanese education includes a ''shadow'' system of private schooling that students use to supplement the conventional education they receive. In addition to the *yobiko* (cram schools), the umbrella term *juku* is often used by Japanese students and teachers to encompass the full range of academic options outside the school system. The two main types of juku, other than cram schools, are as follows: *naraigato/okeikogoto,* courses that provide personal enrichment such as calligraphy or piano; and *gakushu,* (academic) juku, courses and tutoring that are directly related to academics. Academic juku can be taken to gain remedial help in particular courses or to provide advanced learning in preparation for entrance exams. These courses are to be distinguished from the specific type of juku called yobiko, which *exclusively* prepares students for particular exams. Although ideally juku are taken while a student is still in school, students who fail to gain admission to colleges of their choice may spend a year or two after high school studying in yobiko in hopes of being admitted on their next try.

A very high percentage of students attend juku. In 1998 it amounted to 71.8 percent of public junior high students, 54.9 percent of private junior high students, 35.1 percent of public senior high students, and 40.9 percent or private senior high students. These schools have turned into a huge business in Japan. In the mid-1990s, the largest such school in the country, called Yoyogi Seminar, had 27 branches, 2,000 employees, and a gross revenue of tens of millions of dollars.

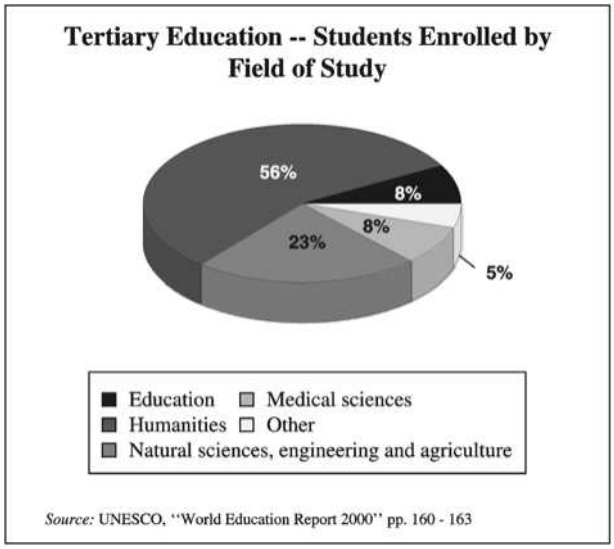
Opinions about juku vary widely in Japan. The public has generally accepted them as a ''second'' school system that complements the public system and fills the gap between what the conventional schools teach and what the next level of schooling and related exams require. Even many educators recognize the value of juku in this respect. Of course, the juku employees and owners would agree that they provide an essential service. Critics of juku use the same argument to point out that the popularity of juku reflects the absolute failure of the Japanese educational system to prepare students for an academically rigorous future. Others note that juku focus primarily on rote memory learning. The time devoted to the schooling on nights and weekends keeps youth from balancing both work and play in their lives. But there are others who claim that juku in fact create an environment for social interaction of children, much like high school clubs do. You can find almost as many opinions about juku as there are people ready to talk about them. The fact is that juku are a part of the educational landscape that provide a necessary service and are not about to disappear.

HIGHER EDUCATION

Students who complete high school have these main options available to them: colleges or universities, junior colleges, technical colleges, special training, or employment.

Universities & Colleges: Japan has over 500 four-year colleges and universities. No special distinction is made between institutions called ''college'' and those called ''university.'' (The term university is used here to indicate both.) There are basically three types of four-year institutions: (1) national universities that are supported by the central government, such as Tokyo University; (2) public universities that are supported by governments at the municipal or prefecture level; and (3) privately funded institutions. Approximately 75 percent of all universities in Japan are private.

The quality of education varies widely among Japan's four-year colleges and universities, which accounts in part for the stiff competition among students who wish to enter the best schools. Generally, universities aim to expose students to a broad range of knowledge while providing a context for research to be conducted by faculty. As of 1999 there were 99 national universities, 66 nonnational public universities, 457 private universities, altogether enrolling about 2,700,000 students, including graduate students. Overall, about 40 percent major in social sciences, 19 percent in engineering, and 17 percent in humanities. When just considering national



universities, however, the proportions change to 31 percent in engineering, 18 percent in education, and 17 percent in social science. Most students do not have a ''minor'' field in their university studies.

Most university programs are completed in four years, with the exception of medical, dental, and veterinary undergraduate preprofessional programs, which take six years. Universities establish graduate programs in areas where they aim to provide opportunities for profound research and scholarship for both their faculty and their students. For admission to a graduate school, an applicant must have completed an undergraduate degree program or its equivalent. Most master's programs require two years of study beyond the undergraduate degree, whereas most doctoral degrees require five years. Exceptions are medical, dental, and veterinary graduate programs, which last four years. About 10 percent of university students went on to graduate school in 1999. The number has continually increased since 1980, when it was about 4 percent. In 1999 about 65,000 students began master's programs, and about 16,000 began doctoral programs.

The academic environment in Japanese universities and colleges has come under criticism in recent decades. It is extremely difficult for students to gain admission to universities, and they often only do so after taking a particular university's admission test two or three times. Having been admitted, however, many students often lapse into what are sometimes called ''leisure lands'' in Japan—that is, universities where little real academic work is completed. For example, students may dedicate a good portion of their time to extracurricular activities such as sports, music, arts, or even a part-time job. In the 1960s many students were extremely politically active and spent much of their time on leftist causes. Although that is not so much the reason for the leisure lands today, the result in that period is similar to the result today—students often skip class and fail to spend much time on their studies. Some reasons often given for this phenomenon are as follows: first, many students do not get admitted into the school of their first choice and are less motivated to work hard; second, they have not yet grasped the significance of the course of study they have selected and its importance to their future; third, many of the professors have given in to the phenomenon and are less than inspiring teachers, preferring instead to conduct their research and other duties; and fourth, there remains the perception that companies or government agencies traditionally hire their employees from the same universities, with little regard for the degree of academic achievement of graduates. Some aspects of this approach to university life have changed in recent years. The educational and working culture has changed as a result of globalization and as a result of Japan's economic downturns, creating a more competitive atmosphere in universities and in companies. But there is still work to be done to raise academic standards in universities.

Junior Colleges: Established during the Occupation after World War II, junior colleges usually involve two or three years of training and traditionally have enrolled mostly women. In fact, about two-thirds of the women who go on to higher education after high school enroll in junior colleges, though that number is decreasing as women gain access to more professional careers and attend universities in greater numbers. Taken together, about 12 percent of men and women who participate in higher education attend junior colleges. As of 1999 there were a total of 585 junior colleges in Japan, with 503 being private and 82 being public. Some of the most popular majors in junior college are as follows: home economics or domestic science (24 percent of students), humanities (23 percent), education (17 percent), and social science (13 percent).

Technical Colleges: Technical colleges were established in 1962 as five-year institutions for students who had completed their lower secondary (middle) schooling. These colleges emphasize specialized subjects that prepare students for a vocational life. Japan's technical colleges can be grouped into two main categories: industrial and merchant marine. For the industrial track, students can take courses in subjects such as industrial chemistry, public works, metalworking, mechanical engineering, electrical engineering, electronic control, information technology, material/bio-engineering, civil engineering, and management information. The merchant marine track focuses on various aspects of marine studies and takes an additional six months, for a total of 5.5 years. In 1999

there were 62 technical colleges, 59 of which were national or public and 3 of which were private. A total of 56,436 students were enrolled, up from 52,930 students in 1990. Technical education continues to be a solid option for students who enjoy skilled labor and do not plan to advance to a university.

Special Training Schools: Another postsecondary option is ''special training schools'' and other miscellaneous schools that focus on specific vocational needs. Started in 1976 to fill particular niches in the industrial community, these schools are required to enroll at least 40 students and to last for at least one year, offering 800 hours of training for that one-year course. The courses at special training colleges can be grouped into three categories: advanced courses designed for graduates of upper secondary school (high school), high school level courses for graduates of middle school, and other courses. Courses in the high school group usually comprise two-year programs of study in business, engineering, foreign languages, hygiene, or medicine. As of 1999, there were 3,565 special training colleges, 3,206 of which were private and 359 of which were public or national. That year there were 753,740 students enrolled, up from about 40,000 in 1989.

Sometimes grouped with special training schools are ''miscellaneous schools,'' a category that included special training colleges until they were declared a special type of institution in 1976. After the higher category of special training colleges was established, the miscellaneous schools began to be recategorized and thus declined precipitously in number. From 1980 to 1989 the number dropped from about 5,400 to 3,570, and the enrollment dropped from 724,000 to 442,186.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education, Science, Sports and Culture (often shortened to Ministry of Education) represents the central educational authority in Japan. It is headed by the minister of education, who is appointed by the prime minister and serves on the prime minister's cabinet. The Ministry oversees many national institutions such as universities, museums, research institutes, and youth centers. It gives assistance to all levels of education throughout the country, especially at the municipal and prefecture level. Following are some of the specific responsibilities of the Ministry:

1. Plans and coordinates educational projects at all levels
2. Provides advice upon request from educational units around the country
3. Gives financial assistance to enhance education
4. Operates many educational institutions including universities, junior colleges, and technical colleges
5. Gives final approval for establishing public and private higher education institutions
6. Promotes lifelong learning throughout the country, because Japan has been making the cultural shift to this sort of system
7. Requires heads of municipal and prefecture governments to submit reports about their organizations, as deemed necessary
8. Orders local authorities to make adjustments in policies, procedures, or situations that may be in violation of regulations or laws
9. Oversees the curricula
10. Coordinates the selection of textbooks
11. Controls the programs for the training of teachers
12. Establishes standards for various types of equipment used in the schools

The Ministry has purview over essentially all educational institutions and serves as a central clearinghouse for proposals that aim to improve the national system of education.

Japan is composed of 47 prefectures. Every prefecture has a board of education that coordinates education in that geographic unit. Each board comprises five members who are appointed by that prefecture's governor, approved by the legislative assembly, and serve for a four-year term. Some of the main responsibilities of the board are as follows:

1. Manage the wide variety of educational units in the prefecture, from secondary schools and schools for the handicapped to museums and public libraries
2. Promote events and activities related to physical education and the social education of youth
3. Provide advice and financial assistance to the mayors and municipal boards within the prefecture
4. Establish or close down kindergartens, upper secondary schools, special education schools, special training schools, and miscellaneous schools
5. Issue certificates to teachers

In addition to the board having a wide range of responsibilities, the governors of the prefectures are charged with the following tasks: managing universities and junior colleges in the prefecture, approving the establishment of a variety of schools, and overseeing the drafting of budgets for a variety of educational activities.

Education administration at the municipal level is handled by a municipal board of education. Each board

includes five members selected by the mayor of the municipality with the agreement of the elected assembly. Holding office for four years, these board members have the following responsibilities: selecting a municipal superintendent of education from among its own membership, managing a variety of educational institutions in the municipality, promoting cultural activities, and selecting textbooks for elementary and middle schools. Then the municipal mayor has the responsibility to oversee the municipal universities and junior colleges and the process of preparing educational budgets.

Several advisory councils assist the minister of education. The most important is the Central Council for Education, established in 1952 for the purpose of studying possible changes related to education, culture, and the arts and sciences. Composed of up to 20 members appointed by the minister of education, with the approval of the cabinet, the council has taken on a variety of issues—some of them quite controversial—during its tenure. In its first few years its work was primarily related to instituting compulsory education, maintaining the teaching profession as a politically neutral group, and improving the system by which textbooks are compiled. In the 1960s the council issued reports on subjects such as the junior college system, technical and scientific education, and financial aid for students.

In 1984 the Central Council for Education suspended its work and was temporarily replaced by the Provisional Council on Educational Reform, an advisory group installed by the cabinet to address serious issues related to the reform of the entire educational system in Japan. It consisted of 25 members, a strong staff of technical specialists, and a chairman, Okamoto Michio, a well-known figure in Japanese education and the former president of the prestigious Kyoto University. All four major reports completed by the Provisional Council focused on the importance of reinforcing a respect for individuality at all levels of education. The council offered proposals to improve adult and continuing education; create new university admission tests that would apply to national, public, and private universities alike; convert the separate three-year middle school and three-year high school systems into a six-year secondary school system; initiate a more flexible system for high schools whereby students could graduate after completing three years of work and a prescribed number of credits; and improve the training provided to teachers during their first year on the job. In the late 1980s the Ministry of Education began working to put a number of the group's recommendations into practice throughout the country. After the Provisional Council completed its work, the Central Council for Education was reconvened in 1989 and issued several important documents at that time.

In 1995 the Central Council for Education was reorganized by the Ministry of Education and asked to consider the educational challenges ahead for Japan in the twenty-first century. In its first report, issued in July 1996, the council showed that it was willing to take on many of the difficult challenges that would confront Japanese education in the new century. Following are a few of its observations and recommendations:

1. Advancements in information technology will change the nature of education in the coming years, and Japan must be prepared to incorporate these new technologies into the classroom.
2. Excessive focus on completion, especially for entrance to many levels of schooling, is a problem that must be addressed because it works against the need to nurture ''competencies for positive living''—or balance—in the lives of children of all ages.
3. The family, schools, and community must do a better job of working together to solve growing problems such as school truancy and bullying within the schools.
4. The curriculum of schools should be reformed to include less straight memorization and more emphasis on critical thinking and independence of mind.
5. Schools should supplement the traditional classroom activities with additional programs in sports, volunteer work, nature studies, and other means of developing the full personality of the child.
6. There should be more emphasis on the importance of the home in the education of children, for example, with the use of new media and with the expansion of networking among groups of parents.
7. All elementary and secondary schools should begin to make the transition to the five-day school week, and ''special attention should be paid to the following needs: the enrichment of children's out-of-school activities; an increase in the educational functions of the home and community; the mitigation of excessive competition for entrance examinations; the securing of some latitude in children's life; and the implementation of the five-day school week for all schools irrespective of different categories: national, local public or private'' (*Outline of Education in Japan 1997*).

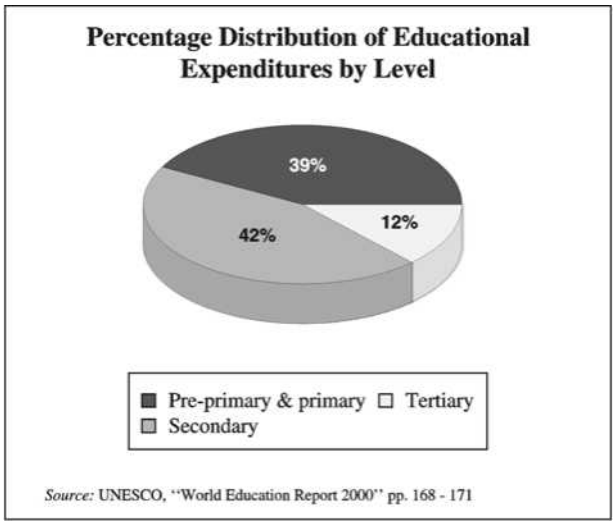
As a result of the council's 1996 report and the many other recommendations for reform in the years leading up to and following the report, the Ministry of Education has implemented a number of significant changes in all levels of education. The last few decades have witnessed serious efforts to reform education by the administrative units charged with overseeing the Japanese educational system.

Finances: Three main entities share financial responsibility for supporting public education: the national, prefectural, and municipal governments. Through the use of taxes and other means of acquiring income, each of these units funds a diverse array of educational programs at its level.

At the national level, the Ministry for Education funds two main units: first, the national educational establishments, such as universities; and second, various public and private educational institutions at the prefecture and municipal level. In 1999, the budget for the Ministry of Education was a little over 7 percent of the entire national budget. About half of that amount was related to liability of the cost of compulsory education, about a quarter was devoted to subsidizing national institutions such as universities, and the remainder was devoted to programs such as life-long education. At the level of the local governments, the relative expenditures for education are as follows for a typical year, in this case 1997: 35 percent for elementary schools, 20.8 percent for junior high schools, 18.3 percent for senior high schools, 17.3 percent for social education, and 5.6 percent for education administration.

Special mention should be made about the significant level of financial support provided to private institutions by the national government. The part that private institutions play in Japanese education is huge. In 1995, for example, the following percentages of Japanese students were enrolled in private schools: 74 percent of students in universities and junior colleges, about 30 percent of high school students, and about 80 percent of kindergarten students. Because of this major contribution, and the important research that goes on in many of these organizations, the government provides major subsidies under the provisions of the Private School Promotion Subsidy Law. Assistance is given to private universities, junior colleges, colleges of technology, secondary schools, and elementary schools.

As for scholarship aid, student aid programs are available through many private and public organizations. The primary benefactor is the Japan Scholarship Foundation, a public corporation supported by the national government, by prefectural and municipal governments, and by not-for-profit organizations. The foundation provides students with loans, either with or without interest. The no-interest loans are mainly directed to students attending upper secondary schools, universities, junior colleges, graduate schools, colleges of technology, and special training schools. The loans with interest generally are geared for students in universities, junior colleges, master's degree programs in graduate school, and specialized training schools. These loans do not accrue interest while the students are enrolled. Upon graduating, students begin to repay the loans, which have a relatively low annual interest rate. The heads of educational institutions have authority to choose the students who will receive loans in their respective institutions. In fiscal 1996, about 484,000 students received such loans.



Educational Research: Research on education in Japan is conducted both by government agencies and by private academic societies. The first main unit to support such research was formed in 1949 by the Ministry of Education. Originally called the National Institute for Educational Research, this agency had nine departments and had a wide range of official duties both within and outside the country. In particular, it coordinated research work being done by both private and public organizations throughout the country. Also, it linked up with research institutes in other Asian countries. In 2001 the institute was reorganized by the government and also renamed. Now called the National Institute for Educational Research, the organization has added to its agenda of research topics the study of educational policy.

In addition to the National Institute sponsored by the Ministry of Education, there are many other consortiums and academic societies that support educational research. A prominent one is the National Federation of Educational Policy Research Institutes, which in 2001 had a membership totaling 279 educational institutes throughout Japan. As for academic societies that support research in education, the most well known one is the Japan Society for the Study of Education. Founded in 1941, as of May 1999 it had 2,920 individual members and 340 organization members, of which 255 are universities and research institutes and 85 are bookstores.

Besides the Japan Society for the Study of Education, many other groups are involved with research in education, such as the following:

- Council for Improvement of Education through Computers (CIEC)
- History of Educational Thought Society (HETS)
- The Japanese Association of Educational Psychology (JAEP)
- The Japanese Association for Methods of Moral Education (JAMME)
- The Japanese Association for the Study of Educational Administration (JASEA)
- The Japan Academic Society for Educational Policy (JASEP)
- Japan Association for Women's Education (JAWE)
- The Japan Educational Administration Society (JEAS)
- Japan Society of Educational Information (JSEI)
- The Japan Society for Education System and Organization (JSESO)
- The Japanese Society for the Education of Young Children (JSEYC)

In addition to the above organizations, each subject taught within the school system is represented by its own society of education.

NONFORMAL EDUCATION

Japanese nonformal education comprises the various forms of learning that are *not* covered under the Fundamental Education Law of 1947 (which established the 6-3-3-4 system that extended from primary school through university education). Nonformal education includes the types of learning that occur outside the formal educational system. Though still under the oversight of the Ministry of Education, these forms of learning include supplemental learning quite unlike what is included in the formal system. Examples of nonformal education includes the following: juku or yobiko, social education, adult education, correspondence courses, and English language training.

''Social education'' (or community education) generally refers to a wide range of organized activities beyond the structured school curriculum, aimed especially for adults and young people. Facilities often used for these activities include public halls, libraries, museums, youth houses, children's centers, women's education centers, and sports facilities, as described below.

Citizens' public halls exist in over 90 percent of Japanese communities and serve as centers for various activities. Besides lending books to members of the community, they provide a venue for lectures, exhibitions, meetings, physical training, and other forms of recreation. Public libraries and museums also serve as centers of learning, both by giving citizens access to their collections and by opening their facilities to community groups. Youth houses and children's centers give young people an opportunity to participate in activities that involve an overnight stay. Often located in areas with beautiful natural surroundings, these facilities focus on teaching young people skills such as self-discipline, collaboration, and service. Women's education centers aim to provide an opportunity for women to gain experience in leadership skills and to get together to share experiences and develop networks for support. Most of these centers are nongovernmental organizations or are run by local governments. Finally, there are many facilities throughout the country that encourage physical education of people of all ages. Besides playgrounds, swimming pools, and gymnasiums that are open to public use, many colleges and schools permit their physical education facilities to be used by members of the general public when not scheduled for students.

Adult education can also take the form of courses that are taken outside the classroom through correspondence or through other media such as radio, television, satellite transmission, or the Internet. Traditional correspondence course work was introduced in the 1880s at Waseda University, one of the most prestigious universities in the nation. Generally, two main options are available in correspondence work. First, the courses can be taken for actual course credit that applies to degrees, certificates, or diplomas given by the institution. Second, the curricula offered through correspondence may have no credit attached to it and instead can be taken to gain vocational background, to advance in cultural understanding, or to develop an outside interest or hobby. Courses range widely in content and include topics such as bookkeeping, drafting, calligraphy, childcare, and computer literacy.

One type of correspondence course of special note is the so-called *Hoso Daigaku* ''University of the Air,'' a college that is operated by the Broadcast College Special Corporation and that is administered from an office in the city of Chiba. This organization was established in 1983 to provide university-level curricula on television and radio. Generally, students are required to have graduated from high school; however, students who are 18 or older and who have not received a high-school education can participate in the program. The system works in this fashion: a participant gets two credits by listening to 15, 45-minute lectures and then by completing some on-site work at local study centers located throughout the country. The course work falls into three main groups: domestic science, business/social science, and humanities/

natural science. Once a student gains enough credit, he or she receives a Bachelor of Arts degree.

Students of all ages participate in the University of the Air, but about half the students are over the age of 40. The University of the Air is just one example, therefore, of the shift in Japan away from a strictly traditional student body receiving traditional professional degrees. Now certificates or nontraditional degrees, such as those gained through the University of the Air, are gaining credibility as mechanisms for seeking new employment or promotions in current positions.

One type of nonformal education that is extremely popular is training in the English language. An entire private industry has developed to teach English to those who feel they need more language preparation than they received in public school. As of the mid-1990s there were more than 400 such schools around the country, usually offering courses of one year or more. Much of the popularity of such courses arises from the fact that English has become the language of business and industry throughout the world, including Japan. Many of the Japanese people feel that the kind of English training they received in public school was inadequate for their purposes in the workplace, thus requiring nonformal courses later in life. Yet the subject of English language teaching certainly is not without controversy in contemporary Japan. In the year 2000 the prime minister's office received a report from a prestigious advisory group that suggested much more emphasis on English literacy in Japan's universities. Entitled ''Japan's Vision for the 21st Century,'' the report even noted that it may be time to consider declaring English to be the country's official second language. Such a change would help provide the impetus for giving young people an adequate working knowledge of English before they enter the workforce, reducing the need for so much extra training after exiting the school system. Although establishing English as an official second language would be a controversial subject in a country that takes such pride in its own linguistic inheritance, there continues to be a strong demand for English training in nonformal education.

TEACHING PROFESSION

The aftermath of World War II saw significant changes in teacher training that had been in existence since the Meiji Restoration of 1868. Prompted by the recommendations of the 1946 U.S. Education Mission to Japan, the education of teachers was upgraded. Previously, most teachers received their training at ''normal schools'' or gained a certificate by passing an exam. The postwar reform grouped teacher training curricula into three main areas: general education, professional courses related to the subject matter being taught, and professional courses related to the practice of teaching. Other changes included the restructuring of the normal schools into professional teachers' colleges that required four years of education and the introduction of teacher training programs into traditional universities.

Teacher training today occurs at various types of institutions, depending on the level. Preschool or kindergarten teachers are educated at private junior colleges or at special institutes approved by the Ministry of Education. Teachers in primary schools or in special schools (e.g., schools for the handicapped) are trained in education departments of universities and at national teachers' colleges. Finally, middle and high school teachers are educated mainly at regular universities.

Teaching certificates, which are required for the profession, are divided into two groups, first class and second class, according to the amount of education received and the level of education being taught. Teachers can sometimes be given temporary certificates. They may advance from temporary to second class or from second class to first class by taking additional coursework, such as through in-service training while they are employed. Japanese educators have three main types of in-service training available to them:

1. Training done on their own or through the school where they work
2. In-service training completed at designated education centers operated by the Ministry of Education
3. In-service training at regular universities

A variety of opportunities exist for teachers to upgrade their skills. In addition, teachers who strive to advance their skills through such training often are selected for midlevel management positions within their school systems.

Teachers' incomes tend to be comparable to employees in other industries and actually slightly higher than other types of government workers. They have a standardized pay scale that is based primarily on their level of education, and middle school teachers have a separate salary scale than do high school teachers; however, beginning teachers in both groups with the same educational level start their career at the same salary. Besides their basic salary, teachers receive family allowances, bonuses, and other types of special pay adjustments. All teachers receive their bonuses three times each year. The amount of these bonuses is considerable, possibly totaling five times the individual's monthly salary. Teachers certainly deserve all the salary they earn because they are charged with a wide range of responsibilities within their schools.

Besides teaching in their subject areas or grades, teachers are responsible for guidance counseling, student

activities such as clubs, homeroom supervision, and oversight of field activities conducted outside the school. Like teachers in many other countries, they also are obliged to commit time to tasks associated with their parent-teacher associations. One way that the system attempts to reduce ''burn out'' and stagnation in the profession is by periodically transferring teachers among schools within the same prefecture.

Teachers are appointed in various ways, depending on level and affiliation. If they teach at schools associated with national universities, the minister of education is responsible for appointing or dismissing them. If they teach at public elementary or middle schools, they are appointed or dismissed by the board of education in their prefecture. And if they teach in public high schools, they are appointed or dismissed by either the prefecture or municipal board of education. Oversight of the profession corresponds to the general administrative hierarchy for the national prefectural, and municipal governments.

Unions continue to play a role in the Japanese education system, with well over half of the teachers belonging. The largest teachers' union is *Nikkyoso* (the Japan Teachers' Union, or JTL), founded in 1947. Over the years it has tended to oppose the educational policies of the Ministry of Education. There are also more conservative teachers' unions such as the *Nihon Kyoshokuin Remmei* (Japan Federation of Teachers) and the *Nihon Kyoshokuin Kumiai Rengo* (New Japan Federation of Teachers Union). Union membership among teachers is most prevalent in the public schools at compulsory levels, but certainly unions are also represented in the high schools and even in the universities.

SUMMARY

In many ways, Japanese education can be considered an overall success story, though certainly not without its problems in the early part of the twenty-first century. Highlights of what has worked well in Japanese education follow:

1. The nation is almost universally literate, with a high level of fluency and with a large amount of shared cultural knowledge among the populace.
2. About 96 percent of students who complete the nine years of compulsory education proceed on to the optional three years of upper secondary school.
3. Students completing high school enjoy a wide range of education options that include universities, junior colleges, technical colleges, and special training schools.
4. The organization overseeing the system, the Ministry of Education, has helped to promote a fairly high level of student standards and achievement, teacher training, and educational funding over the years.
5. The nation has remained reflective enough to recognize the problems in its education system and thus to initiate reform movements at critical periods in its history.

There are many nations throughout the world that are envious of the educational achievements in Japan. Japan's success seems especially remarkable in light of the huge efforts that had to be mounted at two particularly significant historical junctures: after the ''opening'' of Japan in 1853, when the country raced to modernize following over 200 years of virtual cultural isolation; and after World War II, when much of the countries' infrastructure lay in ruins.

Its overall success in education notwithstanding, Japan now confronts a number of heady challenges that will once again require the nation to overcome major obstacles. Here are five needs that are most prominent:

1. *Need to Reduce Regimentation:* The very quality that helped Japan's educational system take its part in the technological success of the country has come under criticism. One main result of recent reform movements has been to introduce more creativity and critical thinking skills into the curriculum. But the nation still has challenges ahead in reducing the emphasis on memorized learning, entrance exams, and outside ''cram'' schools.
2. *Need to Reduce Rebelliousness and Related Problems:* Figures from 1999 show some downturn in the bullying cases that were a large problem in the 1980s. However, statistics from 1999 also reveal troubling numbers of cases that involve problems such as general acts of violence, truancy, and violence against teachers—at least when compared with early data. Violence against teachers increased markedly in the last 15 years of the 1900s, a fact of particular concern in a culture with a history of Confucian respect for teachers and others in authority.
3. *Need to Respond to Issues of Minority Communities:* Some minority communities feel that the overwhelming sense of homogeneity in the Japanese culture affects the culture of the classroom as well. More sensitivity to the linguistic, social and intellectual needs of minority children is needed.
4. *Need to Enhance the Intellectual Atmosphere in Universities:* Although there have been some positive changes in the academic and social structure of universities, many of them still fail to challenge students intellectually. The system needs to rid itself of the perception, and in some cases reality, that a university education is more a reward for the hard work of completing high school and scoring well on entrance exams than it is a chance to take advantage of a stimulating intellectual environment.

5. *Need to Increase Opportunities for Women Students:* There have been significant advances in Japanese culture in general, and education in particular, with regard to gender equity. But work remains in ensuring that women are not expected, by their families or by the culture, to attend a certain type of postsecondary school or to enter a certain type of profession.

These needs notwithstanding, Japan has an enviable education system that has served the culture and its people quite well. If its history and the industry of its people are any indication, then one should expect that Japan will continue to reform its educational system to meet the needs of the future.

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—Minoru Moriguchi and William Sanborn Pfeiffer

JERSEY

BASIC DATA

Official Country Name:	Jersey
Region:	Europe
Population:	88,915
Language(s):	English, French, Norman-French
Literacy Rate:	NA

The largest of the British Channel Islands, Jersey has benefited from its status as a dependency of the British Crown and from its location between Great Britain and France. During the late sixteenth and early seventeenth centuries, a significant immigration of Calvinists made their way to the island from France, bringing with them a typical Calvinist emphasis on education. This period saw the establishment of schools in each of the island's 12 parishes and support for islanders seeking education at Oxford. Another wave of immigration from France following the revolution and Napoleonic period brought significant numbers of members of teaching religious orders to Jersey.

In 1995 the average cost per student at government schools stood at 2,783 pounds or 702 pounds per resident. Due to the island's income tax rate, which stands significantly below that of England, Jersey has experienced a significant influx of affluent residents without a corresponding rise in school enrollments. This disparity has led to positive funding for the educational system.

The schools in Jersey follow the model of the United Kingdom in most respects, including drawing on the U.K. National Curriculum. Education is divided between primary and secondary schools. The island's Department of Education reported an enrollment of 11,830 pupils in the primary and secondary schools in 1996 with a student-teacher ratio of 19.2:1 in the primary and 12.9:1 in the secondary schools. In recent years roughly 75 percent of Jersey students have completed the secondary course of education.

Highlands College provides vocational education for more than 8,000 students annually. The government also provides grant aid to students pursuing higher education in Britain. During the 1990s the number of students receiving grant aid increased by more than 70 percent, averaging more than 1,200 students each year by the end of the decade.

—Mark Browning

JORDAN

BASIC DATA

Official Country Name:	Hashemite Kingdom of Jordan
Region:	Middle East
Population:	4,998,564
Language(s):	Arabic, English
Literacy Rate:	86.6%
Number of Primary Schools:	2,623
Compulsory Schooling:	9 years
Public Expenditure on Education:	6.8%
Educational Enrollment:	Primary: 1,121,866 Secondary: 155,008 Higher: 112,959
Teachers:	Primary: 45,367 Secondary: 9,300 Higher: 5,275
Student-Teacher Ratio:	Primary: 25:1 Secondary: 17:1

HISTORY & BACKGROUND

Jordan is situated in the Middle East. It is bordered by Syria in the north, Iraq in the east, Saudi Arabia in the south, and Israel and the West Bank in the west. Its territory extends over 86 square kilometers. It became fully independent in 1946 and was founded as a hereditary constitutional monarchy. The estimated population of the country in 1999 was 4.7 million. The population is primarily homogenous; the Arabic language and the Islamic religion predominate throughout. The climate of the country varies from arid or semiarid regions in the east and south to regions in the north and west where there is adequate rainfall and a cooler climate.

Historically, Jordan is part of the Arab world and nations. As was the case with other nations in the region, Jordan was under Ottoman rule until 1918. In 1921, it was known as the Emirate of Transjordan. It remained an independent constitutional state under British rule until 1946, when it achieved complete independence and became the Hashemite Kingdom of Jordan. Following the Arab-Israeli War of 1948, part of Palestine (the West Bank) became an integral part of the kingdom. Since the war of 1967, however, Israel has occupied the West Bank.

When the Ottomans ended their occupation, they left behind a traditional system of education, which was composed of three-year primary schools and four elementary schools offering six years of study. At that time, there were no intermediate or secondary schools. There were private Islamic schools (*Kuttab*) and Christian missionary schools. After the emirate was created, an expansion program began, culminating in 1922 with 44 government schools employing 71 teachers and serving 3,316 students, of which 318 were female. By 1923, a secondary school was established in Salt; this was followed the same year by a program of curriculum unification and the establishment of the country's first Education Council, which was formed to choose teachers and supervisors. In 1926 this council was replaced by another council called the Consultative Council of Education.

In 1946-47, there were 77 government schools enrolling some 10,729 students who were taught by 214 teachers. At the time, the school budget amounted to 6.3 percent of the total budget of the government. The first Ministry of Education during the emirate period was established 24 September 1940. Under its leadership, an educational system was set up with an elementary school cycle (seven years), a secondary school cycle (four years), and a technical school cycle (two years). Government-supervised national examinations were required at the end of both the elementary and secondary school cycles.

In June 1952, the first School Ordinance was issued regulating the examination system, the role of school principals, and the methods to be used for recruiting and promoting school children.

CONSTITUTIONAL & LEGAL FOUNDATIONS

When Transjordan became an independent entity in 1946 a new constitution was written. Article 21 stated that ''communities should have the right to establish and maintain their schools for the teaching of their own members, provided they conform to the general requirements prescribed by law.'' When the constitution was revised in 1952, Article 20 proclaimed that primary education was to be compulsory and free in the public schools and open to all nationals. According to the Ministry of Education, the general objectives of education are: building up citizens' belief in God and their affiliation to their country and nation, endowing them with human virtues and perfection, and fully developing their personalities in their various aspects—physical, mental, spiritual, emotional, and social.

These objectives are based on a philosophy of education that stems from the Jordanian Constitution, Arab-Islamic civilization, principles of the Great Arab Revolt, and the Jordanian national experience.

The aims of education and the procedures for attaining them, according to the Ministry of Education, are:

- To abolish illiteracy and extend schooling by opening as many primary schools as will guarantee a free universal primary education.
- To orient all schools towards practical ends, both by revising present curricula and by strengthening and multiplying vocational establishments.
- To establish a limited number of secondary institutions in addition to the schools already in existence.
- To improve the professional training of teachers in rural and urban schools; in particular, training institutions are required for rural teachers to insure that they remain in the villages and help in improving the community life.

The general law of education (No. 20), issued in 1955, required that all schools be placed under the Ministry of Education and that certain subjects become required in private schools—Arabic, history, geography, and civics. The language of instruction for these subjects was to be Arabic, and each course was to follow the respective syllabus issued by the MOE.

The most significant legislation on education was the Law of Education No. 16, enacted in 1964. This law dealt with the overall philosophy of education in Jordan, specifying the objectives of the compulsory cycle as well as those of secondary schools and educational institutions. Article 4 of the law presented the basic philosophy of education as follows:

- To develop responsible citizens who believe in the basic principles of the constitution; the rights and the responsibilities of citizens; honesty and dedication to work; responsible behavior; and fruitful cooperation with others based on democratic relationships.
- To develop an understanding of the natural, social, and cultural environment starting with the home and ending with the world as a whole. This objective should aim at understanding the environment, its problems, and its urgent needs, and developing, in the individual, a sense of responsibility to do his share in the betterment of the environment.
- To develop pupils physically, socially, mentally, and emotionally, taking individual differences into consideration.
- To raise the health standards—in both the individual and the group—through proper health information and the development of appropriate habits.
- To raise the economic standards of the individual and the society and to increase the national income.
- To develop such skills as effective communication, critical and creative thinking, logical reasoning, or-

derly thinking, the ability to use scientific methods of investigation, and the proper engagement of relationships with others.

Article 6 of the Law classified schools by establishment, financing, and control. Public, or government, schools were under the Ministry of Education or other ministries such as Health, Defense, or Social Welfare. Private schools might be either national or ''foreign.'' National schools were those established and run by individual citizens or agencies. Foreign schools were those established and administered by non-Jordanians, either individuals or agencies. Schools of this type could be secular or religious.

One of the most important outcomes of the First National Conference for Education Development in 1987 was the issuance of the Provisional Education Act No. 27 in 1988. The most important aspects of this act were:

- Classifying and identifying the philosophical bases and principles of education.
- Developing the general objectives of education and educational cycles.
- Expanding free compulsory education from 9 to 10 years.

The most significant law in recent years related to kindergarten, basic, and secondary education was Act No. 3 in 1994. This act regulates education and states educational philosophy, objectives, and policy, as well as the functions of the Ministry of Education. According to this act, the missions and responsibilities of the Ministry of Education include:

- Establishing and administering public schools at all levels and supervising private schools.
- Providing health and counseling services.
- Encouraging educational research.
- Enhancing educational relations inside the kingdom and with other Arab and Islamic countries.
- Establishing adult education centers.
- Furthering cultural and scientific development through libraries and museums, radio and television, lectures, clubs, societies, and appropriate magazines.

Regarding higher education, the most significant laws were:

- The Higher Education Act No. 28, 1985, which stated the objectives of higher education and how they are achieved, instituted the Higher Education Council, and listed other factors that regulate the affairs of higher education institutions.
- The Jordan Universities Law, No. 29, 1987, which listed the objectives of the university and established university councils, deans, and colleges.
- The Private Universities Law, No. 19, 1989, which specified the responsibilities of the Higher Education Council toward the work of private universities.

Other means used in developing and implementing educational change have been the various educational development plans. The general goals of these plans are to improve the educational outcomes, cope with scientific and educational changes, respond to needs of the labor market, and interact with the international cultural developments.

The first stage in the current educational plan was from 1988 to 1995. The goals in this stage were:

- Extend compulsory education to 10 years instead of 9 and reorganize secondary education into a comprehensive two-year program.
- Lower the illiteracy rate to 8 percent by the year 2000.
- Develop and expand vocational education and training.
- Develop curriculum and textbooks.

The second stage was from 1996 to 2000. The goals in this stage were:

- Improve the quality of educational leaders.
- Supply schools with educational resources.
- Develop vocational education and training to support the needs of the labor markets.
- Improve facilities for teaching and learning through expanding and constructing new schools, reducing rented school buildings, and furnishing schools to accommodate more students.
- Develop examinations to balance the content and goals of the new curricula.

EDUCATIONAL SYSTEM—OVERVIEW

The present structure of the Jordanian educational system comprises formal and nonformal systems. The nonformal system includes preschool education, which is run by the private sector and enrolls children as young as age three. Literacy campaigns, home schooling, and vocational training administrated by the ministries of Labor, Industry, and Defense are also part of the nonformal education system.

The formal education system is composed of the following stages:

- A compulsory stage for children ages 6 to 15 (grades 1-10), consisting of primary school (grades 1-6) and preparatory school (grades 7-10).
- A comprehensive secondary education (academic and vocational) and applied secondary education (training centers and apprenticeship).

- Higher education, either a two-year intermediate level course offered by community colleges or four years of university level courses, either in public or private institutions. The student's achievement on the General Secondary Education Certificate Examination is the sole criterion for admission into higher education institutes.

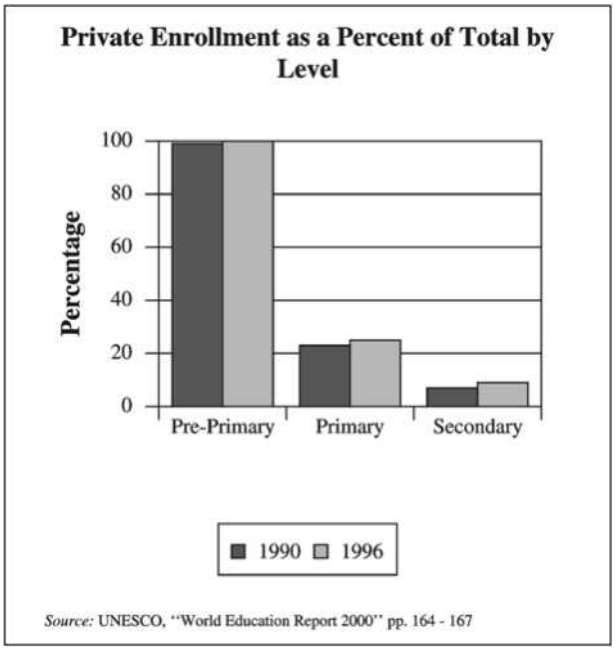
Children move up the educational ladder under a system of modified automatic promotion. Under this system, students in grades 4 through 10 may repeat a grade twice. After that they are automatically promoted. In the preparatory stage, grade repetition is allowed only once. At the secondary level, students are allowed to repeat once in a government school provided they are younger than 17; otherwise they must transfer to a private school.

Before 1975, all students were required to pass a public preparatory education examination to be admitted into secondary school. With the elimination of this exam, students are admitted into the secondary stage simply by passing their ninth grade end of the year examinations and on the basis of their class standing. The exam was reintroduced in 1985, but then cancelled in 1989.

Community colleges and universities vary in required attendance from two years in community colleges to six or more in universities based on the type of institution and specialization. For instance, the faculty or school of medicine requires six years. To be admitted into postsecondary institutions, students must pass the General Secondary School Certificate Examination or GSSCE (*al Tawjehy*). Students in the vocational education program sit for the Vocational General Secondary Certificate Examination.

The majority of students are enrolled in schools directly controlled by the MOE. Some schools fall under the jurisdiction of the cultural bureau of the Ministry of Defense. The Ministry of Health oversees students studying for medical careers; it established the first nursing school in 1953-54.

Instruction is in Arabic, but English is introduced in public schools in the fifth grade and is widely used. A new policy was recently approved to start teaching English in the first grade beginning in the academic year 2001-02. The school year runs for 210 days from September to June. There are two semesters in the school year. Students attend schools five days a week, Sunday through Thursday. To pass from one grade to the next, students need to maintain adequate grade averages. The final grade of each student in each course is converted into a percentage. The minimum passing level in any subject is 50 percent. The universities or other postsecondary institutions also employ this grading system for individual courses. However, a student needs to have a 60 percent average in all courses combined to graduate.



Source: UNESCO, "World Education Report 2000" pp. 164 - 167

All public schools and most private ones use the same textbooks. Under Law 16 of 1964, the School Curricula and Textbooks Division of the MOE is responsible for producing and printing the textbooks. They are distributed free of charge during the compulsory stage, but there is a nominal fee at the secondary stage.

Jordanian public schools are single sex schools. Some private schools allow for mixed classrooms. Jordanian classrooms, much like those in other capital-poor countries, are bare. Rows of chairs for students are positioned against a table from which the teacher talks while the students listen. This lack of facilities compounds education problems. As of 1979-80, for example, with the dramatic increase in enrollments, the MOE was forced to introduce a two shift school program in about 41 percent of the compulsory and secondary schools and to rent some buildings. In 1997, however, only 16 percent of students were attending two shift schools and 11 percent went to rented buildings.

Educational television was introduced on a limited scale in Jordan beginning in 1968. It provided programs for secondary schools, primarily in such fields as mathematics, the sciences, and English. In 1997, the MOE produced 30 programs for grades 1-5 and 36 programs for grades 5-7.

As a whole, education in Jordan is considered an investment in the future. Skilled citizens are necessary. Before the Gulf War, most graduates could find good jobs in the oil-rich countries, and the money they sent home helped the Jordanian economy to grow. It is not uncommon for a family living at subsistence level to be able to send a child to a university (Abu-Zeinh).

PREPRIMARY & PRIMARY EDUCATION

Preprimary Education: Preprimary education, organized for children beginning at age three years and eight months, aims to provide an adequate educational environment to help children acquire sound health habits, develop positive social relationships, foster positive attitudes towards school, and be prepared for a smooth transition from home to school.

Children's attendance at preschool classes is not compulsory. Enrollment in this cycle is 26 percent. Methods and activities in this cycle aim to promote the development of the child's personality. The Ministry of Education supervises all preschool institutions.

In the academic year 1997-98, the average pupil to teacher ratio at the preschool level was 20.7 to 1, and the average number of children per class was 23.6.

Virtually all preschool education is private, but under the supervision and control of the MOE. The aim of this type of education as stated in Article 8 of the Education Law of 1955 is ''to guide children toward the correct habits and actions, to develop their abilities, to accustom them to discipline and to prepare them for entering the elementary school.'' Enrollment in preprimary schools has increased substantially. For example, during 1990, there were 44,856 children enrolled at 546 preschools; by 1998 the enrollment reached 69,425 at 932 schools. The number of teachers grew from 1,933 to 3,346. More than 99 percent of the teachers are female.

Primary Education: Basic education comprises 10 years of compulsory schooling, starting at the age of five years and eight months. Pupils are offered a basic and well-balanced education in the social, emotional, intellectual, physical, and spiritual aspects of their growth to create the basis for successful learning at higher forms of education and for continuous learning in life.

The aims of the compulsory education cycle as stated in Law 16 of 1964 include the development of the individual with respect to healthy attitudes, habits, and religious values and the cultivation of fundamental skills: ''use of proper language, the arithmetic skills that are necessary for the daily life, observation and attentive listening, objectives and constructive criticism, and scientific ways of thinking.'' In addition, students should know about the environment and the Arab world, learn a foreign language, develop an appreciation of the fine arts, and learn to use leisure time effectively.

Basic education aims at preparing the learners to be able to (Ministry of Education 1998):

- Be consciously acquainted with the history, principles, rules, and values of Islam and exemplify them in their character and behavior.
- Master the basic skills of Arabic language to be able to use it easily.
- Know the basic facts and events of history, especially that of Islamic and Arab nations and Jordan in particular.
- Follow social behavior rules and take into account commendable social traditions, habits, and values.
- Love, be proud of, and shoulder the responsibilities towards their homeland.
- Be aware of the basic facts related to the natural environment, as well as Jordanian, Arabic, and international geography.
- Love their family and society and shoulder the responsibilities towards them.
- Master the basic skills of at least one foreign language.
- Deal with numerical systems, basic mathematical processes, and geometrical figures and use them in everyday life.
- Absorb basic scientific facts and generalizations and their experimental bases and use them to explain natural phenomena.
- Think scientifically, using the process of observation, data collection, organization, analysis, deduction, and decision making.
- Comprehend scientific bases of the forms of technology and use them properly.
- Be keen on the safety, cleanliness, beauty, and wealth of their environment.
- Be aware of the importance of their physical fitness and health and to practice suitable sport and health activities.
- Have aesthetic taste in the various arts and express their own artistic interests.
- Be able to perform handicraft skills matching their abilities and interests, make an effort to develop them, and have respect for manual work owing to its basic function in social life.
- Exemplify diligence, persistence, and self-dependence in achievement.
- Express their talents, special abilities, and creative aspects.
- Accept and respect others, consider their feelings, and appreciate their merits and achievements.
- Appreciate the value of time and make good use of their free time.
- Strive for self-instruction and the development of their competencies.

The curriculum adopted in Jordanian basic education attempts to implement the above goals by focusing on Arabic, English, mathematics, and, to a lesser degree, general science. Islamic religion is also offered, along with music and anthems, arts education, physical education, vocational education, computer training, social and national education, and geography.

Enrollment rates in this cycle increased from 926,445 students in 1990-91 to 1,121,860 students in 1997-98. During the same time, the number of schools increased from 2,457 to 2,623. The gross enrollment ratio in this cycle is 95 percent, the average number of pupils per class is 30.4, and the average length of the teaching period is 45 minutes. In the academic year 1997-98, the average student to teacher ratio at the basic education level was 26 to 1.

Evaluating students is the responsibility of the teachers. Each semester there are three exams; each one counts for 15 percent of the student's grade. Participation counts for another 15 percent and the final exam, 40 percent. The school gives students certificates at the end of each academic year through the eleventh class (first year of secondary education), whereby the results of the first and second terms with the final average are all indicated. In addition, classifying students into the various types of secondary education is carried out according to their grades in grades 8 through 10.

SECONDARY EDUCATION

Secondary education consists of two years of study for students ages 16 to 18 who have completed the basic education cycle. As the students were provided with a broad-based, general education during the 10 years of basic education, secondary education is designed to prepare them for higher education or the labor market.

Students are admitted to secondary education according to their abilities and interests. They are provided with specialized cultural, scientific, and vocational experiences, which meet the existing and anticipated needs of society. Accordingly, secondary education is divided by category: comprehensive secondary education, which provides a general common cultural base to all students, in addition to specialized academic or vocational education, and applied secondary education, which provides vocational training and apprenticeship. According to the Ministry of Education (1998), secondary education in this context is intended to enhance the major cardinals of basic education and to prepare students to be able to:

- Use the Arabic language to increase their ability to communicate, develop their scientific and literary culture, consider the fundamentals of correct language structure, and relish its arts.
- Adapt to environmental changes in their country and their effects on the natural world, society, and culture; to exploit and maintain resources well; and to improve their potentials.
- Derive their culture from their nation's heritage and to be aware of the necessity of conscious openness to world civilization and to contribute to it.
- Interact with the cultural environment of their society and to try to develop it.
- Be aware of the importance of family and its role in social life.
- Consolidate their self-confidence with respect for the dignity and freedom of others.
- Exemplify the principles, rules, and values of Islamic ideology in their behavior and understand the values and convictions in other heavenly religions.
- Seek the progress, prestige, and pride of their country and be keen to participate in solving its problems and achieving security and stability.
- Know the issues of their nation, be proud of belonging to it, and seek its unity and progress.
- Work in a team, know the bases and forms of democracy and practice them in dealing with others, and believe in social justice principles.
- Be aware of international issues and of the importance of international understanding and peace built on justice and right.
- Perform their duties and adhere to their rights.
- Master at least one foreign language.
- Understand mathematical and logical concepts and relationships and use them in solving problems.
- Look for data resources carefully and be able to collect, store, process, and benefit from them.
- Understand new scientific facts and their applications, be able to verify them experimentally, and know their role in human progress.
- Protect the environment, keep it clean, and develop its potentials and wealth.
- Understand health information and rules pertaining to balanced physical and psychological growth and to practice them.
- Relish artistic work and express their interests in this field through producing positive artistic works within their abilities.
- Seek professional qualification, economic independence, and self-sufficiency.
- Use their free time for practicing useful hobbies and recreational activities.

- Reflect Arab, Islamic, and humanistic values in their behavior.
- Use common sense in dialogue, tolerance in dealing, and courtesy in listening.
- Develop themselves through self-learning and lifelong education.

In the academic year 1996-97, the average student to teacher ratio was 17 to 1 in the academic secondary education and 13.8 to 1 in vocational secondary education. Successful students at the end of the secondary cycle obtain the General Secondary Certificate, which includes the results of the General Secondary Examinations for the first and second terms, as well as their overall average.

Between 1995 and 1998, two-thirds of male students enrolled in academic secondary education and four-fifths of female students enrolled, perhaps because females had fewer options in vocational training than males.

Starting with the academic year 1996-97, one exam for the General Secondary Education Certificate at the end of the second term of the academic year was introduced. In addition, a project related to the development of the General Secondary Education Examinations, implemented in cooperation with the Scottish General Examinations Board, aims to measure several such skills as acquiring knowledge, solving problems, and finding facts in all subjects. Concerning foreign languages, the MOE plans to include skills related to reading, listening, and conversing, as well as writing. Supervisors and teachers will be trained for the new examinations, and the Ministry will issue specifications.

The comprehensive secondary school aims to prepare youth to enter institutions of higher education. The general secondary school provides two options—the literary and the scientific. Specialization or ''streaming'' takes place beginning in the eleventh grade and depends on prior academic achievement. High achievers in science and math usually follow the scientific stream. Twelve subjects are offered in the scientific stream and 14 in the literary. The subjects are classified general requirements, basic or essential subjects for the field—both compulsory and optional—and electives.

Vocational education is offered in six types of schools: commercial, industrial, agricultural, nursing, hotel services, and home economics. Each of these fields offers different subjects in the eleventh and twelfth grades. For example, the agricultural field course offers chemistry, biology, general agricultural sciences, and irrigation. During the school year 1997-98, there were 30,372 students in 322 such institutions. These students represented 43.2 percent of male students and 22.4 percent of female students enrolled in the secondary education.

Industrial secondary schools teach skills necessary for employment. The course work focuses on mathematics, physics, vocational safety, and specialized industrial sciences, in addition to courses in general education and knowledge.

HIGHER EDUCATION

The Jordanian higher education system offers options not always available in developing countries. These include a differentiated system of higher education institutions (universities and community colleges) and patterns of ownership (public and private) (World Bank 1996).

Higher education in Jordan started in 1951 with a one year postsecondary teacher training class. The first university program began in 1962 with the establishment of the University of Jordan.

Article 3 of the University Law of 1964 summarizes the formal functions of the universities as follows: to afford university study opportunities; to encourage scientific progress and serve the society; to provide the country with specialties in different fields; to pay special attention to the Arab-Islamic civilization and spread its heritage; to participate positively in international thought; and to strengthen cultural and scientific ties with other Arab and foreign universities and scientific organizations.

Higher education in Jordan is comprised of two levels. Two-year intermediate level programs at public or private community colleges offer about a hundred specializations distributed through 11 programs: academic, administrative, agricultural, applied arts, computer, educational, hotel management, meteorological, paramedical, social work, and engineering. Public and private universities offer a variety of four-year degree programs.

Pre-university reform in Jordan has yielded nearly universal access at the basic level and an enrollment rate close to 70 percent at the secondary level. Combined with the rapid population growth, this has created a strong demand for higher education. Twenty-three percent of 20 to 24 year olds (110,000) were enrolled in higher education in 1999; two-thirds of these attended public institutions. Enrollment in private universities has expanded from 1,300 in 1992 to more than 35,000 students in 2001.

Governance: The Ministry of Higher Education was established in 1985 with a mandate that included controlling the process of random pursuit of specializations by students and, rather, coordinating specializations with the development needs of the country. The 1998 Higher Education Law abolished the Ministry of Higher Education entirely.

Public universities are governed by the Law of Higher Education. Accordingly, each university should

have a university council, deans council, faculty council, and departmental council. The current administrative organization in public universities is as follows:

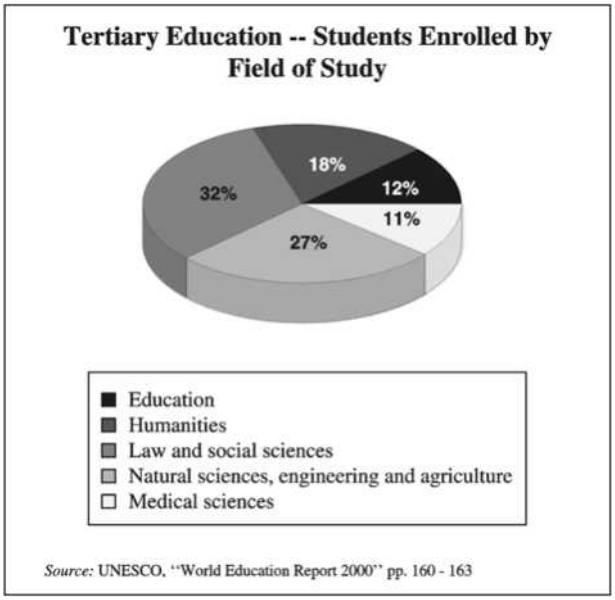
- Higher Education Council (HEC): Legislation governing higher education in Jordan was passed 6 April 1980. This marked the formation of a council that plans and coordinates higher education in Jordan and lays down its general policies. The HEC serves uniformly as a Board of Trustees for the Jordanian universities. This Council is chaired by the Minister of Higher Education and is charged with laying the foundations and defining the objectives of higher education and estimating needed manpower in the various fields of knowledge, including sending students for study outside Jordan.

- University Council: University regulations state that each university should have a university council, chaired by the president. Its members are: all vice presidents; all deans; a member from each faculty elected by the faculty to serve for one year subject to renewal; the directors of two administrative units at the university, appointed by the president for one year; three members of different backgrounds from the local community, recommended by the president and appointed by the Higher Education Council for one year; one student, selected by the president, for one year; and one member from the university alumni, selected by the president, for one year. The university council is responsible for developing general policy for the university; evaluating university activities and examining the president's annual reports; strengthening the relationship between the university and the public and private sectors; looking into university regulations and plans; and preparing the budget for approval by the Higher Education Council.

- Deans Council: The deans council is chaired by the university president. Its members include all vice presidents and deans and is responsible for appointing and promoting faculty members; approving faculty sabbaticals and other leaves of absence; and approving the curricula of the various faculties.

- Faculty Council: The faculty council is chaired by the dean of the faculty. Its members are all vice deans; heads of all departments of the faculty; a representative from each department, elected by its faculty members for one year; and two experienced members of relevant experience to the functions of faculty, appointed by the president upon the recommendation of the dean, for one year and subject to renewal.

- Departmental Council: Every academic staff member is a member of one of the departmental councils, which form the basic unit in the academic structure of the university. In the department, decisions are made with the participation of all members.



Source: UNESCO, "World Education Report 2000" pp. 160 - 163

All university presidents must be of Jordanian nationality; they are nominated by the CEH and appointed by royal decree to a four year term, which is renewable once. Vice presidents and deans are nominated by presidents and appointed by the CEH. Vice presidents have three year terms, which are renewable once, and deans have two year terms, which are renewable once. Vice deans and department heads are nominated by deans and appointed by presidents to renewable one year terms.

There are two types of universities—public and private. The 10 public universities are, according to government policy, distributed throughout the country: Yarmouk University, Jordan University of Science and Technology, and Al-Elbeit University in the north; the University of Jordan, Hashemite University, Amman University College, Al-Dawa and Religion Principals College, and Al-Balqa University in the central region; and Mutah University and Al-Hussein University in the south. Al-Hussein is the newest university, established in 1999. Enrollments during the 1996-97 academic year ranged from 21,639 students at the University of Jordan to 654 at Al-Dawa College.

The 12 private universities are all in the northern and central regions where the population is dense. They are Amman Private University, Philadelphia University, Al-Isra University, Applied Sciences University, Jordanian Girls University (changed recently to Petra university), Al-Zeitunah University, Jerash Private University, Al Zarqa Private University, Irbid Private University, Edu-

cational Sciences College, Princess Sumayya University College, and Jordanian Academy for Music. Enrollments during the 1996-97 academic year ranged from 4,021 at Amman Private University to 49 at the Jordanian Academy for Music.

One of the recent changes in higher education is that Al-Balqa Applied University now supervises about 45 community colleges. There are four types of community colleges:

- Twenty governmental community colleges that are under the umbrella of Al-Balqa University in all aspects—academic, administrative, and financial.
- Eighteen private community colleges that are owned and run by the private sector under the technical supervision of Al-Balqa University.
- Five Jordanian Armed Forces Colleges that are run by the Jordanian Armed Forces and technically supervised by Al-Balqa University.
- Community colleges that are under the umbrella of the United Nations Relief and Work Agency for Palestinians Refugees (UNRWA) in all aspects—academic, administrative, and financial.

During the 1996-97 academic year, nearly 24,000 students were enrolled in community colleges of all types. In addition, during the 1995-96 academic year, 29,581 Jordanian students studied in higher education institutions abroad.

Admission for Undergraduate Studies: Students are admitted to all departments and faculties in public universities on the basis of their grades in the *Tawjihi* (The General Secondary School Certificate Examination or CSSC) or its equivalent. Admission is highly competitive, but students from the less privileged areas in the kingdom are accepted on the basis of a quota system, which allows the most competitive of them to be admitted relatively easily. A number of seats are allocated to the sons and daughters of those working in the armed forces, the Ministry of Education, and the national universities.

Application for enrollment in the university for the first semester is advertised during the first third of August every year. Names of students eligible for admission are published in local newspapers. Applications are sent by mail to the United Coordination Office for Admission to State Universities at the University of Jordan.

Applications for admission to university are accepted from students who have obtained the General Secondary Education Certificate (or its equivalent), provided that their average scored is not less than 85 for medicine and dentistry faculties, 80 for engineering and pharmacy faculties, or 65 for all the other faculties.

Applications for enrollment in the Department of Fine Arts specializations are advertised in local newspapers during the first half of August. These applications are to be made directly to the University Department of Admission and Registration. Names of students eligible for admission are published in local newspapers after they have passed the capacities test prescribed for that purpose.

Applications for enrollment made by Jordanian students who have obtained General Secondary Education Certificates outside of Jordan are to be directly made to the University Department of Admission and Registration within the period prescribed for submitting applications for enrollment to the United Coordination Office for Admission to Jordanian State Universities. Students shall be admitted in the light of the allocated seats and in accordance with the sequence of grades in the Jordanian General Certificate of Secondary Education or GCSC (or its equivalent).

Non-Jordanian students will be accepted through the Council of Higher Education.

The following documents are required from students to be considered for acceptance:

1. Original copy in Arabic of the Jordanian GSEC grade sheet certified by the Ministry of Education or, for students who have obtained a non-Jordanian GSEC, a photocopy certified by the Ministry.
2. Original birth certificate with the National Number inscribed thereon or a certified photocopy thereof.
3. A photocopy of the valid Family Card (for Jordanian students only).
4. Nationality confirmation certificate for non-Jordanian students.
5. Military Service book for male Jordanian Students.
6. Four personal photographs (4 centimeters x 6 centimeters).
7. Equivalence of the GSEC from the Jordanian Ministry of Education for students who have obtained a non-Jordanian GSEC.

The public universities follow the credit-hour system. Credit hours required for a bachelor's degree are as follows: Faculty of Arts, 126; Faculty of Business Administration, 126; Faculty of Science, 126; Faculty of Shari'a (Islamic Studies), 126; Faculty of Agriculture, 138; Faculty of Educational Sciences, 126; Faculty of Law, 126; Faculty of Physical Education, 126; and Faculty of Social and Human Sciences, 126.

The academic year consists of two main semesters. First semester classes start in the first week of October and end in January. Second semester classes start during the first half of February and end during the first half of

June. In the optional summer session, classes start during the first half of July and end during the last third of August. Regular attendance is compulsory for all students at public universities.

Admission into Graduate Studies: Enrollment opportunities in the Graduate Studies Program are advertised in local newspapers during the last third of June. Applications are directly submitted to the University Deanship of Academic Research and Graduate Studies. Names of students eligible for admission are published in the local newspapers. Applications for the Diploma in Education are also directly submitted to the Department of Admission and Registration as advertised in local newspapers during the last third of June. Names of candidates eligible for enrollment are published in local newspapers. Non-Jordanian students are accepted through the Jordanian Council of Higher Education.

The following documents are required as part of an application for graduate studies:

1. Grade sheet of the bachelor's degree or, for doctoral candidates, the master's degree, duly certified.
2. The original university transcript or a duly certified photocopy thereof.
3. Original birth certificate or a duly certified photocopy thereof with the National Number inscribed thereon.
4. Duly certified photocopy of the Family Book (the first page and the student's legal guardian's page) with the National Number inscribed thereon.
5. Military Service Book or Exemption Certificate for Jordanian students required to serve in the military.
6. One personal photograph (4 centimeters x 6 centimeters)
7. For students with academic degrees from non-Jordanian universities: grade sheets of the bachelor's degree or, for doctoral students, the master's degree, certified by the Jordanian Council of Higher Education.
8. For students with academic degrees awarded by non-Jordanian universities, equivalence of university degrees, awarded by the Jordanian Council of Higher Education.

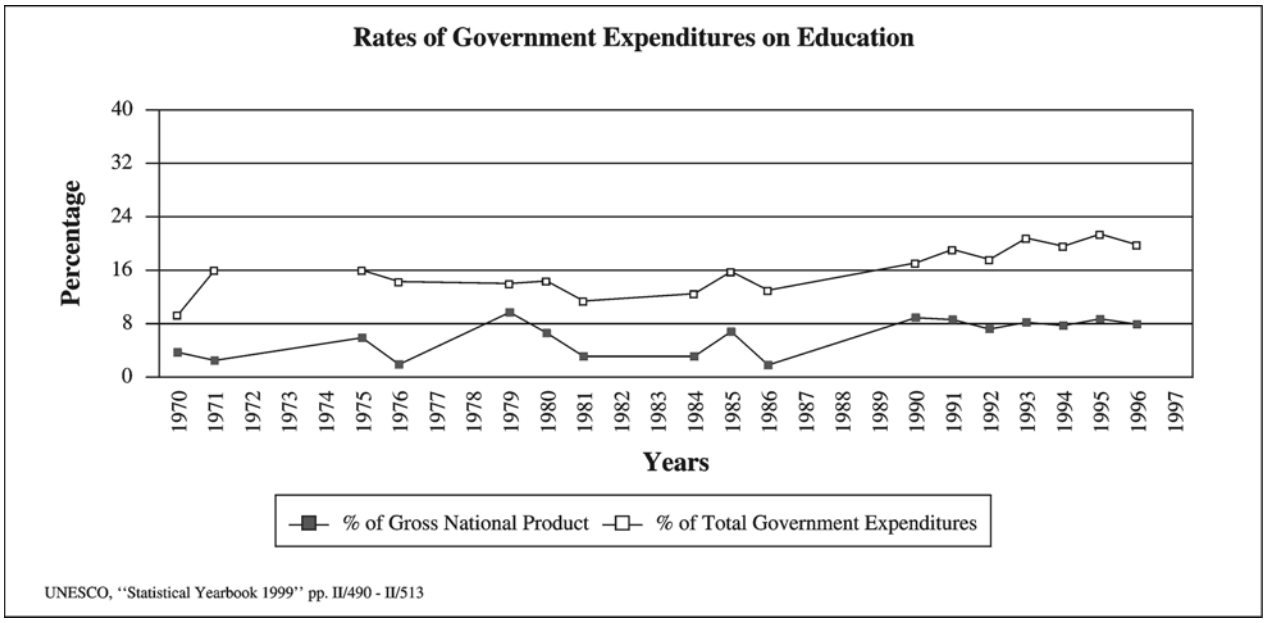
There are four sets of requirements a student must satisfy to complete a graduate degree: university, faculty, departmental, and free electives. In the Faculty of Arts, a total of 132 credit hours are needed. Credits are based on semester hours. Faculty requirements consist of 21 credit hours, some compulsory and some electives. Departmental requirements consist of compulsory courses and electives within the department. In a single specialization, students are required to take 60 credit hours of compulsory courses and 27 in departmental electives. For a major specialization, students are required to take 39 credits in compulsory subjects and 21 in electives within the department. To have a minor specialization, a student is normally expected to complete 27 credit hours in the field. An additional six hours may be taken in any department of the university. To be in good standing, graduate students must maintain a minimum cumulative average of 70 percent. If not, they are placed on academic probation. Students normally have to take final examinations for each course in which they are enrolled. Final grades are entered into the records as a percentage. The minimum passing grade for an individual course is 50 percent.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Administration: Jordan, like most Arab countries, has a centralized system of education. Thus, the MOE constitutes the final authority on all important matters, such as what is to be taught by whom and under what conditions. Accordingly, decisions on the distribution of resources, syllabi, textbooks, teacher appointments, and national examinations are made by the MOE or its affiliated agencies.

Administratively, there are four units that plan and implement the educational process. These units are:

- The Center: It is responsible for designing the educational policy and plans, as well as implementing and following up. The units in the Center include the secretary general, the general directors, specialized directors, and the office of the minister.
- The General Directorates of Education in the governorates: These directorates are headed by general-directors who supervise and implement the educational policy and plans at the governorate level. There are 12 general directorates.
- District Directorates of Education: There are 26 district directorates of education in the governorates, each with a director and assistants for technical and administrative affairs. Each district has a local education committee or, where such committees are not available, a municipal council, which assists the district office in carrying out such activities as building and expanding schools, appointing staff, allocating funds, and training. The district or regional directorates mainly carry out the policies of the MOE and the Central Education Committee attached to it.
- The school is considered the central unit of the educational process. It is administered by the principal and assisted by adequate staff to provide the necessary services.



Institutions other than the MOE participate in delivering educational services. These include the Ministry of Social Development and the Directorate of Education and Culture of the Armed Forces, which administer 19 schools. UNRWA is responsible for administering 198 schools for Palestinian refugees in which 143,893 students were enrolled in the academic year 1997-98.

Financing Education: Public education is financed mainly through the general budget of the government. For the 1997 fiscal year, education contributed 4.2 percent of the gross national product, and educational spending represented 12.5 percent of the total general budget of the government. This was up from 8.5 percent in 1990. Education in Jordan, however, is not financed by the government alone. UNRWA finances and administers basic education for Palestinian refugees.

Public universities are financed by government support from the general budget, customs and taxes imposed by the government, student fees, grants, and university benefit projects. Student fees in private universities are three to four times the fees of public universities.

Public universities evaluate their own performance through their boards of trustees, while private universities are evaluated for accreditation by specialized committees that pay repeated visits to the universities and report to the Ministry.

Private universities are owned by companies that are established under the Corporate Law and are either public shareholding companies or private shareholders. All these institutions are for profit entities.

While some financial support is available from the government for students attending university, the majority are supported by their families. Those students on government scholarships pursue a secondary school teaching career. Arabic, English, mathematics, and science are the prime areas of concentration for most of these students who are expected upon graduation to serve the country's schools.

Tuition and fees are the same in all of the public universities, while they vary in private universities. The main sources of financing for private universities are student fees; shareholders, either individuals or institutions interested in education; and donations from individuals or institutions in Jordan or abroad.

Educational Research: Educational research, still in its infancy in Jordan, is carried out by different agencies. Research is a function of the Research Section of the MOE's General Directorate of Educational Research and Studies. The tasks of this directorate are:

- Identifying the problems related to teaching-learning process.
- Selecting researchers to conduct studies, monitor their implementations, and prepare their budgets.
- Conducting research related to the improving the teaching-learning process.

The research budget at the MOE for the 1998 academic year was estimated at 26,000 Jordanian dinars and distributed as follows: research conducting; stationery and publications; and rewards of researchers, coordinators, and evaluators of educational research.

Other organizations concerned with educational research in Jordan are the National Center for Human Re-

source Development, the universities, and the Educational Research and Development Center of UNRWA.

The research fund in the budgets of universities is either very small (about 1 percent), too small to be useful, and in many cases not used at all. Limited project funding is available from such local sources as the cooperative research programs administered by the Higher Council of Science and Technology.

NONFORMAL EDUCATION

Various nonformal educational programs are offered by the education system in Jordan, such as literacy programs, evening classes, and home study, which provide education for adults to continue self-learning and to sit for school and general examinations. In addition, short, nonformal vocational training courses and programs in cultural centers are offered for adults.

Special attention is paid to literacy and adult education programs, in particular. A plan for this purpose was set down aiming at reducing the rate of illiteracy from 11 percent in 1997 to 8 percent by the year 2000; reinforcing literacy programs by introducing agricultural, health, and cultural skills to meet the needs of the labor market; improving compulsory education conditions to reduce failure and dropouts in the basic cycle; developing the quality of nonformal education programs; diversifying teaching methods and content; and developing trainers' and supervisors' capabilities in illiteracy eradication and adult education programs.

During the 1997-98 school year, 635 literacy centers were established in various areas of the kingdom, 53 for males and 582 for females, with a total of 11,226 learners. The evening centers enrolled 3,447 students; the home studies program, 567; and the summer centers, 5,010.

Cultural centers provide nonformal education and training through vocational and academic courses at the end of which the student obtains a certificate certified by the MOE. By 1997-98, there were 349 distributed in various directorates. The programs are diversified, and the course durations range from one month to one year. These programs provided 43 specialized training courses with about 27,720 students in 1996-97.

The national program of adult vocational education programs was initiated through the support of the United Nations and the International Labor Organization. Under the plan, known as the National Vocational Training Scheme, the trade training centers provide apprenticeship programs for youth and unemployed adults and skill upgrading for those already employed.

To upgrade the skills of employed workers, so-called ''labor upgrading centers'' have been created. These centers, which give courses in the evening, utilizing the facilities of the secondary industrial schools, normally offer specializations available in the school that houses them. On the average, 150 hours of practice training and relevant technical theory are required over a 6 month period. The employer is responsible for paying the nominal course fee, which is about 70 Jordanian dinars. Most of these programs are under the Vocational and Technical Committee (VTC) and available in Amman, Irbid, and Zarqa. The Telecommunications Corporation has also established centers to train workers in this field of employment.

In 2000, the Economic Consultative Council of Vocational and Technical Committee finished the draft law for a vocational and technical training council. The goal is to formulate comprehensive policies to secure the best development of manpower. The drafted law would also unite the efforts of the many sectors that are concerned with vocational and technical training, such as the Ministry of Education, Al-Balqa University, the Armed Forces, and the private sector.

There is also a General Management Institute in Amman that began operation in 1968, seeking to upgrade the administrative personnel in both governmental agencies and private firms. The training, normally given over a period of 2 to 12 weeks, focuses on such fields as high and middle level management, supervision, personnel and office management, secretarial work, and accountancy. In 1975, some 375 individuals were enrolled in the Institute. The government has also supported the establishment of Workers Education Institutes concentrating on the role of trade unions in society. Trade union leaders are urged to attend these institutes and enroll in such courses as economic development, labor wages policy, and production.

TEACHING PROFESSION

Generally, primary and intermediate school teachers are trained in the community colleges and secondary school teachers in universities.

With the dramatic increase in enrollment, there has been an increased demand for teachers. In 1953 there were fewer than 5,000 teachers, while at the beginning of the 1980s there were almost 30,000. After the Gulf War in 1990, many of the Jordanians who had been working in Kuwait and other Gulf countries, such as Saudi Arabia, Qatar, and Bahrain, were dismissed from their jobs and returned to Jordan. In a couple of years the need for teachers was dramatically increased, and it is estimated that the number of teachers in 1992-93 was approximately 55,000.

In order to improve the teaching profession through upgrading teachers' qualifications, Act 3 of 1994 stipu-

lated that every teacher, in any stage from kindergarten to the secondary cycle, must have a university degree. Their supervisors must hold a postgraduate degree.

In 1997, a total of 69.50 percent of teachers had a community college degree, 26 percent had a bachelor's degree, and 3.6 percent had more than a bachelor's degree. The MOE encourages teachers who already have their bachelor's degree to enroll in graduate studies. In 1997, the MOE funded 759 teachers to get their bachelor's degree, 423 to get their diploma, and 75 to get their master's degree. The General Directorate of Training in the MOE is responsible for planning these programs in cooperation with educational experts and international and regional organizations.

Teachers are selected for the job through competitive selection and on the basis of need, specialization, year of graduation, GPA, living place, and experience. Although there are general criteria for employment, a quota is given to some categories, such as orphans of fathers who served in the Jordanian army, poor families, and handicapped teachers who hold an academic qualification. Generally speaking, promotion takes place after passing five years in a grade, class, or category. It is possible to be promoted earlier with a higher academic degree or a distinctive performance.

Teachers' workload (average number of weekly periods allocated to classroom teaching) depends upon where in the educational cycle they teach. Generally, for example, teachers at vocational schools teach more periods than teachers at secondary schools.

Salaries are determined according to Civil Service Regulation No. 1 of 1988 and the Unified Allowance Regulation No. 23 of 1988. Salaries are classified according to academic qualifications, category, grade, and nature of work.

SUMMARY

Jordan is a country rich in human capital but poor in natural resources. The government therefore decided to begin a broad-based reform program. The first step was to establish the institutional and physical infrastructure needed to support Jordan's educational goals.

To move reform forward, the government took several steps: a new education law was prepared in 1994; the school system was restructured, abolishing middle schools and reducing the secondary school cycle from three to two years; the curriculum was modernized; and higher minimum qualifications were established for teachers.

More attention should be given to education at the preprimary level. The gross enrollment at this level is 26 percent. Because 99 percent of preprimary schools are run by private organizations and charge fees, not all parents can afford to send their kids to preschool. Thus, not all kids will be ready to learn when they start their first grade in public education. The government should initiate some preprimary schools, especially in rural areas.

At the basic education level (grades 1-10), the government has achieved nearly universal access: gross enrollment is 95 percent. Jordan was active in adopting the framework of the Education for All Conference held in Thailand in 1990 and again in Amman in 1996. This indicates the awareness of the government to educate all.

Secondary education in Jordan consists of two types—comprehensive (academic and vocational) and applied general education. The comprehensive secondary school provides two options—the academic and the vocational. Vocational education is offered in six types of schools—commercial, industrial, agricultural, nursing, hotel services, and home economics.

The higher education system in Jordan is comprised of two-year community colleges and four- to five-year university education. The offerings dramatically expanded in the 1990s when the government allowed private firms to invest in education by building their own universities. Twelve private universities were established, and three others were under construction in 2001.

The first public university was established in 1962. Three other universities were established by the end of 1989, followed by four more in the 1990s. The major reason for expanding higher education in 1990s was to cater to the hundreds of thousands of people who returned to the country after the Gulf War. The government was faced with the great demand to expand public universities, and several business leaders felt the need to invest in private universities.

In February 2000, the Jordanian government got a $34.7 million loan from the World Bank for a higher education development project. Its objective is to initiate improvements in the quality, relevance, and efficiency of Jordan's higher education. This is a very important change that needs to take place soon. Even though all public universities are governed by the same authority—the Council of Higher Education—these universities do not coordinate effectively in terms of the specializations to be taught. All of them offer similar fields and have the same colleges. The problem is that each university serves a certain region of the country, and they are not seen as a single unit serving the whole country.

While there is a high unemployment rate in the country, there is a need for skilled labor, but the universities do not focus on this type of training. The exception to this is the Jordan University of Science and Technology,

which decided to open new fields of study that are not taught in other universities.

The two major changes planned for the academic year 2001-02 will be to begin computer training in the third grade and to teach English in first grade. The Jordanian government is aware of the importance of English as the language needed to compete globally and the importance of computer technology as an essential prerequisite for success in the information age.

In 2000, the Ministry of Education signed a $33 million contract to purchase approximately 20,000 computers. Twenty-two computers and a server to connect the school with a local network will be installed in 900 of the kingdom's public schools. The Ministry's ambitious program to introduce computers and computer-based learning in all government schools will be implemented over three years.

Incorporating the English teaching policy will be a challenge. The government will need to hire new teachers in the face of a budget deficit and hiring freeze in the public sector.

Teaching computer technology might be an even more unrealistic decision. The Ministry of Education unfortunately does not have trained people to teach computers. The other problem is financing such a project. This requires hiring new teachers and buying new computers, neither of which is possible unless the government gets loans from international lenders.

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—Osama M. Obeidat

K

KAZAKHSTAN

BASIC DATA

Official Country Name:	Republic of Kazakhstan
Region:	East & South Asia
Population:	16,733,227
Language(s):	Kazakh, Qazaq, Russian
Literacy Rate:	98%
Academic Year:	September-May
Compulsory Schooling:	11 years
Public Expenditure on Education:	4.4%
Foreign Students in National Universities:	2,928
Libraries:	15,055
Educational Enrollment:	Primary: 1,342,035 Secondary: 1,921,302 Higher: 482,690
Educational Enrollment Rate:	Primary: 98% Secondary: 87% Higher: 33%
Female Enrollment Rate:	Primary: 98% Secondary: 91% Higher: 38%

HISTORY & BACKGROUND

The dissolution of the Soviet Union in 1991 led to the creation of the Republic of Kazakhstan, one of the world's largest countries (2.7 million square kilometers), located in the heart of the Eurasian continent. Administratively, the country is divided into 14 *oblasti* (states), with 160 *raiony* (districts), and the major cities of Astana, Almaty, Ekibastuz, Karagandy, Kustanai, Pavlodar, Semipalatinsk, Shymkent, and Ust'-Kamenogorsk. In 1997, the capital of the country was moved from Almaty to Astana.

Kazakhstan is a multi-ethnic state. Various periods of Kazakhstani history reflected noteworthy shifts in the demographic situation. In the course of peasants' migration in the pre-1917 period, more than 1 million people came to Kazakhstan from Russia, the Ukraine, and Byelorussia. After the 1917 Revolution, about 1 million people were subjected to migration to Kazakhstan for the purposes of constructing industrial facilities; even greater numbers were victims of Stalin's policy of farm collectivization. They came mostly from the European part of the Union of the Soviet Socialist Republics (USSR). During World War II, 150,000 people were evacuated from the territories occupied by Nazi Germany to work at the military facilities. Kazakhstan became a place of exile for several ethnic groups who were suspected of being potential collaborators with Hitler. These groups included nearly 800,000 Germans, 78,500 Koreans, 102,000 Poles, and 507,000 people from the North Caucasus. In the 1950s, the reclamation of virgin soils in Kazakhstan brought yet another 1,500,000 people from various USSR republics.

According to the 1999 estimate of the Agency of the Republic of Kazakhstan on Statistics, almost 15 million people representing 120 ethnic groups lived in the country. Among them were nearly 8 million Kazakhs, more than 4 million Slavic and non-Slavic Russians, 547,000 Ukrainians, 353,000 Germans, and 249,000 Tatars, and 1 million people belonging to other ethnic minorities. The population of the country has a high percentage of people with bi-ethnic and multi-ethnic backgrounds. Since the last census taken in 1989, there was over a 1 million de-

crease in population due to emigration because of the country becoming a separate nation-state, economic hardships, and growing nationalism. Most of the emigrants were from Russian and German communities. Another factor relates to the birth reduction. For example, the 1995 child birth rate was approximately 17 children per 1,000 of the population. In 1999, the rate fell to 14.

Most of the population lives in urban areas that have better economies in comparison with the rural areas. This has a great impact on the educational system and educational opportunities of people. The urban areas, mostly located in the northern part of the country, have highly developed industries, and a high number of educational institutions. They are heavily populated with ethnic Russian or Russian-speaking people, while the countryside has a larger proportion of ethnic Kazakhs and other Central Asian minorities.

Major religions are Islam, which makes up a little more than half of the population, and Russian Orthodox Christianity, which comprises just a little less than half of the population. Kazakhs were converted to Islam only in the early nineteenth century. A predominantly atheistic republic by the end of the twentieth century, Kazakhstan experienced a genuine religious renaissance after the days of its independence.

Kazakhstan possesses rich oil and natural gas reserves (mainly in the Tenghiz region in Western Kazakhstan) and substantial amounts of iron ore, chrome, coal, copper, titanium, and other mineral resources. These are viewed by the leadership of the country as a significant factor in helping the country to emerge from its difficult berthing. Major farm products include wheat, barley, meat, and wool.

Since most ethnic Kazakh nomads moved with their cattle from one place to another, there were few attempts made to develop formal schooling. A rudimentary education was provided in the *mektebah* schools (four-year elementary schools) for a small number of young boys who studied the Koran. This studying was done in Arabic under the guidance of *mullas* (priests), most of whom were foreign. A small number of advanced three to four year *medrece* schools were held at mosques and trained religious ministers and teachers of *mektebah* schools. Overall, the level of illiteracy among the people was high. According to the 1897 census, a very small part of the population was literate, and most of them lived in the northern parts of Kazakhstan where the mixture of Kazakhs and Russians was the highest. Only one child out of ten attended a school.

The first formal schools providing general education for the indigenous population were sponsored by the Russian mercenaries and settlers. They migrated to this region in search of new lands in the eighteenth and nineteenth centuries. The first secular vocational schools were also opened to prepare clerks, translators, teachers, and medical workers for the Russian Protectorate administration. The Russian-Kazakh and Russian-Kyrgyz municipal schools, financed by the government, laid the foundation for the creation of the system of public education. To promote the education of girls, the government opened several Russian-Kazakh women's schools and community colleges. By 1896, the number of girls in these schools reached only 211; however, it was a break from a centuries-old Islamic tradition of keeping Kazakhi girls away from getting an academic education. To pursue higher education, most ethnic Kazakhs usually went to Moscow, Saint-Petersburg, or other Russian cities, since Kazakhstan did not have any colleges or universities.

Although not a separate, national state in the past, Kazakhstan began the construction of its national identity after the 1917 Bolshevik Revolution. The Communist ideological foundations that shaped the USSR were a significant factor in molding the educational, political, social, and economic scene of the republic and the culture of its people.

Kazakhstan inherited many educational legacies from the former Soviet Union. One such legacy was a system of universal compulsory general school education. The Communist ideology of the Soviet Union was driven by the social reconstructionist theory that placed a great importance on education as a means of economic, political, and social transformation. The government set the eradication of illiteracy among both adults and children as its prime goal. In the 1920s, supported by the Soviet government, the Communist Party leadership, filled with the revolutionary enthusiasm of the young people, launched the campaign ''Down with illiteracy!'' Though the material and the human resources were scarce, by the end of the 1930s Kazakhstan managed to teach most of the population, about 84 percent, the basic literacy skills in reading, writing, and arithmetic at the elementary school level. Education became an important value and an issue for personal and social development for the Kazakhstani people.

Another legacy was the development of a system of higher education and scientific research institutions. Having not a single establishment of higher education in the pre-1917 years, the words ''university'' and ''institute'' did not even exist in local languages, Kazakhstan entered its new stage of development in 1991 with the Academy of Sciences. This included several dozen institutions conducting research in a wide range of disciplines such as astronomy, agriculture, biology, ethnography, linguistics, among other areas.

The ideological and moral fabric of education in the Soviet Kazakhstan was yet another inherited legacy. It was deeply rooted in the ideas of collectivism, which is the supremacy of the social good and social prosperity over individualism and personal good. The ideology of the Socialist state broke away from the capitalist values of the pre-1917 Tsarist Russia, and emphasized sameness and uniformity, which suppressed individuality. For more than 70 years the educational system of Kazakhstan, like education in any other Union republic, tried to instill in students the ideas of the collective serving the good of the country and the good of other people, rather than competing with others for wealth and benefits through personal efforts, talents, and ambitions. In a state where everybody was supposed to be like others, school curriculum did not promote pluralism and diversity, and there was no choice for educational institutions.

In its attempts to educate a new, Socialist type of a person, one who was free from exploitation, greed, religion, and ethnic nationalism, the Communist ideology gave priority to educating individuals who rose above, or abandoned, their ethnic values and traditions. Even some ethnic Kazakh Communist leaders sacrificed their ethnic identities, considering them inferior to the identity of a modern socialist person. Neither Kazakh, nor Russian cultures of pre-1917, were represented in their full glory within their national curricula. At the beginning of the twenty-first century, Kazakhstani society was still in search of answers as to which historic traditions and values needed to be restored, which Communist ideas to abandon, and which new world values to adopt.

Another inherited legacy was that of a strong emphasis on free high school education for all. For 75 years, the state-owned and government-planned economy excluded any private initiative in education. It accustomed parents and their children to the ideas of free textbooks, to a monthly allowance given to the university students with good grades, to the reduced cost of public transportation to all students, to free access to university facilities, and to many other benefits and privileges. The idea of free education, so deeply embedded in the mentality of Kazakhstani people, was challenged by the new capitalistic developments such as the introduction of private education.

A final legacy was that of a tough military and economic competition with the world's capitalist countries in the twentieth century. The Soviet system of education placed a great emphasis on preparing engineers, scientists, and researchers. As a result, the school curriculum included many subjects related to mathematics and science, and neglected the role of social studies and humanities. Teaching stressed indoctrination and rote memorization of the content materials, rather than the development of critical thinking abilities.

In 1991, Kazakhstan obtained sovereignty. The process of the dissolution of the Soviet Union was abrupt. It happened at an unexpectedly high speed for many people throughout the USSR, especially in multiethnic republics, like Kazakhstan. For the people of Kazakhstan, independence did not come as a result of long struggle. On the contrary, the President of Kazakhstan, Nursultan Nazarbaev, was one of the few leaders of the former Soviet republics who fought for the preservation of some type of a union for the territories of the USSR. However, it did not happen, and Kazakhstan was left completely unprepared for the new role of a nation-state. Kazakhstan faced many adjustments, such as the transitional period from a ''command and planned'' economy to free-market one; from Communism to Democracy; from the dependence on the decisions made by the central Union government; and the Politburo of the Communist Party of the Soviet Union to independent decision making as a sovereign state. The destruction of the well-established economic ties between all republics of the USSR brought the country many economic, social, educational, political, and ethnic conflicts and challenges. The legal and governmental authorities of the Republic of Kazakhstan faced a problem of establishing a national system of education and a governance that would facilitate the process of nation and state building. The efforts of the Kazakh society have been directed toward reassessing the legacy of the socialist education system and introducing market economy, promoting democracy, developing new types of cooperation with the former Soviet republics within the Commonwealth of Independent States, and searching for new cultural identities. The search for national identity increased the number of educational institutions at which all subjects were taught in Kazakh and other languages.

CONSTITUTIONAL & LEGAL FOUNDATIONS

In 1995, the Parliament of Kazakhstan adopted a constitution that was approved during the nationally held referendum. It spelled out the following political, and ideological principles of education: democracy, equal rights, construction of the national identity, and rediscovery of ethnic and religious identities. The constitution guarantees citizens the right to determine their language identity. As Article 19 stipulated, ''everyone shall have the right to use his native language and culture, to freely choose the language of communication, education, instruction and creative activities.''

The country remains dedicated to providing its citizens free public education compulsory through the eleventh grade. The constitution states, ''The citizens shall be guaranteed free secondary education in state educational establishments. Secondary education shall be obligatory'' (Article 30).

The constitution preserves the traditional competitive nature of higher education it inherited from the Soviet Union under which applicants to state-owned universities are required to take entry exams. In such a system, only a small part, less than the top 25 percent of those who apply, can be admitted.

For the first time in the history of the country, the constitution guaranteed that ''the citizens shall have the right to pay for and receive an education in private educational establishments on the basis and terms established by law'' (Article 30). The existing laws allow individuals and organizations to sponsor private educational institutions, a practice abolished in 1917.

As the control of the educational system by the Communist Party loosened during the last years of the Soviet Union, the local bodies and educational institutions lowered the requirements in education. To prevent a decrease in the quality of education, the constitution stipulated ''the state shall set uniform compulsory standards in education. The activity of any educational establishment must comply with these standards.'' This provision also created background for a high degree of centralized state planning and administering of the educational system in the country.

The constitution created the necessary legal foundations for the use of various languages in state institutions. According to Article 7, the Kazakh language became the state language of the Republic of Kazakhstan. Since the Russian and Russian-speaking population are high in the country, Russian acquired the status of an official language. As the constitution maintains, ''in state institutions and local self-administrative bodies the Russian language shall be officially used on equal grounds along with the Kazakh language.'' It becomes a law that ''the state shall promote conditions for the study and development of the languages of the people of Kazakhstan.''

The reform of education in the Soviet Kazakhstan began in mid-1984 with the adoption by the USSR Supreme Soviet ''The Basic Trends of the Reform of Secondary General and Vocational School.'' The law, passed during M. Gorbachev's politics of restructuring and openness, paved the way for innovative educators and new progressive movements in education. This law gave rise to new ideas in instructional methods, organization, teacher-student relations, democratization, and humanization of educational curriculum. These ideas received a new impulse in 1992 when laws ''On Education'' and ''On Higher Education'' were passed by the Kazakh Parliament. They served as guidelines for conducting state policy in this area based on new national and cultural identities, and limited administrative interference. Overall, they extended greater autonomy to educational institutions. A national program of state-granted support of educational establishments was developed. The government approved several documents outlining several conceptual frameworks for education, such as the Conception of State Policy in the Field of Education, and the Conception of Arts Education, among others.

Many concepts and ideas were determined as priorities in the field of education for the country during the twenty-first century. Some of them include: transition to alternative education, humanization of education; introduction of a student-centered curriculum instead of society-centered one; democratization of education; compiling Kazakhstani textbooks in all the subjects of general-education school; integration of the educational system in the world educational processes; and the computerization of Kazakhstani schools.

EDUCATIONAL SYSTEM—OVERVIEW

The Republic of Kazakhstan enjoys a 97 percent literacy rate, which is higher than in developing countries such as India, Peru, and Morocco. The system of education in the country consists of: preschool education, general secondary education, out-of-school training and education, family education, secondary vocational training, secondary technical education, higher education, post-higher education, and the development of professional competence and in-service training.

The mandatory general education for young people, ages 7 through 16, is provided by various institutions. Before independence, the biggest number of students attended 8,027 primary and secondary schools. In 2000, the number of schools and students slightly decreased due to the overall decrease in population. The primary school includes grades 1 through 4; the secondary stage consists of grades 5 through 9 and high school includes grades 10 and 11. It is a common practice that all three stages function under one administration and are located in the same building. Primary schools exist mainly in very remote rural areas with a low density of population.

At the end of the 1980s, an alternative type of general education institution received a revival—*gymnasiums* and *lyceums.* A small number of them functioned in the area even before 1917. The *gymnasiums* had a very rigorous classic curriculum that prepared students for higher education, while the *lyceums* emphasized math and science. However, after 1917, the Soviet government abolished both institutions and installed a unified system of school education that tried to blend both trends. The experiment lasted for several decades and proved that the unified secondary education did not meet the needs and interests of diverse student population, and for that reason it came under public criticism in the 1980s. In 2000, the system embraced 31 *gymnasiums* and 96 *lyceums.*

The network of general secondary education establishments also incorporates 244 secondary specialized

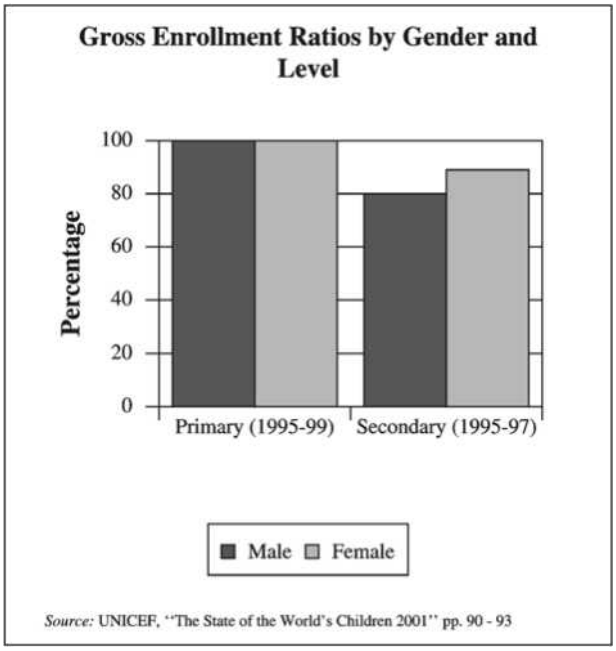
schools which, in addition to the general education curriculum, offer the in-depth study of some subjects, foreign language being the most common one. In addition, there are 40 common type children's homes with a contingent of 5,006 children; 43 family type children's homes with 126 children; 22 boarding schools for orphaned children and children deprived of parental care; 48 seasonal boarding schools of common type attended by 15,647 children of migrant workers; 249 all-year round boarding schools with 8,250 children; 32 boarding schools for 4,853 mentally and physically handicapped children; and 1 boarding school for 93 children with severe behavioral problems. Along with the day-time general education schools, there are 62 night schools, 31 full-tuition by-correspondence schools, and 21 training centers for adults who received no certificate from a secondary high school.

Equal educational opportunities for boys and girls was a major goal of the Soviet Union, and remains as such in independent Kazakhstan. Historically, before 1917, education of girls was organized within families to teach girls to accept the traditional women's roles as wives, mothers, and cooks. In 1920 and 1921, only 1,900 ethnic Kazakh girls attended schools. In the years 1966 to 1976, this number rose to 424,759 and, in 1999, the number rose to more than 1 million. All schools are coeducational.

School education is offered in 21 languages. Out of the total number, 3,291 schools use Kazakh, 2,406 use Russian, 2,138 are bilingual and use both Russian and Kazakh; 77 Uzbek; 13 Uighur, 16 Tajik, Ukrainian, and German; 86 schools use other languages. As for higher education, 77,000 students are taught in Kazakh and 177,000 in Russian. Since science and engineering were started in Kazakhstan by Russian scholars. Russian language is used more in the politechnical, technological, and scientific schools of higher learning. In some majors, teaching is conducted in Uzbek, English, or German languages.

The school year starts on the first of September and lasts for 210 days, excluding weekends, holidays, and breaks. The grading system is based on a scale from one to five, with five being the highest. The lessons last for 45 minutes with a 10-minute break between them and one 20-minute snack break. There are usually four to five lessons a day in the primary schools, and five to six lessons in the high schools. Homework requiring several hours of study is common. Since admission to universities is highly competitive, many parents hire tutors for their high school children, thus turning the other half of the day, and often weekends, into a second school.

The government pursues the policy of giving assistance to parents through the Parents' Universities and the Knowledge Universities. These provide consultations, lectures, and films on educational issues.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

The educational policies, facilities, and efforts created a substantial educated human capital in the twentieth century that has helped make Kazakhstan more industrialized than other former Soviet republics in Central Asia. However, educational institutions are mainly concentrated in big cities and towns, creating a cultural gap between rural and urban population.

Private Education: During the Soviet years, Kazakhstan had no private educational institutions; they all belonged to, and were run by, the government. The constitution provided guarantees to individuals, public organizations, and churches to open private educational institutions. The growth of non-state educational institutions in the 1990s was substantial. The number of non-state general education secondary schools went from zero in 1991 to 199 in 1999. The enrollment of students increased from zero in 1991 to 16,400 in 1999.

While the number of schools increased in the second half of the 1990s, the enrollment of students decreased. The private initiative was on the rise and many new entrepreneurs wanted to open schools; however, the quality of teaching in state-owned schools remained better. The public and the parents who experienced enthusiasm about private education at the beginning of the 1990s became disappointed about the low quality of instruction. The entrepreneurs were more interested in the number of students and less in the quality of teaching. The parents started withdrawing their children from private schools

and sent them back to public schools. The picture was different in non-state vocational secondary schools. In 1991, there were no non-state vocational secondary schools, as compared to 99 in 1999. The enrollment of students increased from zero in 1991 to 33,000 in 1999.

As the desire of many young people to get to work earlier to make money as capitalist incentives became stronger, attendance in vocational schools became significantly higher. This is also because of the desire of some parents for their children to be financially independent in the wake of growing poverty.

The growth of non-state institutions of higher learning was on a constant rise in the country from zero in 1991 to 106 in 1999. Kazakhstan's Association of Educational Institutions was established in 1996 in order to develop nongovernmental sector of education, to improve the quality and range of services, and to democratize and ensure wholesome competition. In 2000, the Association included 71 private universities and 45 colleges. It actively participated in developing the legal base for the institutions of different levels. This was extremely important because the development of the private educational sector was accompanied by a number of serious violations. There exists a corrupt policy of double standards in licensing and certification that undermines the principle of fair competition. It leads to unreasonable suspension and withdrawal of licenses from some educational institutions and granting them to those who do not meet the requirements.

PREPRIMARY & PRIMARY EDUCATION

There were two preprimary educational types of schools in Kazakh SSR, one of which was nurseries for children from one-and-a-half years of age through three years of age, with a primary goal of providing child care for working parents. The other was kindergartens for children four to six years of age, with two purposes: to provide child care and help children develop intellectually, physically, emotionally, and socially for attending a primary school. Preschool institutions were heavily subsidized by the government, or by big enterprises that built kindergartens and nursery homes for their employees. They paid up to 90 percent of all expenses for children. In cases when families had several children (in the 1950s, the Kazakhs had the highest birth-rate of all 15 Soviet republics with 7.4 children per family), the government paid 100 percent of all expenses and gave additional assistance to the family in terms of clothes, money, and summer camps, among other things. In a classless society, children were the only ''privileged class,'' as the Soviet metaphor described the attention to the children's needs and concerns in the country.

In 1966, some 4,143 preschool institutions for 360,167 children operated in the republic. In the 1970s, the number increased to 551,800. Preprimary education in the Soviet Kazakhstan was sometimes criticized for not being able to accommodate all children of working mothers. In some regions, the kindergarten admitted up to 80 percent of preschool children. In others, especially rural areas, less than 50 percent were admitted. One example of the lack of facilities for many children was the Karaganda coal mining company. This company, one of the biggest in the USSR, constructed 85 nurseries and kindergartens for 10,000 children of its employees.

As Kazakhstan embarked on capitalist economy, the state subsidies to the preschool institution dramatically dropped, leaving them to survive on their own. The privatized companies, factories, and plants sharply cut the state's spending on preschooling. As a result, many of these institutions were closed and children had to stay at home with elderly, or with other members of the family.

The private preschool institutions that arose after 1991 are not numerous due to their high cost, and the fact they can be afforded by only wealthy people. As of the beginning of the 1997-1998 school year, the Republic numbered some 1,905 establishments of preschool education attended by 184,500 children.

Primary schools consist of grades one through four. As independent units within the system of education, they function only in remote villages with scarce populations. There were 1,766 primary schools out of total 8,400 schools. Children in rural areas are provided transportation to attend school in a nearby town or city. Since most of the population of the Kazakh Soviet Republic in the first half of the twentieth century was involved in animal husbandry, boarding schools were created across the republic. However, as the industry developed rapidly during and after the World War II, and more people moved to the urban areas, the number of the boarding schools drastically decreased. The overwhelming majority of students receive primary education at the secondary general education school. This educational institution provides mandatory education for children ages 7 to 16, which involves grades 1 through 9. It unites a primary school, a middle school, and a high school. In the 1996-1997 school year, the enrollment at primary education level was 98 percent of the relevant age group.

The primary schools provide students with rigorous instruction in Kazakh and Russian languages, literature, mathematics, the study of nature, arts, music, and physical health. Some schools offer the study of a foreign language in the second grade. Most of the subjects are taught by one teacher who stays with the students through four years of study; this allows for close bonds to be developed with students and parents. Staying in the same building with middle and high school students gives small children an opportunity to learn about expectations

at the next levels of their learning. Since most parents work, primary schools, at an additional cost to parents, organize ''extended day'' groups, turning the other half of the day into an extension of regular lessons during which children do their home work.

The 1990s brought a huge wave of curriculum reform. An intensive process of updating the textbooks and instructional materials for primary classes was launched in accordance with the State Program ''New Generation of Textbooks.'' In 1997, new and updated textbooks for 19 subjects for the first grade of all types of schools were published by the Ministry of Education. By 2000, the Ministry planned to publish textbooks for 24 subjects for the second grade, and for 26 subjects for the third grade, projecting to continue work on accruement of textbooks for the fourth and other grades in the next decade. Annually, about $1.5 billion *tenge* (Kazakhstani currency) are allotted to the publication of textbooks of a new generation.

SECONDARY EDUCATION

At the middle level, grades five through nine, each subject is taught by a separate teacher. The curriculum includes the Kazakhi language and literature, Russian language and literature, mathematics, geometry, geography, physics, chemistry, physical health, arts, music, and a foreign language. Each grade section has a senior teacher, or a class guide, who is appointed by the principal to maintain contact with parents, help students organize various social activities, and be a liaison with the school administration. In some small, rural areas, incomplete secondary schools (grades one through nine) operate as a separate entity.

At the end of the ninth grade, school children take exit exams developed by the national Ministry of Education and Science. Those who pass may continue their education in high school to obtain a certificate of secondary general education that gives them the right to apply to an institution of higher learning. Teachers and school administrators advise those students who are not academically bound, and might not meet the requirements of the high school, to apply to one or two-year *professional'no-tekhnicheskoe uchilishche* (vocational or professional schools) that enable the graduates enter the labor market at a low level of qualification. However, it is the parents who make the final decision. Students may apply to more academically rigorous *tekhnikum* (three-year technical schools), pedagogical, or medical schools that grant graduates a general secondary education, a vocational certificate, and the right to apply to universities for advanced programs of study. The students who continue their education in high school take exit exams at the end of the eleventh grade. There were eight exams, but the number was reduced by two in the 1990s. The tests are graded by local teachers, and not by the experts who composed them in the republican test center. Some institutions of higher learning started accepting exit school grades as the entry exams, relieving the school graduates from the stress of two exam sessions a summer. Usually, these are the graduates of some academically rigorous private schools or specialized schools run by the boards of education or by the universities.

As the new educational standards have been developed in Kazakhstan, secondary education in Kazakhstan has been diversified according to the Basic Education Plan that offers the students 28 variants of education. The most major, Variant Number 1, has a general education curriculum. Other variants are designed to provide an in-depth study of specific subjects and resemble magnet schools that exist in some countries. For example, Variant Number 5 offers the intensive study of foreign languages and literature. Variant Number 6 provides profound study of native languages (Turkish, Uighur, Korean, and others.) Variant Number 7 offers an in-depth study of mathematics. Variant Number 23 aims at an in-depth theoretical and practical training in national and economic industries. Variant Number 24 is designed for general education rural school. Variant Number 26 represents an aesthetic profile with such subjects as arts, music, and dance.

The major efforts in secondary school reform aim at diversifying the ideological and theoretical foundations of curriculum development. They also aim to make the process of choosing a curriculum more flexible and democratic by re-introducing traditional ethnic values and multicultural education.

As Kazakhstan becomes more open to the world community, the educational system experiences the imperative of society to increase its dedication to promoting the study of foreign languages. During the Soviet time, all students were required to study a foreign language, usually English, for seven years. This requirement was made because Cold War contacts with other countries were limited, and few students were interested in learning languages. As the country develops cooperation with the rest of the world, the study of two foreign languages, especially English, Arabic, Turkish, or Persian, becomes more common.

A great deal of attention is given by the government to Information Processing, the content of which is oriented toward developing computer skills and programming. To accomplish the goal of computerization, as it is outlined in the reform documents, 40,000 copies of a new textbook in both Kazakhstan and Russian languages have been made available for schools. A Kazakh-Russian-English Dictionary of Informatics terminology

has been issued, and regional centers of new technologies in education have been created. In 1997, the President of the country approved the State Program of the Informatization of the System of the Secondary Education for the years 1997-2002 that commits 154 million U.S. dollars to schools. The financial support of the Program also comes from the Asian Bank of Development loan. In 1998, the Program was supposed to computerize 1,000 schools, including 60 percent in rural areas, a goal too bold under the given constraints of the budget.

There is no social promotion in the educational system. Those who fail one subject are allowed to take summer course work, either independently, or through tutoring. If they pass the test on the eve of the new academic year, they are promoted to the next grade. However, the repetition rate is very low (around 1 percent), and this is described by some critics as a result of grade inflation and bribery.

As the country develops its identity, nationalism is on the rise. The political elite continues to establish more schools for the Kazakh ethnic group. The ethnic Kazakh group is disproportionately represented in the leadership of the Ministry of Education and other administrative bodies, though the urban schools are more cosmopolitan. To overcome inter-ethnic tension, the government launched a project of opening schools in which diverse ethnic cultures are represented. The first, called *Vozrojdenie* (Revival) School was created in the city of Pavlodar. More than 500 school children of different nationalities come here six days a week. They study the native languages, culture, and traditions of people who live in Kazakhstan. The departments and classes actively intercommunicate, prepare joint concert programs, and other social events. The young artists from *Vozrojdenie* participate in festivals of the Kazakh, Russian, Ukraine, German, Korean, and Polish, all cultures that are regularly carried out in Pavlodar oblast. In 2000, 2 new departments, Belorussian and Greek, were added to the 10 existing departments.

Kazakhstan inherited a wide-spread system of vocational education institutions. In 1997-1998, the specialized secondary vocational education was offered by 230 schools, including 174 state-owned, and 56 non-state owned. They trained 128,730 young people in 160 specialties. During the Soviet years, the system was subsidized by both the enterprises and the state. As the plants and the factories were privatized in independent Kazakhstan, their new owners cut the spending of money on vocational education and the system began crumbling. To meet the needs of local enterprises in the labor force with the middle level of qualification, vocational schools introduced ''education on contractual basis.'' This is when an enterprise, under the auspices of the local Bureau of Employment, signs a contract with a vocational school and pays money for training a certain number of workers.

The government encourages the creation of private secondary schools hoping that they will reduce the financial burden on public schools. The government stopped supplying textbooks for free.

Of the relevant age-group students, 87 percent were enrolled in all types of secondary education schools in 1996-1997. Leaders of Kazakhstan know this must be improved.

HIGHER EDUCATION

The development of higher education in Soviet Kazakhstan was a part of the general policy of the Soviet Union to promote the cultural enlightenment among the wide masses of population. Before 1917, the Kazakh territory had no institutions of higher learning. However, 50 years later, the Republic had 44 four-, five-, or six-year universities and institutes. They include Kazakh State University, Kurmangazy Kazakh State Conservatory, 19 teacher training institutes, 5 medical, and 10 politechnical institutes with total number of 415,000 students. Kazakhstan had the highest percentage of students per 1,000 people among all Central Asian republics. The higher education enjoyed the high status among the young people because it was one of the few paths to well-paid jobs, social prestige, and prosperity at the level of standards attained in the country.

In Soviet times, higher education was free. It was viewed as a professional activity requiring full time dedication on the part of students. To help students materially, the government developed a program for their support. On a monthly basis, students were provided with an allowance, the size of which depended upon their financial status and academic achievements. However, the students who flunked the final exams at the end of the semester, or came from the families with high incomes, were disqualified from receiving an allowance. The universities also awarded some money as remuneration for outstanding achievements in learning. The Union of Higher Education Workers financially supported the students from the families with low incomes. The principle of free education ensured that students did not have to buy textbooks or any instructional materials: there were enough of them in the libraries of the institutions of higher learning or in public libraries. All university facilities were available at no charge. Therefore, because of such generous support, very few students had to seek jobs for extra financial resources during their years of study.

In Soviet times, the admission to the universities was highly competitive, since the country pursued the goal of providing higher education to the few who were academically motivated or capable. Based on the results of the entry exams, universities and institutes selected about 25 percent of all the applicants. Although the USSR Consti-

tution proclaimed equality for all in education, special preference in the admission process was given to the members of the *Komsomol* (Young Communist League) and to the Communist Party members who were viewed as active social participants in the life of the community.

As the country embarked on the capitalist economy in 1991, higher education continued to be a high priority among young people. The number of institutions and the number of students in them grew even bigger. The dynamics of this growth was remarkable. Despite the growth of the number of the universities and the enrollment, the number of students per 10,000 population decreased from 165 in 1970 to 157 in 1998 due to the faster growth of population during the previous 30 years.

The transformation of the country from socialist toward a capitalist free-market society compelled the society to substantially reconceptualize the notion of public education as being completely free. The size of the allowance shrank to a size that could support students only for a few days. Some institutions started charging admission fees that put the academically talented, but financially poor, in situations of inequality with regard to the rich. It increased competitiveness among the economically challenged for the fewer places available, deprived them of equal educational opportunities, and raised social stress. The fees for some instructional materials, retaking examinations, and other services became common in public universities. Some institutions had to change their public status in order to survive. For example, in 1997 four state technical higher educational institutions were transformed into private institutions.

The reform of higher education in the 1990s followed the provisions of the constitution which allowed the establishment of the private institutions. Their number skyrocketed from 0 to 106 in the years of 1990 through 1999. Educational institutions, such as universities acquired a good reputation, but they were very costly for an average citizen earning the equivalent of US$42 a month. The process of obtaining a license for opening a private institution does not always strictly follow the guidelines set by the government, and the absence of independent accrediting institutions make it difficult to verify the quality of curriculum offered.

The cardinal changes took place in the field of curriculum. They involved the reduction of the ideological burden of the past and the elimination of the mandatory study by all students in such core courses as History of the Communist Party of the Soviet Union, Scientific Communism, and Scientific Atheism. The new market economy in the country also necessitated the introduction of new majors and the development of new courses for them, mainly in the fields of management, marketing, and investment.

In Soviet Kazakhstan every graduate was guaranteed a job upon graduation both by the KazSSR and the USSR governments. The new state experienced high levels of unemployment, 12.3 percent in 2001, and it had to abandon the former function as a job provider. Instead, it gave an order and some money to the state-owned universities to prepare a certain amount of specialists for the needs of the state structures. It also provided financial assistance to 58,600 students or 24 percent of all the total contingent, with full compensation of money after graduation.

The teaching faculty makes up 21,834 people, and among them are 1,191 Doctors of Science and 7,529 Candidates of Science. They are prepared in the educational or research institutions in the three-year *aspirantura* (doctoral programs). The curriculum of these programs requires more independent work under the supervision of an experienced scholar than the course work in the form of lectures and seminars. After the graduates defend a dissertation, they are granted the scholarly degree of the Candidate of Science in specific areas. Up to 10 percent of those who continue to research extensively and publish, may choose to write another dissertation for the degree of the Doctor of Science in specific areas. The difference in salaries of doctors and candidates is substantial.

The reform of higher education targeted the restructuring of the system in order to bring it closer to the one that exists in many countries of the world. In the past, most institutions of higher learning had a status of an institute with a five-year program. In the 1990s, they were converted into universities and academies with the four-year baccalaureate and one or two-year graduate master's programs.

As an independent country, Kazakhstan established new ties and cooperation with the world's institutions of higher learning. In 1998, a total of 3,598 international students from 43 countries studied in Kazakhstani universities.

Studying abroad for Kazakhstani people is sponsored by various programs organized by the state, religious, and international organizations, such as the British Council, and the American Council of Teachers of Russian. Upon independence, many countries, especially Islamic ones, advanced into the Kazakhstani educational system to promote their culture and influence by opening religious schools and establishing joint institutions; one example is Kh.A.Yassavi Kazakh-Turkish University. The Republic's universities also signed agreements on student exchanges with their partners in other countries of the Commonwealth of Independent States (CIS), and the former Soviet republics.

Starting in 1995, the Republic has been putting in practice President Nazarbaev's instruction to allocate a

10 percent quota to facilitate admission of representatives of small minorities to higher educational institutions. It resulted in a dramatic rise in their share among students, which equaled this index with the level of national minorities within the overall statistics of the Republic's population.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

As independent Kazakhstan faced the imperative of constructing a new structure of governance, it almost followed the pattern of the USSR in establishing a separate Ministry of Education. However, given the limited budget potentials, and the reduced size of the educational system, the Ministry was united with the ministerial structures, which are responsible for culture and health. In 1999, the President of the Republic reformed the government and created the Ministry of Education and Science, which adopts major decisions about educational policies, goals, national standards, finances, and personnel. The Ministry focuses mainly on control rather than leadership, supervision, and evaluation. At the state level, and in the big cities of Akmola and Almaty, the system is administered by the Board of Education and at the district level of by the Department of Education.

When part of the Soviet Union, the system of education in Kazakhstan was operated on a highly centralized planning basis. The major function of the KazSSR Ministry of Education lay in controlling the implementation of the constitutional provisions on education, Communist Party of the Soviet Union ideological guidelines, and orders of the USSR Ministry of Education. While the USSR Ministry of Education developed goals, policies, and the larger part, about 70 percent of the school curriculum, the republican Ministry was responsible for developing about 30 percent of curriculum which included history, literature, language, geography, and culture of Kazakhstan. Parents, governing bodies, and school administrators and teachers had limited authority over decisions about curriculum at the lower local level. Such a centralized system created more uniformity, and deprived teachers an opportunity to adjust schooling to local and individual differences. The administration system still resembles that of the USSR, even though some transformations have been made.

The financial support to the system of public education comes mainly by the national budget. In 1999, some 15 percent of total spending was allotted to education. It is a big increase after the fiscal crisis of the first half of the 1990s when spending fell to 3.1 percent. Additional financial assistance has been provided by International Monetary Fund, World Bank, IREX, American Council of Teachers of Russian, Asian Bank of Development, as well as by various private companies and public organizations from the Arab world. In order to overcome financial shortage, some educational institutions began renting their buildings to private businesses.

The rapid development of science and research in Kazakhstan took place during World War II when many research institutions and scholars were evacuated from the European part of the Soviet Union to the republic. The scientific potential grew so high that, in 1946, the Academy of Sciences of KazSSR was founded, and a network of research institutions developed.

Prior to the country's independence, most of the scientific and technical potential of Kazakhstan was integrated in the much larger and elaborate scientific entities and structures of the former Soviet Union. In the 1990s, the Republic faced a task to reassess its relation and relevance to the former scientific programs and projects, its financial potentials, and the new needs and research agendas of the country. Given the conditions of an all-embracing disintegration of the organizational pattern of science, its Kazakhstani contingent suffered a serious destruction. Over the period of 1991-1993, as a consequence of sharply reduced funding of scientific institutions, the number of scholars engaged in research decreased dramatically.

In Soviet Kazakhstan, the substantial amount of educational research work was conducted in the KazSSR Scientific Research Institute of Pedagogy which, after independence, obtained the status of the National Academy of Education. A great number of research projects have been carried out in universities and pedagogical institutes, which are the major teacher training institutions. In 1999 alone, three new research institutes on the problems of education and upbringing were initiated in Kazakhstan: the Institute of Preschool Education in Semipalatinsk State University; the Institute of Higher Education in L.Gumilev Eurasian University; and the Institute of Upbringing under the auspices of National Academy of Education. The institutes set the task to provide the schools of Kazakhstan with textbooks that reflect new challenges of school democratization, humanistic education, multiculturalism, and search for national identities of Kazakhstani people.

Kazakhstan launched a number of projects in experimenting with new approaches in education. In the Republic, 250 schools have been given a status of an experimental site: 46 of them work on curriculum reform; 32 schools research new pedagogical techniques; 31 develop alternative management structures; 55 apply new module technologies; 32 introduce ideas of developmental psychologists V. Davydov, B. Elkonin, and L. Vygoysky; and 46 develop strategies of ethno cultural education. It is too early to evaluate their impact on public system of education.

NONFORMAL EDUCATION

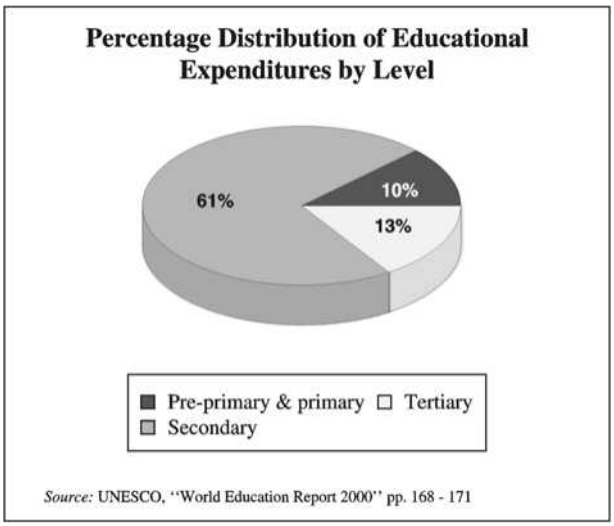
To provide proper conditions for the development of versatile interests and abilities of children in the Republic of Kazakhstan, the government has arranged a network of nonformal educational establishments, which include 790 institutions attended by 383,000 students. Subsidized by the government, they provide opportunities to children to become engaged in car design clubs, drama studios, various clubs of young mathematicians, chess players, and physicists. Stations for Young Naturalists, Technicians, and Tourists provide 47 facilities for students to develop techniques of working with various instruments, camping, and preserving and learning about nature. Schools, as many as 531, offer classes for those who are interested in music, fine arts, dance, and sports, so it is common for a student to attend two schools a day. Due to the financial problems, the state system of nonformal education began charging parents for the use of the materials and facilities, making these institutions unavailable to the poor families. The private system of nonformal education is in the initial stage of its development.

At the level of higher education, the system of by-correspondence courses was highly developed in the Soviet Kazakhstan. The government of the Republic provided students with additional two-week paid leave and travel expenses to the site of the institution twice a year for exam sessions.

Distance learning via high technology, including the internet, a personalized system of instruction, computers, and television instruction is a new challenge for the country. The assistance for its development comes mostly through international organizations, joint ventures, and foreign companies and organizations. In 2000, a pilot project called National Educational Television began broadcasting on Kazakhstan-1 Channel. For four weeks, National Educational Television launched a daily two-hour educational program for the distant and underpopulated regions of the republic. According to the sponsors of the new television program, the latest pedagogical ideas, works of outstanding scientists, the funds of museums, libraries, and archives become available for a wide scope of the population. The project aims at restoring the traditions of educational television, which has taken place in Soviet Kazakhstan's history when the government subsidized educational television programs. The program is a voluntary action designed to draw attention to solve the problem.

TEACHING PROFESSION

As the Soviet system of central governance came under attack, enthusiastic teachers created a Union of Teachers to promote innovative ideas in instruction, school organization, and school democratization. As the economy deteriorated in the 1990s, teachers stopped getting salaries on a regular basis and often had to work two jobs to survive. As a result of this, the unions re-focused their efforts from reforming education to mainly economic issues.



The teacher education programs are concentrated in co-educational universities and in pedagogical institutes, including the only one for women (Kazakh State Pedagogical Institute for Women), with a four- to five-year-course of study. The curriculum requires an intensive program of study in subject matter, pedagogical and psychological disciplines, and a practicum, which begins in the first year of their studies. The instructional methods heavily rely on lectures and seminars. After graduation, young specialists are hired on a one-year probation. Students can choose a double major. The two-year pedagogical schools prepare nurses and teachers for nurseries and kindergartens. The graduates may continue their education at the pedagogical institutes in the third year of the program. Each of the 14 administrative states has an in-service training institute for teachers who must upgrade their teaching certificate every five years.

Teachers' salaries are lower than those in many other career areas, especially in the private sector. Sometimes, delays in salary delivery last for several months; therefore, many teachers have left their jobs. In 1996, there were more than 23,000 vacancies in public schools. Schools experience shortages with foreign language teachers because many of them left for international joint venture companies.

SUMMARY

Soviet Kazakhstan arrived at its independence day with a widely developed system of preschool, primary, and secondary education that put the republic among the

ranks of developed nations of the world. The citizens of the republic enjoyed free and universal education. The higher education institutions provided the country's economy with highly qualified specialists. The nonformal educational institutions provided additional opportunities for well-rounded development. The KazSSR Academy of Sciences enjoyed a high reputation in international scholarly circles. Since 1991, Kazakhstan has experienced a decade-long transition from being a part of the USSR to an independent state, from socialist planned economy to a free-market one, from Communist politico-ideological system to democracy and pluralism, from a centralized administration to a relatively democratic system with the diversity of educational institutions, policies, and curriculum and freedom of choice of venues in education. However, the country has taken only initial steps on this road and will continue to stay in a transitional state for a long time to come, since changes of such magnitude do not occur rapidly. The precipitous fall in production, the disruption of the monetary system, the break of industrial ties, and the high rate of inflation in the 1990s caused a sharp decline in the standards of living for the population. It is also responsible for a lot of problems in all spheres of education in the country.

The major challenge lies with poor financial resources. Many educational institutions do not have enough financial resources to maintain education at high standards. The equipment in language laboratories, scientific laboratories, and computer classrooms are outdated in many cases. While school administrators and teachers gained more freedom to be creative in their offices and classrooms, many of them quit their jobs because they are not paid salary on a regular basis, or the growth of salary does not match the rate of inflation. The capitalist economy returned Kazakhstan to where it was in 1917 in terms of sharp social stratification and division, inequality, and injustice. The opportunities for free education were diminished. The rural schools, whose budget depends mostly on the national government, suffered more than the city schools. Furthermore, bribery has flourished from kindergartens all the way through the universities, especially prestigious ones.

In the 1990s, the government of Kazakhstan launched several bold reforms on all levels of education with promising prospects. However, the 1998 economic crisis in Asia and Russia had negative consequences for the country and reduced the Republic's chances for quick recovery and development. Kazakhstan needs to address its problems to make the results of reform tangible.

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—Grigory Dmitriyev

KENYA

BASIC DATA

Official Country Name:	Republic of Kenya
Region:	Africa
Population:	30,339,770
Language(s):	English, Kiswahili
Literacy Rate:	78.1%
Number of Primary Schools:	15,906

Compulsory Schooling:	8 years
Public Expenditure on Education:	6.5%
Libraries:	21
Educational Enrollment:	Primary: 5,544,998 Secondary: 619,839
Educational Enrollment Rate:	Primary: 85% Secondary: 24%
Teachers:	Primary: 178,097 Secondary: 38,307
Student-Teacher Ratio:	Primary: 30:1 Secondary: 15:1
Female Enrollment Rate:	Primary: 85% Secondary: 22%

HISTORY & BACKGROUND

The Democratic Republic of Kenya lies across the equator on the east coast of Africa. It borders Somalia, Ethiopia, and Sudan to the north; Uganda to the west; Tanzania to the south; and the Indian Ocean to the east. The country covers an area of 222,845 square miles, approximately the size of the state of Texas. Almost 80 percent of the land mass ranges from arid to semi-arid savanna land, mostly occupied by sparsely populated communities that combine agriculture with pastoralism. Tourism is one of the main ways in which the country earns foreign currency. Kenya has a moderate climate, much open space, and an abundance of wildlife that attracts people from all over the world. Modern transportation has made traveling in the country more convenient. It takes approximately 45 minutes by air and six hours by road to travel from the wild game parks to the Indian Ocean coast, which has many popular beaches.

The country is divided into eight provinces including the Nairobi area: Central, Coast, Eastern, North, Rift Valley, Western, and North Eastern. They are divided into administrative areas known as districts. Nairobi is the capital city with a population of approximately 1.4 million. Other major towns include Mombasa, Nakuru, Kisumu, and Eldoret.

The 1997 census estimated the population at 29.1 million. There are numerous religious affiliations, with the population being approximately 40 percent Protestant, 30 percent Roman Catholic, 6 percent Muslim, and 23 percent other religious believers (Embassy of the Republic of Kenya 2001).

The U.S. Central Intelligence Agency (2000) indicated that the July 2000 population was estimated at 30.3 million. The report notes that these estimates explicitly take into account the effects of excess mortality due to AIDS, which can result in lower life expectancy, higher infant mortality and death rates, lower population and growth rates, and larger changes in the distribution of population by age and sex than would otherwise be expected.

In Kenya, there are 42 ethnic groups, each with a unique language, divided into four major linguistic groups: the Khoisans, Bantu, Nilotics, and Cushites. Swahili (*Kiswahili*) is the national language, and English is the official language and the medium of instruction. As a result of interaction between the coastal Bantu, the Arabs, and other groups, the Swahili language developed as early as the fifth century. The Swahili speaking people (*Waswahili*) are made up of a mixture of different people from various ethnic groups, especially the coastal Bantu (the *Miji Kenda*), known as the nine tribes of the coast. The *Waswahili* mainly dwell in the cities and the majority of them are Moslem. The main Kenyan ethnic groups include: *Kikuyu,* 22 percent; *Luhya,* 14 percent; *Luo,* 13 percent; *Kalenjin,* 12 percent; *Kamba,* 11 percent; *Kisii,* 6 percent; *Meru,* 6 percent; other African, 15 percent (which includes the *Miji Kenda*); and non-African (Asian, European, and Arab), 1 percent.

The country's history dates back to the Stone Age. Kenya possesses one of the world's largest and most complete records of man's cultural development, partly because of the country's rich variety of environmental factors conducive to human survival and development. According to archeological finds in various parts of the country, the prehistoric period is divided into two categories: the Stone Age period, which dates from about two million years ago, and the Neolithic period, which dates from about 2,000 to 10,000 years ago. Available evidence indicates that man left behind traces of his occupation during the Iron Age through the precolonial period and up to the present time. The phases of the various periods are characterized by tools ranging from crude to advanced (Quyum 2001).

Kenya was colonized by the British government for 70 years. It became a British protectorate after the Anglo-German agreement of 1890. At this time the British main interest was not to control local people, but to construct a railway that would connect Uganda, Zanzibar, and the Indian Ocean. The railway was important for strategic and economic reasons; it was to be the main link that would connect Lake Victoria (the source of the river Nile) and Uganda, which was also under British control. The construction of the railway led to a large immigration of people from India who were imported to work on the railway. Other immigrants from Europe, Australia, New Zealand, and Canada followed in 1903 as economic inter-

ests grew. European settlers from South Africa also moved to the new British territory.

In order to prosper, the colonial government had to force the Africans who lived in its protectorates to work. In 1901 the British imposed tax payments in every area that they controlled. In order to maintain control over Africans, the British limited their education to mere practical skills, suitable for working on the farms. The missionaries and Islamic groups on the Indian Ocean coast had already established schools. The discriminatory attitudes and the imposition of taxes, forced labor, and land confiscation caused friction between Africans and the colonial government. The friction triggered a political consciousness among Africans, which led to the eventual resistance by Africans against British rule. The strongest rebellion against the British was the *Mau Mau,* first in 1890 and the last in 1952. This period marked the beginning of African nationalism.

Daniel N. Sifuna, in the book, *Development of Education in Africa: The Kenyan Experience* (1990), points out that the Second World War brought not only an economic boom, but also a significant psychological change that led to the subsequent spread of nationalism in Africa. Previously, Europeans had dominated Africans by demonstrating advanced military and economic power and an attitude of superiority and invincibility. Many Africans, after fighting alongside the European soldiers, realized that the Europeans were equally vulnerable human beings. Thus, the white superiority myth was destroyed.

The Mau Mau resistance paved the way for constitutional reforms and development in subsequent years. In 1955, various political parties were formed all over the country after the colonial government yielded to their formation. Elections were held in March 1957, after which racial barriers in the government began to be lifted. In 1960, the Kenya African National Union (KANU), which advocated a unitary government, was formed. In 1961 the Kenya African Democratic Union, which advocated a quasifederal government (*Majimbo*), was also formed. The first full franchise general elections were held in May 1963, and KANU emerged the winner. In June 1963, Kenya attained internal self-government. On December 12 of the same year, independence was achieved with a complex (*Majimbo*) constitution, which conceded much autonomy to the regions. On the first anniversary of independence in 1964, Kenya became a republic, with Mzee Jomo Kenyatta as president. Following his death on 22 August 1978, the Honorable Daniel Arap Moi assumed the presidency in accordance with the Kenyan Constitution.

After independence, Kenya faced an enormous challenge of reforming the educational system to reflect its citizen's needs. Such a challenge continues to haunt the country today. One difficulty lies in developing an education system to replace the one inherited from the colonial government.

Sifuna (1990) defines education as the ''whole process by which one generation transmits its culture to the succeeding generation, or better still a process by which people are prepared to live effectively and efficiently in their environment.'' This definition fits a universal view of what education is, and what it aspires to be. Thus, the difference between African-Kenyan indigenous education and that inherited from the British is in its application or methods and interpretation of the needs of the society by its leaders.

Usage of the Terms Race, Ethnicity, & Tribe: It should be noted that the terms: race, ethnicity, and tribe can be confusing. The meaning depends on who is using the term and from what era. In colonial times, the Europeans often viewed Africans as uncivilized people, and, when describing African groups, did not consider their language variations or linguistic diversity as important. They often referred to Africans as ''black people'' or a ''black race'' divided into different tribes. However, Africans in general, including Kenyans, identify themselves according to their linguistic groups, as Irish-, Italian-, or German-speakers do. Thus, the Kamba people who speak the *Kikamba* language or the Kikuyu people who speak the *Gikuyu* language belong to two different ethnic groups.

In the twenty-first century, usage of the terms race and tribe can portray insensitivity and a racist attitude, particularly when the term race is used to refer to the skin color of the people but not their culture, language, and ancestry. Confusion occurs when the term race is used in place of ethnicity because race can refer to skin color, whereas ethnicity means more than physical description. The following description of kinship should help clarify misconceptions and confusion caused by usage of the terms race, ethnicity, and tribe. It is also important because it clears the distortion that has been imposed on Africans' identity in general by foreigners.

Kinship: In Kenya and Africa, traditional ethnic groups were determined by geographical region, language, and common culture. Each ethnic group had its own social and political organization with a strong sense of kinship. Kinship controls social relationships between people in a given community, governs marital customs and laws, and determines the behavior of one individual towards another (Mbiti 1992).

Understanding kinship is important as far as intracultural (cultural awareness among Kenyans), cross-cultural (awareness transfer or borrowing from one culture to an-

other), and intercultural (awareness between different cultures through interaction) factors are concerned. An awareness of kinship was lacking when Western education was introduced in Kenya. Exclusion of the indigenous form of education from formal education in Kenya has led to an alienation of cultural identity. This is one of the main reasons why many Kenyans feel the education system needs a complete overhaul in the twenty-first century. Education in Kenya has been declared dysfunctional because it has failed to address a full range of economic, social and cultural, political, and psychological perspectives.

In traditional societies, the community took precedence over the individual. Members owed existence to one another, including both their ancestors and contemporaries. Marriage was highly valued, as were children. ''Whatever happens to the individual happens to the whole group, and whatever happens to the whole group happens to the individual. Therefore the individual can only say, 'I am, because we are; and since we are, therefore I am''' (Mbiti 1992). Communities lived together in villages, which included farm fields and animal sheds along with houses and shrines. The style of traditional houses varied from community to community. Some were round in shape, built around the village compound in a circle or semicircle, while others were rectangular in shape. The houses generally faced the center of the compound (Mbiti 1992).

Very little has been included in the educational curricula that emphasizes ancient African civilization. Most emphasis is placed on understanding Europeans and life outside the African continent. Thus, it is not surprising to find that most educated Kenyans have not visited or know much about the ancient civilization archives in Egypt, just two hours away by air.

Indigenous Education in Kenya: Kenyans as well as other Africans did not live in the society as one nation of people. Therefore, they did not have one single indigenous form of education. As Sifuna (1990) points out, Africans had different systems of education to transmit their own particular knowledge and skills. He notes that, although the African-Kenyan indigenous education differed from one ethnic group to another, the goals were very similar. The main purpose of indigenous education was to train youth for adulthood. Emphasis was placed on the established norms (normative goals) that were unique to each ethnic group, which reflected the standards and beliefs of the correct behavior (ethical and moral character in Western terms). Other goals were expressive that emphasized unity and consensus. Competitiveness in intellectual and practical matters was encouraged. In essence, African-Kenyan indigenous education had a holistic approach that emphasized social responsibility, job orientation, political participation, spirituality and moral values.

The curriculum was pragmatic by design. Environmental knowledge was crucial in order for the student to overcome hardships and to exploit it for survival reasons. Therefore, the student had to acquire knowledge of physical geography, appropriate technology, plants, animals, and insects. Also, learning how to get along and stay close, with a sense of cultural identity and community, and strong government was highly emphasized. Understanding ''who you are'' through kinship (lineage and ethnicity), and one's role in society was highly valued. Most of the activities that taught these values were very ritualistic, and constituted civic responsibilities. Thus, depending on one's clan and ethnic group, the rituals involved initiation rites and ceremonies that were symbolic and served as a form of teaching and learning.

Informal methods of instruction involved productive and meaningful work, mostly learning by doing along with adults. The formal methods of teaching involved a theoretical and practical inculcation of skills through apprenticeship. The philosophical foundations that shaped indigenous education were universal to all ethnic groups. The foundation included the following philosophies: communalism, preparationism, functionalism, and holisticism.

Communalism emphasized group cohesion. Preparationism prepared children to become useful members of the household, village, clan, and ethnic group (tribe). The preparation of young people was gender specific, where girls learned from women and boys from men. Functionalism is another philosophy that is strictly utilitarian, used as an immediate induction into society and preparation for adulthood, a participatory process. Functionalism incorporates spiritual and moral living, economic communal participation, and job orientation and application.

Another philosophy, perennialism, focused on transmission of heritage from one generation to another. This is the way the civilization of a people is perpetuated and assurance of continuity of cultural heritage. It is a collective means through which the society initiates its young generation. Lastly, holisticism involved learning without any specialization, in which aims, content, and methods are inextricably interwoven. This principle requires critical thinking and creativity (Sifuna 1990).

Sifuna (1990) asserts that, while indigenous education is suitable for Kenyans, it has some weaknesses and deficiencies that would not adequately fit today. These weaknesses include the neglect of the individual, little contact with the outside world due to the confinement to the ethnic group (tribe), and the static nature of a lifestyle where there are few career choices.

Despite these weaknesses, the question remains: Why did the postindependence education reform movement fail to integrate the indigenous aspects of education? One of the reasons was the lack of ideological base, and a leadership that adapted Western ideas in shaping education without integrating them with the indigenous elements that were reflective to Kenyans' psyches and needs. The new leaders were also working with the former colonial expatriates who also shared the expenses. Thus, the educational reforms had to serve the interests of the former colonial government through funding and expertise (usually viewed as ''Neocolonialism''). Adapted ideas of political process also contributed to the maintenance of status quo.

The constitutional and the legal foundations of education in Kenya have been shaped and guided by a reactionary, reactive process. It is reasonable to conclude that, after independence, Kenya was mostly concerned with re-appropriating the land to the people. While educational development was not the main focus, it became important as the country developed and started to interact with the rest of the world.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Kenya is a democratic government with political pluralism. The president is the head of state and government. The constitution is the supreme law of the state. It establishes and determines the composition, powers, and duties of the main organs of government namely the executive, the legislature, and the judiciary. Before independence, Kenyan education was divided into a three-tier system: schools for whites, Asians, and Africans. The best schools were reserved for the whites, the middle class for Asians (mostly Indians), and the lower class for Africans.

After Kenya's independence in December 1963, the Minister of Education appointed the Ominde Commission to assess the educational resources and to advise the government on the formulation and implementation of national policies for education (Sifuna 1990). The commission noted that independence created a condition that would not allow racially segregated schools such as those that existed during the colonial era. The commission recommended that, since independence signified the birth of the nation, education should serve as a means of uniting the different racial and ethnic groups that make up the nation.

The commission's decisions were influenced by international opinion and internal political socioeconomic forces published in several works including the ''High Level Manpower Requirements and Resources in Kenya, 1964-1970'' and ''The Development Plan 1964-1980, and African Socialism and its Application to planning in Kenya.'' From these publications, the commission identified a direct relationship between education and economic growth. It was recommended that educating upper- and middle-class manpower was needed by developing countries, and could accelerate Kenya's economic pace. The commission endorsed an educational policy objective that called for free primary education. Under these recommendations, Kenya chose to emphasize an expansion of higher levels of education that was geared to meet the manpower needs, and as a means to increase primary school enrollment. From 1964 to 1969, deliberate efforts were made to slow the growth of primary schools, which had enrollment increases of 20 percent, rising from approximately 1 million to 1.2 million. The government's primary education development plan of 1970 to 1974 was designed to increase enrollment to 1.8 million in order to cover 75 percent of the school age population by 1974. In this effort, the old educational system (referred to as the 4-4 system) developed by the British colonial rule was abolished.

The 4-4 system consisted of four years of primary education and four years of intermediate. After the first four years there was a common exam, the Competitive Entrance Examination (CEE). Eight years of schooling was the highest level of education Africans could achieve under this system. The 4-4 system was replaced with 7-4-2-3, whereby a common national exam was held after the first seven years, the Certificate of Primary Education (CPE). This system was replaced in 1985 with the Kenya Certificate of Primary Education (KCPE) when the 8-4-4 system was implemented.

Politically, the government had embarked on ''africanizing'' the civil service and the economy. As a result, ''kenyanization'' of the education system was also emphasized. While ''africanizing'' or ''kenyanization'' of the educational system in Kenya was deemed necessary, there was a lack of ideological foundations that tapped into indigenous ideals, which would translate the needs of appropriate educational development and reforms. Sifuna (1990) notes the dilemma the Kenyan educational system faced by indicating that Kenya made rapid expansion at the secondary and higher education levels after independence was achieved. However, the educational policies were influenced by the manpower utilization model, which may have been justified but overemphasized. Sifuna asserts that the results of this approach were that the trained manpower did not represent the priority needs of the country. Thus, because many could not be accommodated in the existing labor market, the manpower utilization model was probably not the best choice, especially when it stressed formal education as the only potent tool for effecting the development of society. Therefore, the preoccupation of planners with this partic-

ular model prevented meaningful efforts to universalize educational integration of formal schooling with socio-economic development.

The continuation of this policy has created a serious gap between the rich and the poor. As a result, Kenya is faced with an influx of unemployed populations in the urban areas, and a neglect of agriculture and rural development, which is the mainstay of Kenya's economy. The educational system change produced an overwhelming growth in school enrollment. The expansion of secondary schools led to a massive enrollment increase at the university level and an influx of unemployment. Kenya continued to face this trend as it enters the twenty-first century.

EDUCATIONAL SYSTEM—OVERVIEW

Missionaries introduced Western education in Kenya. The first missionaries to settle on the East African coast were Portuguese Roman Catholics. By 1557 they had established monasteries at Mombasa and Lamu, Kenyan coastal towns. The second wave of Christian missionaries included the Lutherans, who were sent to Kenya through the Church Missionary Society (CMS). Among these were Johann Ludwig Krapf, Johann Rebman, and Jacob Erhadt. The partition of Africa in 1884 established British rule in Kenya and led to an increase of Christian missionaries. As the missionaries established themselves on the mainland, they started schools as a means of converting Africans to Christianity. Their acceptance was somewhat due to the fact that they used the schools as a means of rehabilitating slaves who were returned after having been captured by Arabs. The Arabs had established themselves earlier on the coast, and had already introduced some schools where they taught the *Koran.* Thus, the Christian missionaries had to move further inland, away from the Moslems where they could easily rehabilitate the returned slaves. Later the British colonial government started to urge the missionaries to expand the educational system to include a technical focus in the curriculum in addition to religion. Although some were reluctant, for fear of losing the monopoly of schools to the government, some went along and even received funding.

In 1908, the missionaries formed a joint committee on education that later became the Missionary Board of Education, representing all the Protestant missions in the British protectorate. In 1909 the British government established an education board with Henry Scott of the Church of Scotland serving as the chair. The establishment of the education board occurred at the same time that the Fraser and Giroud Commissions were put in place. These commissions called for racial consideration in developing the British protectorate. The recommendations included a push for industrial development, technical education, and the teaching of religion as a moral foundation. The import of expensive labor from India was discouraged. Professor Fraser also recommended the establishment of a Department of Education.

After the First World War, a more concerted effort by the British to develop African colonies was established. The British began reexamining and reevaluating education in the African territories. In 1923 the British secretary of state established a committee chaired by the parliamentary under-secretary of state to advise on the educational affairs of the African-Kenyans. This marked the beginning of the first educational policy by the British colonial government.

This period marked the beginning of the three-tier education system in Kenya. There were racially segregated schools for Europeans (whites), Asians, and Africans. It was also the starting point of a joint venture between the colonial government and the missionaries, whereby the missionaries paved the way for colonialism. After Kenyan independence was achieved, the three-tier system developed into three types of schools: government, private and/or missionary, and *harambee* (a grass-root movement of self-help schools). The government schools, formerly reserved for whites, and the private schools were the best equipped. The missionary schools continued to exist, although some were converted into government schools. The quality of harambee schools, which were geared towards increasing education for Africans, depended on the economy of the location.

As of the early 2000s, the government schools have deteriorated and lost prestige due to lack of funding. The private schools seem to prosper most as the economy continues to decline. In the government schools tuition is waived; however, the government introduced a cost-sharing funding of the schools, whereby the parents contribute to the building facilities and supplies. Because most of the parents cannot afford their share, the schools are falling apart. This has created chaos in Kenya's educational system that has resulted in poorly trained personnel and loss of quality education. The country is calling for major education reforms in the twenty-first century.

The Kenya education policy was implemented under the mandate of the Ministry of Education, which is also responsible for writing up educational curricula through the Kenya Institute of Education (KIE), and setting and regulating national examinations through the Kenya National Examination Council (KNEC). Education takes up to 25 percent of the government expenditure.

The current educational curricula, commonly referred to as the 8-4-4 system, consists of eight years of primary education, four years of secondary, and four years of university education. According to Sifuna

(1990), there are three events that led to implementation of the 8-4-4 system: the 1966 conference on education at Kericho in Kenya, which stressed the need for integrating rural development; the International Labor Organization mission report entitled ''Employment, Incomes and Equality: A Strategy for Increasing Productive Employment of 1972;'' and the recommendation of the National Committee on Educational Objectives and Policies of 1975. In 1979 the Ministry of Education was changed to the Ministry of Basic Education with an introductory nine-year basic education system program. The rationale was that the previous program was too short and not rigorous enough to give graduates enough practical education. It also recommended that the first six years of primary were to concentrate on numerary and literacy skills and the last two years on basic education with practical orientation. This represented a shift from a focus on enrollment to restructuring the program as a means to cater to the influx of unemployed.

The twenty-first century educational reform proposals are under review because the systems have failed to meet the original purpose. The system in Kenya has been described as a burden to both teachers and pupils due to the wide scope expected in the numerous subjects studied. The failure of the system is blamed on financial constraints and inadequate training of the implementers. Between 1980 and 1990, Kenya faced tremendous growth of privately owned schools and higher education institutions, while the government schools deteriorated. There are also several private schools that offer an international curriculum, including the London education and international baccalaureate (GCE), among others.

PREPRIMARY & PRIMARY EDUCATION

Before 1980 preprimary education, which caters to children between one and six years of age, was exclusively the responsibility of local communities and nongovernmental organizations such as churches, voluntary organizations, local authorities, and individual investors. At that time there were only six preschool training centers. The government assumed responsibility for preschool education in 1980 and has since streamlined the program. The government now has undertaken the training of preschool teachers, the preparation and development of the curriculum, and the preparation of teaching materials. The development of preschool units and the cost of teachers' services has, on the other hand, continued to be met by the communities and other nongovernmental agencies.

Early childhood education in Kenya did not get much attention until the late 1980s. The government did not focus on early childhood education prior to this time because, after independence in 1963, the main priorities were to create a uniquely Kenyan ideology, politics, and constitution. Since the economy was still rural-based, childhood education did not become an immediate necessity until the industrialization of the country increased. As industries developed in the urban areas and more Kenyans started to work away from home, the demand for early childhood education increased.

To enhance the development of preschool education, the government, in collaboration with the Van Leer Foundation, established the National Center for Early Childhood Education, based at the Kenya Institute of Education (KIE). The Center's main responsibility is to train the instructors of preschool teachers, who are then posted to District Centers for Early Childhood Education (DICECE). There are 18 such centers and the ultimate objective is to have a center in every district.

The preprimary education program has grown tremendously over the past 20 or so years. The number of children attending preprimary units in 1990 was in the order of 800,000, while the number of preschool teachers was about 20,000 (kenyaweb.com 2001).

Primary Education: Primary education in Kenya begins the first phase of the formal educational system. It starts at six years of age and runs for eight years. Before the expansion of schools in the early 1970s, the beginning age did not matter. However, as school enrollment increased in the late 1980s, a starting age for attending school became necessary.

The main purpose of primary education is to prepare children to participate fully in the social, political, and economic well being of the country. The primary school curriculum has therefore been designed to provide a functional and practical education that caters both to the needs of children who finish their education at the primary school level, and to those who wish to continue with secondary education.

Before independence, primary education was almost exclusively the responsibility of the communities or nongovernmental agencies such as local church groups. Since independence the government has gradually taken over the administration of primary education from local authorities and assumed a greater share of the financial cost in line with the political commitment to provide equal educational opportunities to all through the provision of free primary education (kenyaweb.com 2001).

There are both public and private primary schools; however, almost all primary schools in the country are in the public sector and depend on the government for their operational expenses. The government provides teachers and meets their salaries. Pupils in the public schools do not pay school fees, but rather pay contributions through

a parent-teacher association cost sharing system. Because of this cost sharing system, government expenditure on school supplies and equipment is minimal. The responsibilities for the construction and maintenance of schools and staff housing are left to the parents. After independence, most primary schools and equipment were built through community fundraising (or *harambee,* a self-help effort).

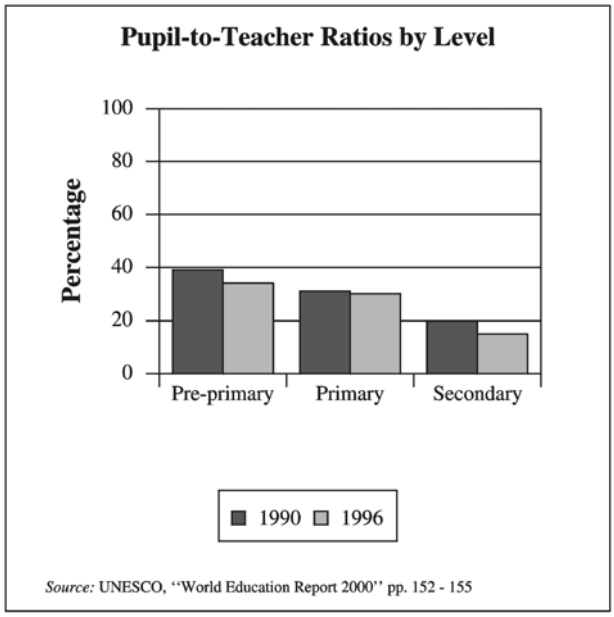
Between 1970 and 1990, there was a remarkable expansion in primary education, both in terms of the number of schools established and in the number of children enrolled. In 1970, there were 6,056 primary schools with a total enrollment of 891,600 children. At the same time, trained teachers numbered 92,000. This number increased by 1990 to over 14,690 primary schools, with an enrollment of slightly over 5 million children and nearly 200,000 trained teachers. Also as enrollment expanded, there was a significant improvement in the number of girls in education. At the beginning of independence, only about a third of the enrollment in primary schools were female. By 1990 the number of girls attending school rose to nearly 50 percent.

At the conclusion of primary school, pupils take a national examination and receive a Kenya Certificate of Primary Education (KCPE). Graduates either proceed to a secondary school for four years or join tertiary institutions such as Youth Polytechnics, a technical training institute, or the job market.

Feneral curriculum subjects for the first eight years include: English, Kiswahili, mathematics, science, music, history, civics, geography, and religious education. The vocational subjects include arts, crafts, agriculture, and home science. Specific activities in the vocational subjects in the arts and crafts involve drawing, painting, graphic design, collage/mosaic, weaving, ornament-making clay-pottery, leather work, modeling and carving, fabric designs, puppetry, woodwork, and metal work. These subjects are well defined in the program of study that should make a Kenyan education among the region's best. However, the problem is in the application of the curriculum and the management of the schools. Thus, if the curriculum were implemented as it is designed on paper, it would make an ideal educational system. The imbalance in implementation process and poor economy contributes to the failure, but not the planning and design expertise.

SECONDARY EDUCATION

Secondary school education usually starts at 14 years of age and runs for four years. Upon completion of secondary school, students can choose to go to college or pursue other vocational fields. Students who do well in secondary school are admitted to college, and others join



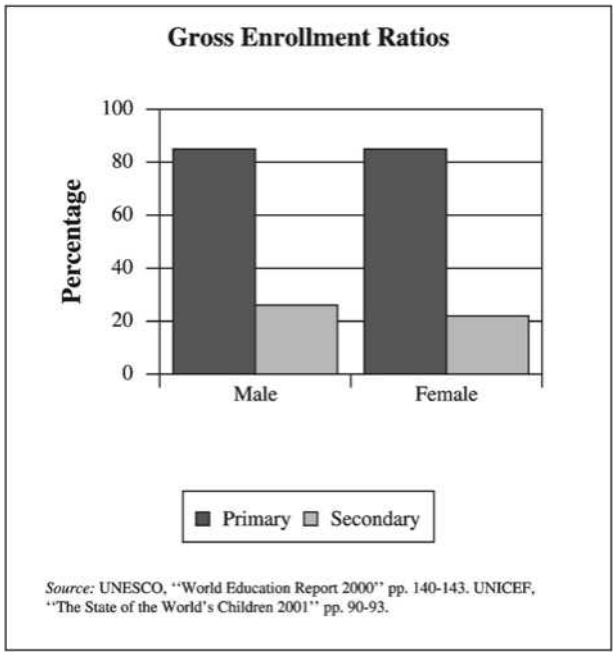
Source: UNESCO, ''World Education Report 2000'' pp. 152 - 155

teacher training institutions, technical training schools, or the job market. The competition for admission to college and the training institutes is very high.

The secondary education program is geared towards meeting the needs of both the students who terminate their education after secondary school and those who proceed to higher education. In this context, the secondary school curriculum emphasizes job-oriented courses, such as business and technical education.

The objectives of the secondary school education are to prepare students to make a positive contribution to the development of society, and to acquire attitudes of national patriotism, self-respect, self-reliance, cooperation, adaptability, and a sense of purpose and self-discipline (Sifuna 1990). The curriculum covers six major areas: communication (English, Kiswahili and foreign languages), mathematics, science (physical and biological), humanities (geography, history, government, religious education, social education, and ethics), applied education (agriculture, industrial education, wood technology, metal technology, power mechanics, electrical technology, business education, accounts, commerce, typing and office practice, home science, clothing and textiles, food and nutrition, arts, and music), and physical education.

There are two categories of secondary schools in Kenya, public and private. The public secondary schools are funded by the government or communities and are managed through a board of governors and parent-teacher associations. The private schools, on the other hand, are established and managed by private individuals or organizations, including missionaries.



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93.

There has been a tremendous increase in both the number of secondary schools and in student enrollment in response to the rapidly increasing number of primary school graduates seeking entry to the secondary level. In 1963 there were only 151 secondary schools with a total enrollment of 30,120 students. In the year 2000, the number of secondary schools had risen to nearly 3,000 with a total enrollment of 620,000 students. Of this total, slightly over 40 percent are female. The rapid expansion at the secondary level has been the result of the vigorous harambee schools movement that has led to the establishment of numerous community secondary schools. Only about 50 percent of pupils that sit for the Kenya Certificate of Secondary Education (KCSE) get places in secondary school. These are categorized into four areas—national, provincial, district, and harambee. Students sit for a minimum of eight subjects at the end of Form Four for the award of KCSE. Compulsory subjects are English, Kiswahili, and mathematics.

The secondary school curriculum was developed with the 8-4-4 system's goals of addressing the following needs: to make a more relevant curriculum that would offer practical skills applicable to a wide range of job opportunities; and to provide equitable distribution of education resources that assured opportunities for all students regardless of their origin, creed, race, or region.

Though the curriculum is designed with the above goals, the postgraduation unemployment problem has not been solved. Unemployment has continued to increase and the number of educated and disillusioned workers has grown in great numbers, especially in the major cities. This is often due to the fact that schools produce graduates who have the hope that education equals access to jobs, but there are no jobs due to lack of infrastructure development. In other words, Kenya faces a problem of too many educated people without the opportunities for them to apply the skills that they acquired. There has been very little emphasis on agriculture and rural development, and many rural residents are moving to the cities.

Thus, the crisis Kenya faces in the twenty-first century is finding jobs for an educated people who are poor and disillusioned. Movement from rural to urban areas has led to overcrowded cities, higher crime rates, and lower educational expectations. A study conducted by Claudia Buchmann titled ''Family Structure, Parental Perceptions, and Child Labor in Kenya: What Factors Determine Who is Enrolled in School'' (2000) points out that there has been very little empirical research on the effectiveness of educational initiatives that have been implemented in Kenya. Court and Ghai (1974) also note that there has been a serious failure of communication between the educational planners and the educators. The educational planners are influenced by political pressure and as a result have rushed their decisions and placed an emphasis on the development of buildings instead of education. Court and Ghai (1974) also assert that the Kenyan educational system was not developed with ''designed and tested objectives in mind but just grew.''

Buchmann (2000), comparing African educational systems in general with other developing countries—such as those in East and Southeast Asia—found distinctive differences in the way families make decisions on schooling for children. In most African countries, and specifically in Kenya, low levels of economic development create an environment where the educational system is very competitive and where high educational achievement does not guarantee occupational mobility. This study also reveals that the theories applied in developing educational policies, if any, were not consistent with Africa-Kenyan values and were misguided. Kenya developed a highly expanded educational system that rivals those in the most industrialized countries in terms of its complexity and competitiveness. Yet, the strength of the extended kinship networks, polygyny, and the dominance of subsistence agriculture show that there has been very little change in Kenyans' lives (Buchmann 2000).

Also, while there has been a great increase in formal education, only 14 percent of the population was employed in the formal sector and 3.5 percent in the informal sector by 1990, nearly three decades after Kenya's independence. More than 80 percent of the total labor force remains in agriculture and pastoralism, with a labor force growth rate of 3.6 percent annually. The country is thus faced with intense competition for wage employ-

ment and growing pressure on developed arable land. In other words, a child's ability to find gainful employment in the future has more consequence for the entire family and not just for the individual child. For this reason school means a hope of increasing job prospects.

Social security for the aging population is usually based on the future earning of the children. Kenya had implemented a social security retirement system similar to that of the Western countries but abolished it in early the 1980s when it was declared dysfunctional. Plans to reimplement the social security system are again under consideration in the early 2000s.

HIGHER EDUCATION

After completion of 12 years of primary and secondary school, graduates have a variety of choices. If they performed well, they can go to a public college based on their financial standing and scholarship availability. Only the top performers have this option. The second choice is to attend a private college, which costs more and has fewer scholarships. The third choice is to go to a vocational school or a teacher training institution, or to join the job market.

Teacher training colleges offer a three-year program for science teachers and a two-year program for liberal arts. The primary colleges are Kenya Science Teachers College (for science teachers only) and Kenyatta and Nairobi Universities (mostly for liberal arts teacher training). All programs at these institutions offer a secondary school teacher's diploma. Training for primary teachers is handled by other agencies under the Kenya Institute of Education. Though the need for science teachers is very high, the requirements to enter such a training institution make them very selective and competitive, which makes this choice a difficult one. The other teaching choice is to join a two-year liberal arts teacher training college that offers a teaching diploma in liberal arts. A secondary school graduate can also get a teaching job as an untrained teacher (UQT) that offers an opportunity to teach while pursuing training for certification. This option has been made available through continued education programs at the universities in order to meet the high demand for teachers.

There are several middle-level colleges, both public and private that offer national and international diploma awards in a wide field of professions. These are mainly located in the larger towns. There are five public universities, which mainly admit KCSE (Kenya Certificate of Secondary Education) students. In addition, there are eight private universities that mainly offer business, humanities, and other arts courses.

University Education in Kenya: In 1961 the Royal College in Nairobi was elevated to university college status. As the first step towards the introduction and development of university education in Kenya, the college entered into a special arrangement with the University of London, which enabled it to prepare students for the degrees of the University of London under the establishment of the University of East Africa. In 1963, the Royal College became the University College of Nairobi. Makerere University in Uganda and the University of Dar-es-Salaam in Tanzania were the other constituent colleges of the University of East Africa. The University of East Africa continued operating until 1970 when the University College of Nairobi attained university status, becoming simply the University of Nairobi (kenyaweb.com 2001).

In 1970 Kenyatta College was made a constituent college of the University of Nairobi; however, the University of Nairobi remained the only university in Kenya until the mid-1980s. Since then, there has been a tremendous expansion in universities in response to the high demand for university education in Kenya. The country now has five public universities, with the most recently established universities emphasizing technology and science-oriented degree programs. In addition to the five public universities, there are 10 private universities in the country offering a wide range of degree programs. They are supervised and controlled by the Commission for Higher Education, under the Ministry of Education.

The public universities are funded partly by the government and partly by the students. The students are required to pay a certain number of fees per semester, which include tuition fees, registration fees and accommodation fees. The students pay for their own meals and supplies and so require substantial amounts of pocket money. The government has a financial program that provides assistance to students, which is carried out by the Higher Education Loans Board. Students can apply for loans, which they can pay back after graduating and attaining employment.

The following are the public universities in Kenya: Egerton University, Kenyatta University, the University of Nairobi, Moi University, Maseno University College, and Jomo Kenyatta University of Agriculture and Technology. Public universities have limited admission so competition for admission is fierce.

Students who do not qualify for the public universities can enroll in the private universities, which require students to finance their studies without any financial assistance. The Higher Education Loans Board offers limited assistance for students attending private universities. The following are some of the private universities in Kenya: Africa Nazarene University, University of Eastern Africa-Baraton, Catholic University of Eastern Africa, Daystar University, United States International University-Africa, and Kenya Methodist University.

Vocational Education: Postsecondary education centers in Kenya known as polytechnics started as shadow system forms of education. According to Court and Ghai (1974) ''The shadow systems have meaning firstly in the extent to which they may complement the formal system by meeting needs which it is not covering, and in the extent to which they display principles which may have a wider application in the national system.'' Court and Ghai further explain that these shadow systems were created as alternative forms of education with the claim that, due to their flexibility, they were able to be more responsive to the needs of individuals than the existing educational institutions. Given the period the shadow systems were introduced, they were also seen as having potential to challenge the formal system, which was not accommodating the masses. Thus, they were seen as having the potential to act as a catalyst in reforming the formal system.

In Kenya the shadow system of education came to be known as village polytechnics, which later became a postsecondary semiformal schooling system. Between 1966 and 1972 there were more than 53 village polytechnics involved in training high school graduates in various vocational subjects (e.g., carpentry, accounts, welding, mechanics, catering, and teaching), leading to certificates or diploma awards (kenyaweb.com 2001). Village polytechnics started as low-cost, postprimary training centers in rural areas. At the time they were created, Kenya was producing about 100,000 primary school graduates each year that could not be employed in the modern sector of the economy. With the spirit of self-help it was believed that village polytechnics could be part of a solution to the problem presented by formal schooling, and as a means to alleviate unemployment. Court and Ghai (1974) contend that, since the village polytechnics included a diversity of activities, techniques, and organizations, it was more appropriate to treat them as an ideological movement than as an institutional prescription. In essence, they were introducing a new ideology that was an antithesis of the formal system.

Court and Ghai (1974) describe the elements and the differences between the village polytechnic and the formal secondary school system in terms of: dimensions, catchments and service, recruitment criteria, capital facilities, curriculum, medium of instruction, standards, form of instruction, leadership, organization, time period, national administration, and responsibility for graduates. Some of the key differences include: the formal system was national while village polytechnics were local; the formal system was expensive while village polytechnics were low-cost; the curriculum in the formal system was standardized and group-oriented while the village polytechnics were unbounded and individualized; the medium of instruction was English in the formal system while in the polytechnics it was vernacular and Swahili; and the formal system involved classroom teaching while the village polytechnics had an on-the-job learning focus.

In the late 1990s, the village polytechnic centers seemed to lose drive and significance, mainly due to a poor economy. While no longer viewed as village polytechnics, as most are located in cities, the main polytechnic institutions that are still in operation in Kenya include: Kaloleni Youth Polytechnic, Lamu Youth Polytechnic, Mazeras Village Polytechnic, the Mombasa Polytechnic, Mwanjila Youth Polytechnic, Mathare Youth Polytechnic, and the Kenya Polytechnic.

There are also colleges that started as polytechnics and then converted to colleges, including Strathmore College of Accounts and IT, Utalii College, Kenya College of Communication Technology, and Bungoma Bible School. These colleges are examples of what was feared by formal education advocates, that polytechnics would replace the formal educational system institutions. To some extent this actually happened, which helped triggered the formal education reform movement. However, most of the changes in the formal educational system were instituted due to economic and management concerns.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Kenya's government is divided into ministries that deal with different government affairs. The office of the president and the vice president are in the Ministry of Home Affairs, Heritage and Sports. Each ministry has a minister, assistant ministers and a permanent secretary. In 1999 a commission on government reform was appointed to restructure the civil service in all the ministries. Before streamlining the government there were more than 15 ministries, which included: Ministry of Home Affairs, Heritage and Sports; Ministry of Finance and Planning; Ministry of Foreign Affairs and International Cooperation; Ministry of Education, Science and Technology; Ministry of Labor and Human Resource Development; Ministry of Information, Transport and Communications; Ministry of Energy; Ministry of Environment and Natural Resources; Ministry of Agriculture and Rural Development; Ministry of Tourism, Trade and Industry; Ministry of Roads and Public Works; Ministry of Health; Ministry of Local Government; Ministry of Lands and Settlement; and the Office of the Attorney-General.

Sifuna (1990) reports that, in the late 1950s, the number of Europeans students started to decline in the European segregated schools as their parents left Kenya due to constitutional changes that gave Africans more power. The colonial government attempted to provide multiracial education at different levels. The first initia-

tives were taken in 1957 when several schools started to admit African students, including Hill Primary School in Nairobi, which was partially financed by the Colonial Development and the Welfare Fund from London; and the Outward Bound School at Loitoktok, which invited a multiracial group of students to climb Mount Kilimanjaro. Most European and Asian schools began to integrate their schools just prior to independence in 1963, admitting Africans who could afford to pay fees or qualified for government bursaries.

After independence, there was increased internal pressure for better education, which became a major political agenda along with land redistribution. The newly independent Kenyan government was faced with a tremendous task of modernizing and increasing efficiency of the government administration system that required specialized training for the developing commercial and industrial sector. This task required a high level education that many Africans did not have. Also, the government had to figure out how to manage the large, rural economy. For fear of academic education being equated to elitism, emphasis was focused on the primary and secondary levels. In developing new educational policies, the government had to deal with other factors that affected the social welfare of the country.

First, the inherited educational system had developed rapidly preceding independence. The system also had racial and regional inequalities with rigid school curriculum and examination patterns that were based on an outdated and irrelevant British model. Second, the government was faced with the need to create national unity, reinforcement of cultural identity, and reduction on reliability of foreign assistance. The third issue was economic constraints that affected the educational development.

There are aspects of educational development that have evolved with the help of foreign agencies, such as the Kenya Institute of Special Education (KISE), a government institution supported by the Danish government (DANIDA). The institute was formally established through legal Notice No 17 of 14 February 1986. KISE provides educational assistance to disabled children, youth, and adults. The main functions of KISE are training teachers and other personnel to work in the field of special education; functioning as a resource center for the production and dissemination of information on handicaps; offering educational and psychological assessment for children with handicaps; and administering distance education courses.

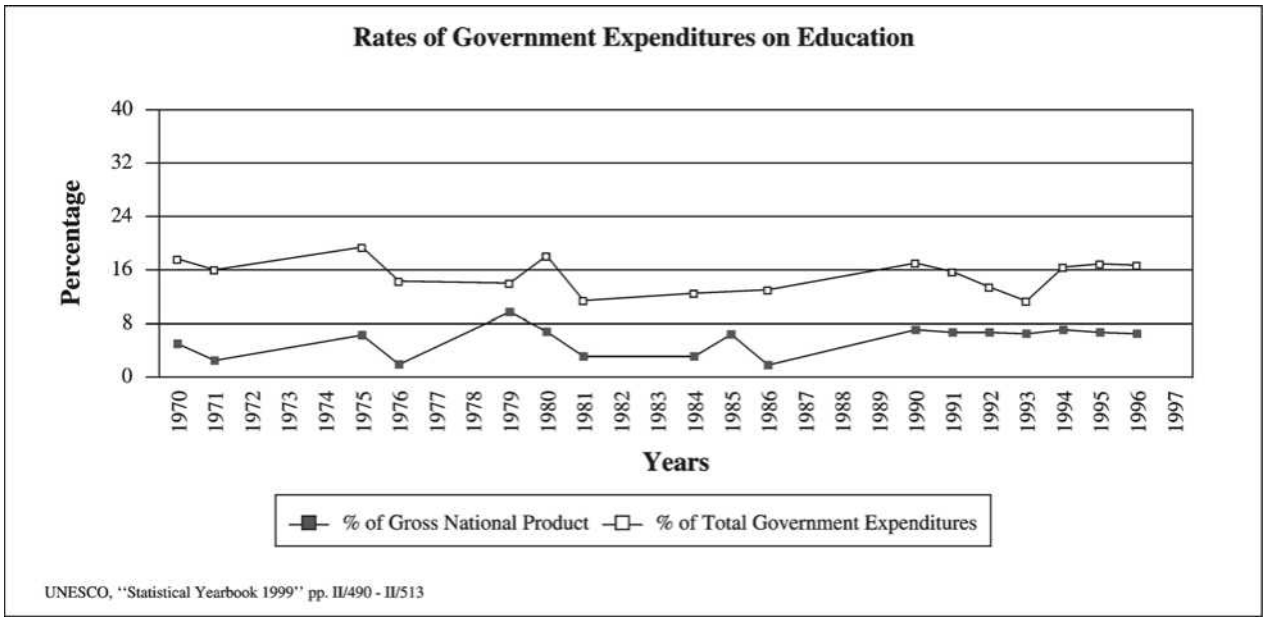
NONFORMAL EDUCATION

Nonformal education (*Elimu ya Gumbaru*) was previously under the Ministry of Social and Cultural Affairs, but was moved under the Ministry of Labor and Human Resource Development. There are other nongovernmental agencies (NGO) that serve as nonformal education resources, such as the Ministry of Culture and Social Services, which was created to provide services to help eliminate illiteracy among Kenyan adults.

During the fifteenth anniversary of Kenya's independence in 1978, President Daniel Arap Moi decreed that a national program be launched to eradicate illiteracy. The Department of Adult Education in the Ministry of Culture and Social Services was then established to spearhead the promotion of literacy and adult education. It included 3,000 full-time adult education teachers. Another 5,000 part-time teachers and many volunteers provided their services after short induction training courses in adult education. Since most adult education teachers had not received adequate training as teachers per se, the training courses helped prepare them to become effective facilitators in the literacy and adult education program. The courses for adult education teachers were a joint venture between the Kenya Institute of Education, the Department of Adult Education, the College of Adult and Distance Education, and the University of Nairobi (kenyaweb.com 2001).

The University of Nairobi has a faculty of external degree studies program that was established in its distance teaching program in 1985. The faculty is part of the College of Adult and Distance Education (CADE), which is one of the six colleges of the University of Nairobi. It is located at Kikuyu Campus outside of Nairobi. The program started within the Department of Education to train teachers in arts and later in science subjects. There are future plans to include implementation of legal and business studies. The University of Nairobi faculty also assists with the training of staff who work in the program, along with other organizations that are involved in distance teaching programs, such as AMREF (African Medical Research Foundation), Kenyan Cooperative College, and INADES Formation, which respectively provide courses for health workers, cooperative personnel, and farmers.

The staff of the faculty of external degree studies have also organized training in several countries in Africa including Zambia, Namibia, Zimbabwe, Somali, Botswana, Mauritius, Tanzania, and Swaziland (kenyaweb.com 2001). Specific program objectives of the external degree studies program are to provide learning opportunities for those aspiring Kenyans who cannot secure places in the existing internal faculties of universities; an alternative and innovative method of learning; an opportunity for people to learn at their own pace; and an opportunity to maximize the use of limited educational resources by making university education available beyond the lecture halls. Courses taught in the distance education mode in-



clude the bachelor of education (arts), bachelor of education (science), and a postgraduate diploma in education.

Arts courses include subjects in education, geography, mathematics, economics, business studies, history, religious studies, English literature, and Kiswahili. Science courses include biology, chemistry, physics, and home science. The program takes six years to complete. Entry requirements for the degree program are the same as for the rest of the University of Nairobi. All students with prescribed entry qualifications for admission are eligible. Applicants for the postgraduate diploma must hold a degree in at least two teaching subjects and have a minimum of two years teaching experience.

The academic year consists of two semesters of 13 or 15 weeks, with the year beginning in June. External students are expected to take examinations at the same time as internal students. These examinations are usually taken at the end of each academic year. External students need to notify the dean of the faculty at least three months in advance if they are ready to take an examination in any of the units they have studied.

Unit cost per student is usually estimated at being 14 percent less than it is for internal students. The classes are taught in English.

TEACHING PROFESSION

There were initiatives aimed at producing teachers to meet demand in Kenya and East Africa before Kenya's independence. One of the initiatives was the 1960 Teachers for East Africa Project (TEA), a joint Anglo-America initiative to provide secondary schools teachers for the rapidly expanding schools in East Africa. A conference was held in December 1960 in the U.S. state of New Jersey by the American Council on Education to secure secondary teachers for East Africa. After the conference, the United States Agency for International Development (USAID) financed the project and the Teachers College of Colombia University recruited the candidates. Makerere University College in Uganda also launched a postgraduate diploma course for British teachers who did not have teaching qualifications. After the completion of the course the teachers were posted to teach in East African schools that included Kenya.

To become a teacher before independence, one had to complete only eight years of schooling. The change from the 4-4 to the 7-4-2-3 system after independence increased the need for more teacher training institutions. In 1969 there were 24 primary teacher training colleges and two main universities. The number of trained teachers increased from 2,400 in 1969 to 2,500 in 1970. In order to meet the demand created by the 1970-1974 educational development plan that almost doubled school enrollment, the number of trained teachers jumped from 2,900 to 3,475 between 1971 and 1974.

Kenyatta and Nairobi Universities and Kenya Science Teachers College trained the secondary school teachers. By 1969 the total number of trained secondary school teachers from the three institutions was 380, with a shortage of teachers amounting to 1,449. The 1970-1974 educational development plan aspired to increase the total number of secondary school teachers from 417 to 670.

Training & Qualifications: Under the Kenya government policy to provide in-service training for unqualified primary school teachers, the Ministry of Education collaborated with the College of Education and External Studies to create a distance learning program so teachers could continue to teach while taking classes. In this venture, the materials were developed and tested before being adopted by the program. Since the early 1980s, the in-service training of primary school teachers through distance learning has become a permanent and parallel feature of teacher training in Kenya.

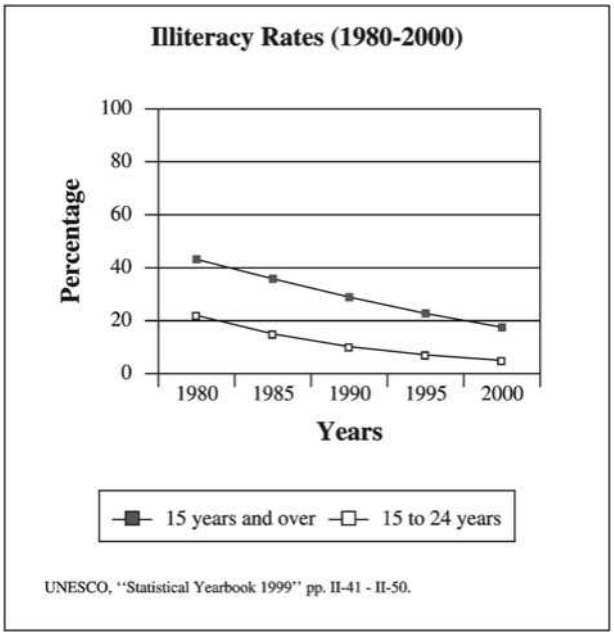
The Kenya Institute of Education plans to start another training program for qualified and unqualified teachers. The purpose will be to provide additional skills in the administration of schools and in some selected subjects that, according to national examination results, are not being effectively taught. This training will be extended to teachers in polytechnics, as most teachers in the polytechnic institutions do not have any initial formal training. Thus, the training program can help teach them relevant skills, enabling them to be more efficient in the classroom.

The Ministry of Education recruits and sponsors all the students. However, candidates must satisfy the following minimum requirements to become eligible:

- Candidates must have at least KCE Division 3 or its equivalent
- Candidates must have taught continuously in a primary school for at least three years
- Candidates must be in the teaching service as a primary school teacher during the period of the in-service training

There are several levels of teacher certification—P1, P2, and P3. Because of the increased demand for teachers, there are some unqualified teachers (UQT) who are employed without certification and pursue certification as they teach. The UQT program started in 1964 as a correspondence tutorial course offered through radio at the recommendation of the then Kenya Education Commission. The Kenya government sought technical assistance from the USAID to establish the Correspondence Course Unit (CCU) through the Institute of Adult Studies of Nairobi University (then the Nairobi University College). At the time there were 37,923 teachers who were employed in Kenya's primary schools, of those, 10,438 were not professionally trained (certified). Among the qualified 27,485 teachers, there were 16,992 teachers who had P3 status, comprising about 60 percent of the qualified teaching staff and almost 45 percent of the total staff (Court and Ghai 1974).

For P3 qualifications, a teacher must have completed seven to eight years of primary education, depending on when they attended school, plus two years of teacher training. In order to be promoted to P2, a P3 teacher had to pass a required national exam, the Kenya Junior Secondary Examination (KJSE). In 1969 the Kenya Institute of Education collaborated with the Correspondence Course Unit in offering the CCU program along with KJSE preparatory courses to both P3 teachers and other adults who had completed primary education. Although Court and Ghai (1974) noted that the teachers who successfully completed the correspondence course compared well academically and professionally with those who had the formal teacher training from the university colleges, they also asserted that KJSE was not the most suitable curriculum for improving teachers' professional skills.



UNESCO, "Statistical Yearbook 1999" pp. II-41 - II-50.

The Kenya Institute of Education offers a Primary Teacher Certificate through the continuing education program. The certificate takes three years to complete. Required courses for the first two years include professional studies, English, Kiswahili, mathematics, science, and music. Second year courses include the addition of art and craft, agriculture, geography, history, and civics. The third year includes the subjects of professional studies, religious education, physical education, geography, history, civics, and home science. There are additional subjects that are offered in addition to the core curriculum.

All courses are taught in English and the media and methods employed are printed text, radio broadcasts, and residential schools (approximately seven weeks per year). Candidates are awarded the Certificate of Primary Teacher Education only when they have successfully completed three full years of the prescribed course of

study. A student who fails to meet the certificate's requirements is allowed to repeat either the examination in the subjects in which they failed to meet the requirement, or perform practical teaching, or both. Grades are accumulated until the requirements for the certificate are met. The certification for teachers are in two classifications: teaching and training skills in general, and primary education, which includes preschool (kenyaweb.com 2001).

SUMMARY

Historically, the Kenya educational system underwent drastic and rapid changes within a short period. As in most African countries, Kenya has been faced with a fast population growth rate and low economic development that contribute to an environment where the educational system is very competitive and high educational attainment does not guarantee occupational mobility (Buchmann 2000). Kenya has accomplished its goals of educational development since independence, according to the normative and organizational triumph of mass schooling theory. The promotion of education, along with credential inflation, resulted in the slow growth of wage employment and an overabundance of educated job seekers. As Buchmann (2000) points out, the result has been a highly expanded educational system that rivals those in the most industrialized countries in terms of its complexity and competitiveness. At the same time the strength of extended kinship networks and the prevalence of polygyny along with a high demand of agricultural economic base indicates very little has changed for the better.

The educational system in Kenya alienated the masses from their traditional cultural ways, which served as the fabric to sustain a healthy climate in the society. Thus, the educational impact on society has resulted in corruption and institutional breakdown, lack of infrastructure to utilize the human capital available, and, above all, the disillusionment that education does not equal economic or social mobility. As a result, education has become a handicap, leading to oppressive social, economic, and psychological conditions. The symptoms that have surfaced are a decline in ethnic pride, patriotism, and the attitude that ''what is Kenyan has no value, but that which is imported is much better,'' and urban life is better than rural. Another impact is the loss of skilled workers who cannot flee to other countries for improved economic conditions. The future of the Kenyan educational system is uncertain; however, the Kenyan people appear to still believe in education as progress, and future reforms may consider including character education, which would foster moral ethics and a revitalization of indigenous cultures.

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—P. Masila Mutisya

KIRIBATI

BASIC DATA

Official Country Name:	Kiribati
Region:	Oceania
Population:	91,985
Language(s):	English, Gilbertese
Literacy Rate:	NA

The Republic of Kiribati consists of 33 coral islands and is located in the central Pacific Ocean, halfway be-

tween Hawaii and Australia. Kiribati gained independence from Britain in 1979 and has a population of 91,985 people (July 2000 est.). Kiribati are generally described as Micronesian, and many speak Gilbertese, a Micronesian dialect, on the islands surrounding the capital island of Tarawa. However, English is the official language and is most commonly spoken on Tarawa and is understood in all government offices.

Education in Kiribati is free and compulsory for ages 6 to 13. Primary education includes the first seven years: classes one to six. The 110 government-funded primary schools throughout the islands enroll 17,594 students (approximately 49 percent female) and employ 727 teachers (approximately 62 percent female). In 1997, some 75 students were retained in a primary grade because of inadequate academic performance. Educational attainment in Kiribati is largely restricted to the primary level; this is principally the result of a lack of availability and cost of secondary and tertiary schools on the islands.

Secondary education (classes 7 through 11) placements are competitive and based on scores from a National Entrance Examination. Less than 20 percent of primary school children receive any secondary education. In 1997, there were 1,901 students enrolled in secondary schools. Students who wish to continue to receive education beyond the primary level, but are unable to find placement in a secondary school, may continue for another three years in Classes 7-9.

In 2001 there were 6 academic secondary schools, which employed 192 teachers throughout the republic, providing technical, professional, and administrative training. These include the Catholic Senior College on North Tarawa, the Catholic Junior College on Abaiang, the Hiram Bingham High School on Beru, the Seventh Day Adventist on Abemama, the South Tarawa-Moroni High School (Mormon), and the King George V (boys' section) and Elaine Bernacchi (girls' section) on Tarawa.

Since 1973, the University of the South Pacific has had an extension site in Kiribati. It is connected to the main campus in Fiji via satellite and radio telephones. However, most students from Kiribati attend the University of the South Pacific in New Zealand or Australia on funded scholarships. Other institutions of higher learning include the Tarawa Technical Institute, which offers technical and vocational courses; a maritime training school, which prepares students for careers at sea; a teacher training college, which produces the majority of teachers on the islands; and a nurse training school.

The Ministry of Education oversees education in Kiribati. Control of educational issues is given to the Minister of Education who appoints a permanent secretary. Administration is centralized with little authority given to individual schools. The government, churches, and parents provide funding for the educational system. In 1993, educational expenditures accounted for approximately 25 percent of the national budget. Curriculum development for the schools is conducted through the Ministry's Curriculum Development Center in Tarawa. As of April 2001, Kiribati had not participated in any international or local research studies to assess the effectiveness and provision of education in the republic. However, the literacy rate was estimated to be about 90 percent.

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—Greg Forehand and Sanna J. Thompson

KUWAIT

BASIC DATA

Official Country Name:	State of Kuwait
Region:	Middle East
Population:	1,973,572
Language(s):	Arabic, English
Literacy Rate:	78.6%
Number of Primary Schools:	286
Compulsory Schooling:	8 years
Public Expenditure on Education:	5.0%
Foreign Students in National Universities:	2,694
Libraries:	18
Educational Enrollment:	Primary: 142,308 Secondary: 224,293 Higher: 29,509
Educational Enrollment Rate:	Primary: 77% Secondary: 65% Higher: 19%

Teachers:	Primary: 10,798 Secondary: 21,187 Higher: 1,691
Student-Teacher Ratio:	Primary: 13:1 Secondary: 11:1
Female Enrollment Rate:	Primary: 77% Secondary: 65% Higher: 24%

HISTORY & BACKGROUND

The modern State of Kuwait lies at the northwestern end of the Persian Gulf, or the *Arabian* Gulf—as the Arabs prefer to call the body of water separating the Arabian Peninsula from Iran. In ancient times Iran was known as the Kingdom of Persia, from which the descriptor *Persian* came to be used in the West as the proper adjective for describing the Gulf. But to the Arabs, it is the Arabian Gulf, and to avoid causing offense on either side, the Persian/Arabian Gulf is usually referred to as merely *the Gulf.*

Flanked to the north and northwest by Iraq, and bordering Saudi Arabia to the south and southwest, Kuwait occupies a position of strategic importance in the Gulf region. The land area of Kuwait amounts to 17,818 square kilometers (6,969 square miles). With a coastline of 195 km, Kuwait's access to the waters of the Gulf is a coveted asset. The ease of oil-export enjoyed by the Gulf littoral states is an added bonus for the petroleum producing nations of the Gulf Cooperation Council (GCC). From the west, the desert plain of Kuwait slopes from 300 meters above sea level to the shores of the Gulf. The southern regions of Kuwait are generally flat, although there are a number of depressions, sand dunes, and escarpments in the northwest. Off the coast of the mainland are nine islands belonging to Kuwait: Failaka, Bubiyan, Miskan, Warba, Auhha, Umm al-Maradim, Umm al-Naml, Kubbar, and Qaruh.

Kuwait's head of state is HH (His Highness) Sheikh Jaber Al Ahmad Al Jaber Al Sabah. Arabic is the official language, and Islam is the state religion, although there are a very few non-Muslim Kuwaitis, Christians originally of Iraqi or Lebanese origin. There are also Christians, Hindus, and Parsees among the expatriate communities who are allowed to practice their religious faiths with a fair degree of freedom. The population of Kuwait as of 1997 was 2,152,775, and at 3.35 percent, Kuwait has one of the highest population growth rates in the world. But of the total population in 1997, only 745,189 were Kuwaiti nationals, the rest being expatriate workers residing in the country, providing their services in areas such as banking and commerce, or providing the manual labor needed in areas such as construction and cleaning. The exact population statistics are hard to determine due to factors such as illegal entry of foreign workers and a large number of stateless Arabs collectively referred to as *bidoon,* or ''without [nationality].'' These stateless Arabs are a mix of descendants of desert Bedouin who never registered as citizens in the 1960s, as well as immigrants from surrounding countries. Asian and foreign Arab workers comprise by some estimates around 90 percent of the labor force in Kuwait. More conservative estimates place the foreign labor population at around 70 percent of the total populace.

Foreign laborers have quite literally built modern Kuwait, including the ultramodern city buildings and the country's infrastructure of roads, communications networks, and industrial operations. Without foreign workers, Gulf states such as Kuwait would not enjoy the level of prosperity that they do. Foreign workers provide the hard labor needed in the Gulf region for any profit to be realized from the geological stroke of fortune that has placed more than half of the world's known oil reserves in the hands of the Gulf states. But the harsh treatment of foreign laborers has drawn increasing international attention. Gulf states have been known to violate workers rights, housing them in squalid labor camps, withholding pay, providing dismally low wages for grueling and dangerous work in what might be described as a modern form of slavery or indentured servitude. Rioting in Kuwait by enraged laborers in the late 1990s shocked Kuwait, particularly because it is the only Gulf country where trade unions are legal.

In a tense, war-torn region of the world, the security of the Gulf region's extremely affluent oil states has been threatened in recent times by the Iran-Iraq War (1980-88), by the hegemonic designs of Iraq and the Gulf War (1990-91), and by serious social problems hidden beneath an outward appearance of prosperity, Westernization, and modernization. The purported historical claims to Kuwait that Iraq resurrected periodically throughout the twentieth century, most dangerously in the 1990 invasion of Kuwait, constitutes a repeated serious threats to Kuwaiti sovereignty. Even since the expulsion of Iraq from Kuwait by coalition forces, the saber-rattling of Kuwait's aggressive northern neighbor continues. For example, Baghdad labeled Kuwait's celebration of Liberation Day on February 26, 2001, as ''provocative.'' Without the U.S.-led intervention and eventual expulsion of Iraqi forces, Kuwait would have been annexed as the de facto nineteenth province of Iraq. If past history is an indicator of future actions, Kuwait may face further challenges to state sovereignty in the early years of the twenty-first century.

In its past history Kuwait was but a small town with a wall around it, referred to as *Qurain* (or also *Grane*) in the 1600s. Qurain is derived from the Arabic word *qarn,* meaning a high hill. The name Kuwait is derived from the Arabic *kout,* meaning a fortified house built next to water. The plural of kout, or *akwat,* is the source of Kuwait, and the term was used to refer to towns comprising a number of castles and fortified homes surrounded by walls. Thus, the historical description of Qurain (Grane) or Kuwait (kout/akwat) as a fortified town adjacent to water came to be used as the proper name of not only the city of Kuwait, but also the state of Kuwait itself.

The country has benefited from the oil revenues generated since the discovery of oil in 1938. Other areas of economic development in Kuwait in addition to oil exports have included manufacturing industries, petrochemicals, foodstuffs, building materials, trade, real estate, communications, and transport. Although Kuwait has generally recovered, economically speaking, from the Iraqi invasion and occupation of 1990-91, the rebuilding and the financing of the war effort drained hundreds of billions of dollars from Kuwaiti financial reserves, a serious blow to what had been an extremely comfortable state of existence.

It was on June 19, 1961 that Kuwait transitioned from its status as a British protectorate since 1897 to become an independent, sovereign state. A draft constitution was approved on November 11, 1961, outlining Kuwait's system of governance as a ''fully independent Arab State with a democratic style of government, where sovereignty rests with the nation, which is the source of power.'' In the *Amir,* or national head of state, is vested the legislative authority in combination with the elected National Assembly. Executive power resides exclusively with the Amir, his cabinet, and his ministers.

In this context of a constitutional democracy, with the super affluence brought about through oil revenues, Kuwait was transformed from a poor city-state dependent upon fishing, pearling, and trade for subsistence, into an ultramodern nation-state able to provide the highest level of social services and welfare benefits that money can buy for its citizens—not to mention a comfortable level of living for about 1.5 million expatriates living and working in Kuwait. The early development and independence in relation to other Gulf states resulted in the states of the lower Gulf looking to Kuwait as a model for their own social welfare systems, particularly education. Social development has been a priority of the Kuwaiti government, and oil wealth has made possible the use of the latest technologies and resources in education and the social services sectors. However, that wealth has also created unique—and even enviable, from the developing world's vantage point—challenges for the government and citizens of Kuwait. In education, at the outset of the twenty-first century, the challenge has been one of reforming the educational institutions and training centers in order to align them with the needs of the labor market in the process of moving young, educated nationals into gainful and productive employment.

Constitutional & Legal Foundations

The Constitution of Kuwait, adopted on November 11, 1962, outlines the system of governance as a constitutional, democratic monarchy. As an emirate (analogous to a state or province), Kuwait has as its head the *amir,* who according to the constitution must be of the al-Sabah family descended from the late Mubarak al-Sabah. Islam is the state religion, and *Shari'a* (Islamic law) is the main source of legislation. As an Arab nation, the official language is Arabic, and the country is a part of the greater Arab nation and Islamic *umma* (Islamic nation/community). By a fortunate turn of events, Kuwait's status as a democracy came to be a valuable asset during the course of the Iraqi occupation. Kuwait garnered American support through a public relations drive and ''free Kuwait'' education campaign. During the Gulf War some journalists asked why the United States should support a nondemocratic form of monarchical rule. Kuwaiti representatives were able to respond with an explanation of the constitutionally affirmed status of Kuwait as a democracy.

In the constitution of Kuwait, in line with the Islamic principles of societal governance as decreed by the *Quran,* the state is seen as holding the responsibility for educating and protecting the Kuwaiti youth. Article 10 summarizes the protective duties of the state with regard to morals, physical well-being, and spiritual well being: ''The State cares for the young and protects them from exploitation and from moral, physical, and spiritual neglect.''

Articles 13 and 14 specifically state the government's commitment to provide education, and to promote the arts and sciences. Article 13 states that ''education is a fundamental requisite for the progress of society, assured and promoted by the State.'' Article 14 continues by saying that ''the State shall promote science, letters, and the arts and encourage scientific research therein.''

Further on in the constitution, Article 40 outlines the right of every Kuwaiti citizen to obtain an education. Also highlighted are the commitments to eradicating illiteracy. The exact text of Article 40 reads as follows:

1. Education is a right for Kuwaitis, guaranteed by the State in accordance with law and within the limits of public policy and morals. Education in its preliminary stages is compulsory and free in accordance with the law.

2. The law lays down the necessary plan to eliminate illiteracy.
3. The State devotes particular care to the physical, moral, and mental development of the youth.

The Kuwaiti government's role as benefactor to artistic and scientific endeavor, protector of youth, and provider of educational and training services, has transformed the social services sector of Kuwait into one of the most generous welfare systems in the world. For Kuwaiti citizens, education is not just a privilege, but a guaranteed constitutional right.

EDUCATIONAL SYSTEM—OVERVIEW

Since the oil boom that began in the 1950s the social changes in Kuwait have accelerated rapidly. Before the super affluence caused by oil, Kuwait was a poor sheikdom, economically and technologically undeveloped, a state with people eking out a living through fishing, pearling, herding, and trading. The developments of the 1950s and decades following attracted many Arabs from poorer countries of the Middle East, so that by 1970 less than half of the 738,662 residents were national Kuwaitis. Times were changing fast, and Kuwait was moving toward a comfortable, sedentary urban lifestyle, leaving the ''grunt'' work to the foreign laborers.

Early Educational Foundations: From having only a few Quranic schools providing religious instruction and basic Arabic literacy tutelage at the onset of the twentieth century, Kuwait entered the twenty-first century with one of the most generous, comprehensive, and technologically sophisticated educational infrastructures in the Middle East. In 1912 the Al Mubarakiyya school was founded as Kuwait's first modern educational institution. Al Mubarakiyya was funded by merchants to supply clerks who had a basic foundation in commerce, good arithmetic skills, and letter drafting skills. Later, subjects such as history, geography, and art courses were introduced to the curriculum. The first school in Kuwait to offer English began in 1921, the Al Ahmadia School, and shortly after that the first girls' school was founded, offering instruction in Arabic, home economics, and Islamic studies.

In the 1930s, after the devastation of the pearling-based Kuwaiti economy, the modern period of education in Kuwait was underway. Education was placed under state control in 1935, marking the beginning of public education. Teachers from Palestine founded an educational mission, students were sent abroad to receive an education, and new schools were founded. Four primary schools opened their doors. Three of these schools had a combined total of some 600 boys, and the other primary school was for girls with 140 pupils. A national education department was instituted in 1936 to oversee the government schools, and teachers from Egypt, Lebanon, Iraq, Syria, and Palestine initiated the development of a program for secondary education in Kuwait. By 1945 there were 17 schools in the country.

Development continued intermittently until the rapid changes of the 1950s. From then rapid acceleration of educational development ensued with the founding of special education facilities, the founding of the first kindergarten schools, and the opening of the first technical college in academic year 1954-55. There were 80 students enrolled in the first year, and the program grew quickly to accommodate an increasing number of fields of study. In 1956 the Institute for the Blind was inaugurated with the enrollment of 36 children. By 1973 approximately 1,644 special needs students—deaf, blind, or otherwise handicapped—were enrolled in 11 institutes of special education. In 1963 Kuwait started adult education programs for women, following similar programs begun for men in 1958. By 1960, their education system had enrolled 45,000 students, 18,000 of which were girls. The education department officially became the Ministry of Education in 1962, and the ministry was to chart the directions for educational development over the course of the decades ahead.

State Education: Looking back 20 years from the turn of the millennium to analyze the involvement of Kuwaiti nationals in the educational process is a reminder of the progress that has been made, especially in terms of the ratio of national to expatriate teachers. In 1982, there were 24,367 teachers of whom 6,478 were Kuwaiti. By academic year 1997-98 there were a total of 27,359 teachers in state schools (excluding another estimated 10,000 more teaching in private schools), of whom 17,357 were Kuwaiti. From an approximate ratio of 1:3.76 (Kuwaiti to expatriate) in 1982, the ratio changed to approximately 1.7:1. The state succeeded in promoting the *Kuwaitization* of the educational process in terms of more than doubling the number of Kuwaiti teachers from the early 1980s to the late 1990s. The dependence on foreign professional educators was reduced, but as will be demonstrated shortly, the Kuwaitis' greater involvement in the teaching profession occurred mainly at the lower levels of education, particularly in the primary schools of Kuwait, and the entry of men especially into the teaching profession was strictly at the lower levels of schooling.

The transformation of Kuwait into a modern society replete with a dazzling variety of educational institutions results from the government's early decision to distribute the oil revenues among the citizenry through investments in education as well as healthcare, social welfare, and housing. By the late 1990s there were 300,000 students in state schools in an education system to which the gov-

ernment devoted 5.5 percent of the GNP, 8.9 percent of the total yearly government expenditure.

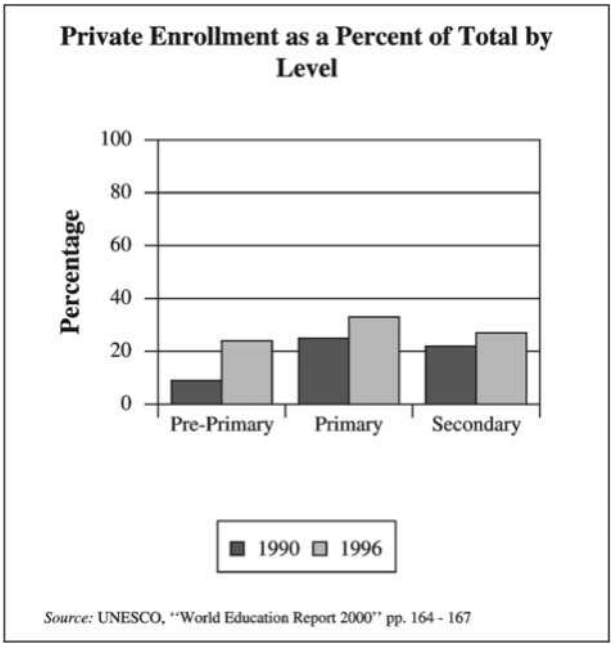
Education is offered to all Kuwaitis free of charge, and as it has been since 1966, education is compulsory for ages 6-14. Today, educational development represents the foundation of the Kuwaiti government's commitment to utilizing the country's human resource base and meeting the social developmental challenges of the new millennium. The state guarantees an educational slot—at every level of education—for every citizen of Kuwait who wishes to pursue an education. And the number of schools alone testifies to the government's willingness to accommodate the educational needs of its people.

General education in Kuwait comprises elementary, intermediate, and secondary school instruction. In 1995 there were 861 state and private schools and institutions falling into these three categories. Of these schools and institutions, 586 were government schools enrolling 280,709 students (140,979 female, 139,730 male). In the private schools there were 113,857 students (52,991 female, 60,866 male). Beyond the general level of education, institutions such as Kuwait University, applied educational centers, and colleges offer training in fields such as technology, education, commerce, health studies, communications, surveying, electrical and hydroengineering, industry, and nursing. As of academic year 1995-96, 4,355 students were enrolled in these applied educational facilities, 4,248 of whom were Kuwaiti.

At the university level, Kuwait University, established in 1966, has evolved to the point where it offers a range of academic courses. Students can choose from academic courses such as studies in the humanities, scientific and educational specializations, or specializations in the social sciences. In the academic year 1995-96, 16,691 students registered for studies at Kuwait University, and of these students, 15,163 were Kuwaiti while 906 students came from neighboring Gulf countries. The teaching staff comprised 845 educational professionals from various Arab and foreign countries.

Private Education: Private education is an important component of the education system in Kuwait. Private schools are subsidized by the government, and they enroll roughly one third of the school age children in Kuwait at the elementary, intermediate, and secondary levels. The following sampling of the relevant enrollment data with regard to private schooling in Kuwait for the 1998-99 school year was obtained from Kuwait Information Office Education Statistics.

- Grades N-12 at the Al-Bayan Bilingual School had an enrollment of 1,131 students.
- Grades pre-K-12 at the Fawzia Sultan International School had an enrollment of 48 students.



- Grades K-U6 at the New English School had an enrollment of 1,750 students.
- Grades K-12 at the American International School in Kuwait had an enrollment of 1,155 students.
- Grades pre K-12 at the American School in Kuwait had an enrollment of 1,270 students.
- Grades K-A level at the British School in Kuwait had an enrollment of 1,300 students.
- Grades N-12 at the Universal American School had an enrollment of 1,200 students.

Other private schooling alternatives exist such as the Gulf English School, the American Academy for Girls, and the Kuwait French School. Parents who wish to enroll their children in private schools have the option of choosing from schools using various curricula and languages of instruction.

Outlook for the Twenty-First Century: As much as the prosperity of the Gulf oil states has enabled rapid development and a high level of social services, it has also created a great number of serious challenges to the stability of the Gulf states. The external appearance of wealth and modern development in Gulf states is deceptive in certain respects. While it is true that Kuwait possesses 9.5 percent of the world's proven oil reserves (out of the 64.9 percent of all the Gulf states combined) and many of its residents are fabulously wealthy, the revenues from oil are very modest when compared to the GDPs of the developed world. The fluctuating price of oil inhibits the reliability of long-term planning and development, espe-

cially when the price per barrel bottoms out on the world market as it did in the 1980s and 1990s. Gary G. Sick points out that the Gulf states have operated on a deficit budget since the mid-1980s due to low oil prices. He also states that the combined GDP of the Gulf states (Saudi Arabia, Iraq, United Arab Emirates, Kuwait, Iran, Oman, Qatar, Bahrain) is scarcely the size of Switzerland's, a country of just more than 6 million people. What gives the Gulf states their illusion of wealth is the fact that a relatively small number of people control substantial petroleum reserves and easy access to world markets via Gulf shipping. The Gulf states have had to deal with the budgetary uncertainties accompanying the vagaries of the oil market; they have had to grapple with problems created by the dominance of the public sector; the dominance of foreign labor; unemployment both visible and hidden; inadequate revenues for burgeoning populations; and an absence of popular participation in the governing process with the notable exception of Kuwait, which as a constitutional democracy has an elected representative body.

The public sector continues to dominate the job market, stifling productivity and efficiency. With the oil revenues and the influx of foreign workers in the 1970s, government jobs became little more than sinecures: ''It was common knowledge that most Kuwaiti civil servants did practically no work in their jobs'' (Nath 1978). In the 1970s the Kuwaitis, as other Gulf nationals in Saudi Arabia and the United Arab Emirates for example, were well on their way to becoming sedentary, content to live off the social welfare provisions of the state, relying overwhelmingly on the labor and services of the highly motivated expatriates who in turn remitted most of their earnings back to their home countries.

The Arab Gulf states' citizens have thus come to a unique and socially troublesome place of becoming minorities in their own countries, depending on imported labor in both the private and public sectors. In 1995, an estimated 82 percent of the Kuwaiti workforce were expatriates, on a par with other Arab Gulf nations (UAE 90 percent; Qatar 83 percent; Saudi Arabia 69 percent; Bahrain 60 percent). Unemployed and nominally employed nationals who have come to depend on the state for easy jobs and comprehensive welfare are a dangerous variable in the social equation, especially when changes could come to force a reduction in benefits. There are also the dangers of the dominant foreign worker population being seen as adversely affecting the Arab Gulf cultures and traditions, and the attraction of the fundamentalist Islamic movements offering an alternative to the perceived Western ''evils'' which might also be blamed for bringing on social and other problems. There is also the possibility of real employment being desired yet unattainable due to a social system that has not provided nationals with skills to match the actual needs of the labor market, but instead has acclimated them to a comfortable lifestyle with little work required.

In the last decades of the twentieth century, Arab Gulf states saw an astounding rise in their populations due to an official policy of promoting population growth through incentives such as marriage funds and stipends for each child. There were also tremendous opportunities for obtaining a high-quality, high-technology education in state-of-the-art facilities, and going abroad for further training was an option for both graduates and undergraduates. But the new waves of graduates, having received from their state schools a nominal college or university education, were unmotivated to enter private sector employment. And just as unmotivated as graduates were to take up private sector jobs, employers were equally unmotivated—if not actually more so—to hire Gulf nationals. They could hire Pakistanis, Indians, Bangladeshis, and other nationalities for much less cost and hassle. A Gulf national wanted a higher salary, costly benefits, short and flexible work hours, and a ''cushy'' work atmosphere. For such a dilemma, ''[t]he solution was as clear as it was painful: higher standards and more practical educational training for national students to make them more competitive; unrelenting reduction in the number of work visas awarded to foreign laborers; and a leveling of the wage/benefit disparity between nationals and nonnationals... the short-term effects would be sectoral labor shortages, inflation, and outrage from the powerful commercial interests. None of the governments were willing to pay that price'' (Sick 1997).

The social unpopularity of such decisions meant that none of the Arab Gulf states were willing to take such measures. Hence, conferences addressing education in GCC countries cite the mismatch between education and training in their countries with the labor force markets. Little correlation existed in the first years of the twenty-first century between the actual needs of the labor market and the preparatory educational and training programs of the state. Calls for reform have resulted in a shift in focus from university education to training in technical colleges and institutions. Technological innovations and stiff competition in the international markets are forcing governments to upgrade the vocational and technical qualifications of the workforce, as is particularly evident in the Gulf.

The upgrading of educational and training systems is a priority at the beginning of the twenty-first century, but the challenges of doing so are enormous. How will traditional attitudes, socioreligious values, and societal norms be accounted for? Despite school enrollment rates being high, and despite a general education being freely available as a basic right of citizens, will the actual quality of that education be improved in the near future? Will

students be receptive to the training and education received so as to obtain skills and qualifications rendering them as competitive candidates in an expatriate dominated job market? More importantly, will they *want* to work in the private sector as opposed to the bureaucratized, state-controlled government sectors? And will schools be able to graduate high-achieving workers who are more than functionally literate, and more than merely nominal college or university graduates? These are some important questions which must be addressed in reforming and upgrading the educational and training systems of the Arab Gulf states.

Privatization of schools is an option for escaping the stifling control of government bureaucracy. In a bureaucratic system, with students who are not concerned about eventually obtaining a job that they will not even really need—and who will be given a job regardless of their educational performance—teachers themselves can lose motivation and the sense of dignity in their profession. Education is more than filling up school buildings with students and teachers, and creating jobs entails much more than filling up large office buildings with workers. But it seems sometimes that this is what is happening when the motivation to work and to learn is absent. Bureaucratic state-control is a great problem when there is little, if any, external accountability and quality assurance. Instead, student results on highly subjective and unreliable national examinations are used to evaluate the quality of educational services. The all encompassing *State* may be a benevolent provider, but critics have noted what might be called the ''spoiled child syndrome'' in the demeanor of many Gulf students and citizens at large. When everything is free in an ''easy come, easy go'' way, and when the amount of work or the efficiency of performance are not correlated with an increase in benefit, then the self-motivation of students and teachers is generally low.

But in a state such as Kuwait, that faces the threat of an aggressive, covetous Iraq, a sort of collective motivation to exist and retain sovereignty seems to have arisen. Sitting back comfortably on the cushion of petrol-wealth ease is no longer an option when serious threats to national sovereignty and regional stability exist. How such motivation will be expressed in the education sector in the early twenty-first century remains to be seen.

PREPRIMARY & PRIMARY EDUCATION

According to the Kuwait Information Office Education Statistics, in the 1997-1998 school year there were 144 male and female preschool-kindergarten schools, which provided a total of 1,387 classrooms. The total number of students (both male and female) attending preschool-kindergarten was 42,226. The total number of preschool-kindergarten teachers was 2,871. Of this number 2,720 were Kuwaiti and 151 were non-Kuwaiti. There were 1,608 male elementary school classrooms and 1,593 female elementary school classrooms. Of this student population 39,621 were Kuwaiti and 2,605 were non-Kuwaiti. In elementary schools, the total number of male students was 47,388; most of these were Kuwaiti, numbering 39,970. The number of non-Kuwaiti male students was 7,418. There was a total of 3,396 elementary school teachers for male students. Of these 3,016 were Kuwaiti and 380 were non-Kuwaiti. The total number of female student in elementary schools was 47,064. As with the male student population most of these were Kuwaiti, numbering 39,872. The number of female non-Kuwaiti students was 7,192. There was a total of 4,165 elementary school teachers for female students. Of these, 3,801 were Kuwaiti and 364 were non-Kuwaiti.

Significantly, teachers at the lower levels of education in government schools are mainly Kuwaiti, but at the higher levels of education this trend is reversed among male Kuwaiti educators and evened out with regard to the ratio of foreign female teachers to female Kuwaiti educators. It seems that Kuwaiti women have more of a predilection for the teaching profession than Kuwaiti men at higher levels of education.

For women in Kuwait, teaching has been, and continues to be, a more acceptable line of work than other professions, because schools offer a gender-segregated environment conducive to the Arab Gulf tradition of cloistering females away at home behind veils of socio-religious propriety. In the early days of the 1970s oil revenue increase, educated women were more a sign of modernization and wealth than an indicator of economic need. But the shift in emphasis now is on moving qualified, educated professionals—including women—into the expatriate dominated workforce. Teaching is still seen in many ways as the most suitable profession for women in the Arab Gulf states.

Outside of government schools, government-subsidized private schools in Kuwait fill an important role in providing educational services, educating about one-third of the school-age children of Kuwait. The private schools provide an alternative to the state-controlled educational sector for those parents who desire a particular educational track for their children, for example, an American, British, Indian, Pakistani, or Filipino/school curriculum. Many expatriates living in Kuwait with their families have the option of placing a child in a school that follows a curriculum much the same as schools in their own countries. So when expatriates return home, their children will be able to easily make the transition to their own national schools. For Kuwaiti parents, enrolling their children in an English medium school not only carries

prestige, but it is a way of ensuring early exposure to and fluency in the language that has become the common language of international communication.

SECONDARY EDUCATION

According to the Kuwait Information Office Education Statistics, in the 1997-1998 school year there were 79 male and 85 female middle schools, which provided 1,488 male and 1,453 female classrooms. The total number of male students attending middle school was 45,689. Of this student population 38,389 were Kuwaiti and 7,300 were non-Kuwaiti. The total number of middle school teachers for males was 3,464. Of these 771 were Kuwaiti and 2,693 non-Kuwaiti. In comparison, the total number of female students attending middle school was 45,000. Of this student population 37,894 were Kuwaiti and 7,106 were non-Kuwaiti. The total number of middle school teachers for females was 4,881. Of these 3,759 were Kuwaiti and 1,122 were non-Kuwaiti. Additionally, there were 57 male and 59 female high schools, which provided 571 male and 671 female classrooms. The total number of male students attending high school was 33,810. Of this student population 29,106 were Kuwaiti and 4,704 were non-Kuwaiti. The total number of high school teachers for males was 3,876; of these 666 were Kuwaiti and 3,210 were non-Kuwaiti. In comparison, the total number of female students attending high school was 36,844, of which 31,759 were Kuwaiti and 5,085 were non-Kuwaiti. The total number of high school teachers for females was 4,706, of which 2,624 were Kuwaiti and 2,082 were non-Kuwaiti.

The trend higher up the educational system is one of increasing dependence on expatriate educational professionals, particularly male teachers, whereas among Kuwaiti educators the trend is clearly one favoring female educators.

HIGHER EDUCATION

Kuwait University is the major institution of higher education with programs and courses of study in the arts and sciences, education, law, Shari'a, commerce and economics, engineering and petroleum, and medicine. The university was founded in 1966 with an enrollment of 418 (242 male, 176 female). In the early 1980s there were just over 10,000 students enrolled for study at the university, and by the late 1990s Kuwait University's enrollment was nearly 18,000. The university today comprises a coeducational system of education effected through the delivery of instruction at five different campuses. In the academic year 1996-97 the university faculty comprised 942 professors and instructors, 796 of whom were male, and 146 female.

The following summarizes some of the relevant data with regard to the students enrolled in Kuwait University in the academic year 1996-97. The data were obtained from Kuwait Information Office Education Statistics. In science, there were 1,778 Kuwaiti students and 289 non-Kuwaiti students enrolled. In the arts, the numbers were 2,368 Kuwaiti students and 215 non-Kuwaiti students. Numbers for other disciplines include the following:

- Education: 2,505 Kuwaiti students and 356 non-Kuwaiti students.
- Law: 764 Kuwaiti students and 34 non-Kuwaiti students.
- Shari'a: 1,071 Kuwaiti students and 100 non-Kuwaiti students.
- Commerce and Economics:2,182 Kuwaiti students and 159 non-Kuwaiti students.
- Engineering & Petroleum: 1,845 Kuwaiti students and 148 non-Kuwaiti students.
- Medicine: 425 Kuwaiti students and 15 non-Kuwaiti students.
- Allied Medicine: 223 Kuwaiti students and 81 non-Kuwaiti students.
- Total Students for All Subjects: 13,261 Kuwaiti students and 1,397 non-Kuwaiti students.

There are twice as many Kuwaiti women studying at the university level as men. For the women, education represents the preferred major, followed by majors in the arts and sciences as well as commerce and economics. For Kuwaiti men, the preferred major is engineering and petroleum, followed by commerce and economics, the arts and sciences, and Shari'a. The low enrollment for men in education holds out little hope for more Kuwaiti men entering the educational profession in the near future, meaning the dependence on foreign male teachers will likely continue.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Kuwait belongs to the Arab GCC, founded in 1981, and whose other members include Bahrain, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The objectives of the GCC call for ''coordination, integration and unity between the member states in all fields.'' This cooperation occurs in economic and financial affairs, commerce, customs, communications, education, and culture among other areas. Joint organization relating to education includes the Arabian Gulf University and the GCC Education Bureau. The ministers of education from GCC countries hold regular sessions as do the ministers and officials from other government departments.

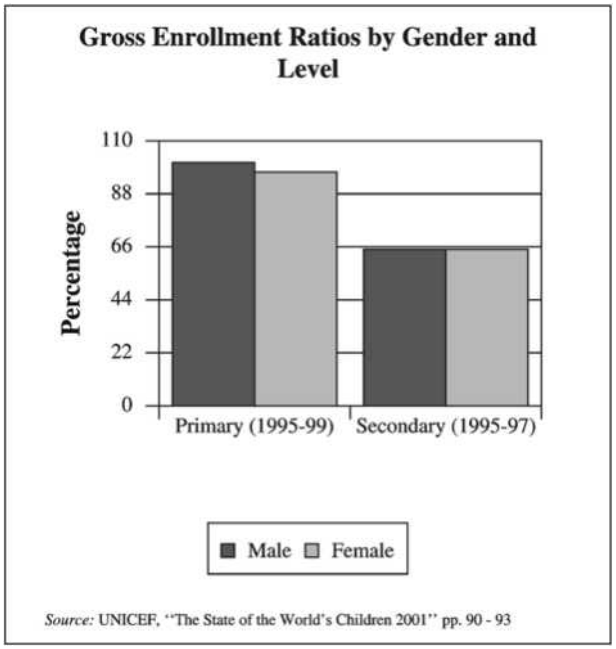
Thus, in the administration of education in GCC countries such as Kuwait, emphasis is given to the coor-

dination and calibration of educational systems with other GCC members. Arab Gulf states have a common heritage in terms of background and governmental style, and in terms of similar solutions to the similar social and economic challenges that they face. All Arab Gulf states depend heavily on foreign labor, and they all have been focusing in recent years on indigenization and nationalization of their workforce. Hence, the *Kuwaitization* of Kuwait's workforce is emphasized and effected through a reforming of the educational and training systems to align better with labor market needs, an alignment which is needed in other GCC states as well.

The following statistics show the education level of the Kuwaiti workforce. The data was obtained from Kuwait Information Office Education Statistics.

- No Formal Schooling: 9,564 Kuwaitis and 495,159 non-Kuwaitis have no formal schooling, which is 40.7 percent of the total labor force.
- Below High School: 81,432 Kuwaitis and 278,079 non-Kuwaitis have a below high school education, which is 28.9 percent of the total labor force.
- High School: 39,373 Kuwaitis and 142,518 non-Kuwaitis have a high school education, which is 14.6 percent of the labor force.
- University/Professional: 79,003 Kuwaitis and 116,191 non-Kuwaitis have obtained a university/professional education, which is 15.8 percent of the total labor force.
- Labor Force Totals: the entire Kuwaiti labor force consists of 209,836 Kuwaitis and 1,033,740 non-Kuwaitis, for a total of 1,243,126 workers.

With 8.9 percent of the government budget directed toward education, educators are well financed in the initiative to address the disparity between education and other sectors of Kuwaiti society. The low achievement standards, stifling bureaucratic controls, high levels of dropouts, and student failure are problems that the wise use of financial resources should be able to address. There exists no consensus among GCC states as to how to best address some of the common challenges in education, but research suggests privatization, development of relevant curricula, and better correlation of education with input from employers as potential ways to begin addressing some of the common educational issues in GCC member states.



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

NONFORMAL EDUCATION

A 1998 article in the *Economist* entitled ''High in the Gulf'' described young Kuwaitis as a ''drug dealer's delight: rich, westernized and bored.'' The problem of drug use in Kuwait has received increasing attention from public officials who are responding through the initiation of a public education campaign. The government has a drug rehabilitation clinic operated by a British company, and the clinic reportedly has about 1,000 regular Kuwaiti patients with an average of 15 new drug addiction cases reported each month. The frankness and openness with which this conservative Islamic nation is addressing the drug use of its youth is remarkable, and other Gulf countries seem to be taking note—for example, the United Arab Emirates, which also has major problems with drug addiction among young people.

Other notable nonformal education projects and programs in Kuwait include a number of religious schools, the Institute for the Blind, institutes for the deaf and hearing-impaired, and centers for special needs and handicapped children. Also, there are adult education and illiteracy eradication centers that provide courses for illiterate adults and handicapped people. There are also eight youth centers that in 1995-96 accommodated 8,297 young men and women, and there were also 36 training centers enrolling 8,297 students, managed by the government offices overseeing youth and education related affairs. Additionally, there are sport federations, sport clubs, and specialized youth centers such as rehabilitation centers, various sport, medical, and health awareness centers, and a Boy Scout chapter with 2,600 members.

TEACHING PROFESSION

Some of the trends that characterize the teaching profession in Kuwait have already been mentioned based on the educational statistical data available for 1997-98,

namely the tendency for Kuwaiti women to prefer educational vocations and the reliance on foreign teachers. Fewer Kuwaiti men are employed as teachers, and there are relatively small numbers of men enrolled in Kuwait University as education majors. The higher up the educational ladder, the less the participation of Kuwaiti nationals appears as another general trend that emerges from the educational statistics. But viewed diachronically, from the early 1980s to the late 1990s, the greater trend has been nearly a threefold increase in the number of Kuwaiti educators, a definite success in the plan to involve more nationals in the education system.

If Kuwaitization of the educational sector is to progress further in the near future efforts must be made to attract more male nationals to obtain educational qualifications and enter the teaching profession. Otherwise, the need for qualified teachers will continue to be filled by qualified nonnationals. This is not a bad situation for the nonnationals because the pay is generally good and the standard of living high. Also, Kuwaiti men who do not enroll as education majors are freed for service in other sectors such as the military, the police, or the commercial sectors. Why certain patterns and trends in Kuwaiti education have emerged from the statistical data are areas for further inquiry, and comprehensive explanation of such patterns and trends will be very useful for educational planning in Kuwait as well as other GCC member states.

SUMMARY

The security of Kuwait in the twenty-first century has social dimensions of which education and other social services are important components. Oil revenues have enabled GCC states such as Kuwait to provide a range of social services, but with the accelerated development and modernization have come new challenges and alterations to longstanding sociocultural and religious traditions. Tangible declines in the level of welfare services for people who have come to hold high expectations from their government could be disastrous for the social stability of Gulf states. A generous welfare system may keep citizens happy and comfortable, but it can also reinforce negative attitudes toward work. Educating citizens with regard to choices, options, and challenges is needed, particularly with regard to the needed alignment of the educational and training programs with labor market needs. Some Arab Gulf states, Kuwait and Bahrain for example, have taken steps to involve citizens in the political decision-making processes, and this will be a stimulus to hopefully even greater involvement in areas such as education.

Although the expatriate dominated workforce seems likely to continue in the near future, education can help resolve some of the frictions resulting from perceived social and cultural changes. Kuwait has had the good fortune to benefit from rapid development due to oil revenues, and the financial resources exist to meet the educational challenges of the day with a technologically advanced educational infrastructure, with qualified teaching professionals, and with an increasingly involved citizenry.

Training and educational quality assurance, integration of training and educational systems with labor market needs, a reduction in the bureaucracy of educational management, curriculum reform, review of testing procedures, and coordination between schools and employers are suggested reforms that may help Kuwaiti and other Arab Gulf nationals to free themselves from the dangerous dependence on foreign labor and the dangerous disillusionment with the comfort level provided by a benevolent state. There are some positive signs that Kuwait may be more willing than other GCC states to take some of the necessary—yet difficult and unpopular—moves needed to ensure a greater degree of social stability. Although some of the excellent traditional qualities of the Gulf Arabs seem to have been assimilated by modernization, a degree of Westernization, and a high standard of living in the age of oil super affluence, the Iraqi invasion and occupation of Kuwait testify to a resolve and spirit of resistance in the face of adversity that bodes well for Kuwait's ability to grapple with social challenges of the future.

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—John P. Lesko

KYRGYZSTAN

BASIC DATA

Official Country Name:	Kyrgyz Republic
Region:	East & South Asia
Population:	4,685,230
Language(s):	Kirghiz (Kyrgyz), Russian
Literacy Rate:	97%
Academic Year:	September-May
Number of Primary Schools:	1,885
Compulsory Schooling:	10 years
Public Expenditure on Education:	5.3%
Foreign Students in National Universities:	125
Libraries:	1,001
Educational Enrollment:	Primary: 473,077 Secondary: 530,854 Higher: 49,744
Educational Enrollment Rate:	Primary: 104% Secondary: 79%
Teachers:	Primary: 24,086 Secondary: 42,286 Higher: 3,691
Student-Teacher Ratio:	Primary: 20:1 Secondary: 13:1
Female Enrollment Rate:	Primary: 103% Secondary: 83%

HISTORY & BACKGROUND

The Republic of Kyrgyzstan is a small, mountainous, landlocked country in Central Asia approximately the size of the U.S. state of South Dakota and with a population in 1999 of 4.8 million inhabitants. Bordered by China in the east, Kazakhstan in the north, Uzbekistan in the west, and Tajikistan in the south, it was one of the smaller, more obscure constituent republics of the former Soviet Union when it declared its independence on 1 January 1991.

Kyrgyzstan gets its name from its largest ethnic group, the Kyrgyz. Originally a group of nomadic peoples from the southern Siberian steppes, they migrated south between the eleventh and sixteenth centuries into modern day Kyrgyzstan. As a nomadic people, the Kyrgyz did not possess a written language until it was transcribed around 1862, using the Cyrillic alphabet. This period also saw the beginning of Russian colonization of Kyrgyzstan, a migration that today has resulted in a significant number of ethnic Russians living in Kyrgyzstan. When the Kyrgyz arrived in present day Kyrgyzstan, they encountered a sedentary people in the flatter more southerly areas, the Uzbeks. Thus today the country is made up of 65 percent Kyrgyz, 12 percent Russian, and 13 percent Uzbeks with a very small number (less than 1 percent) of Tadjiks, Ukrainians, Koreans, and Jewish ethnic minorities. This breakdown, however, conceals regional differences whereby Russians are concentrated in the major cities, Uzbeks constitute a majority in the south, and ethnic Kyrgyz are predominant in the more mountainous and rural areas.

Russian presence and influence in Kyrgyzstan was particularly significant following the Russian revolution of 1917-1918. At this time central Russian control was exercised by the placement of Russians in positions of authority. Moreover, the educational system for the 70 years of Soviet control was based exclusively on the Russian/Soviet model of Marxist-Leninist orthodoxy, a system that today is generally being replaced by a more western capitalist model and curriculum. Therefore, understanding the Kyrgyz educational system invariably involves an understanding of the Soviet system that it replaced and the changes in the external and internal educational environments that have occurred since 1990. In addition to this environment is the emergence in certain parts of the country, particularly the south, of an Islamic system of schooling. This reflects both that the Kyrgyz and southern Uzbeks and Tadjiks are followers of Islam and that religion is a force in the cultural base. Thus there is a rise in Islam as a force in education in the country.

The period of Soviet control was particularly marked in Kyrgyzstan by a rise in literacy. In 1926, at the time of the first Soviet census, there were 65,636 males in the Kyrgyz Socialist Soviet Republic, and 30,846 were literate; there were 63,430 females, and 13,936 were literate. In the census of 1989, just before the collapse of the Sovi-

et Union, only 3 percent of the population (males 1.4 percent and females 4.5 percent) was considered illiterate.

With limited natural resources, a lack of internationally competitive industries, and a landlocked status, Kyrgyzstan has had some difficulty adjusting to a privatized, market economy. It is generally agreed that the process of economic and political transition has been one of the more successful of the former Soviet Republics, but not without significant economic hardship to the people. This hardship has dramatically affected the educational system.

In the years since independence, the other major issue within the new nation that has affected the educational system has been the search for and establishment of a Kyrgyz national identity, along with its resultant impact on the Russian, Uzbek, and other minorities. As a result of measures to establish a Kyrgyz identity, many Russians have emigrated from Kyrgyzstan while those who remain have perceived an erosion of their cultural identity as a result of preferential treatment for Kyrgyz cultural elements. This is important, as Russians formerly held the most important positions in technology, trade, and education. The loss of some 300,000 highly educated Russians in the last 10 years has significantly affected the administrative and educational functions in the country. In an attempt to offset these perceptions, the government has made Russian an official language along with Kyrgyz, established a Slavic university, and appointed prominent ethnic Russians to key government positions. Perhaps more problematic has been the resolution of the issue of Islamic fundamentalism. While Kyrgyzstan is an avowed secular state with Islam the predominant religion, its government has been required to address the incursion of Islamic separatist armed rebels into southern parts of the country, which in turn has diverted public funds to the military that might have gone toward education.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Constitutional Provisions & Laws Affecting Education: Universal free education in Kyrgyzstan was first enshrined in the USSR constitution in the 1970s. It provided for state-subsidized education for all with the goal of 100 percent literacy.

Following the collapse of the Soviet Union in 1991, the government wrote and adopted on the 12 May 1993 a constitution for the new nation. Article 32 in the constitution reads:

- Every citizen of the Kyrgyz Republic shall have the right to an education.
- General secondary education shall be compulsory and free of charge, and everyone shall be entitled to receive it in the state educational institutions.
- The state shall provide for the vocational, special secondary, and higher education for every person in accordance with individual aptitude.
- Paid education for citizens at national and other educational institutions shall be allowed on the basis of and in the procedure established by the legislation.
- The state shall exercise control over the activity of educational institutions.

By also including in Article 16 of the constitution the recognition and guarantees of other human rights, Kyrgyzstan became party to other treaties that affect education, such as discrimination against women, social rights, and the rights of children—all of which have major education provisions.

Upon independence, education was one of the first areas of social concern to be addressed. The Kyrgyz Republic's education law, enacted in 1992, has essentially governed the post-Soviet system of education.

In 1996, policy measures to implement the 1992 law on education were expanded in a national education program called ''Bilim.'' These measures were to guide education development up to the year 2000. The policy addressed the issues of basic necessities (reading, writing, and problem solving), educational content (knowledge, values, and views), and the role of education in quality of life, decision-making, and educational goals. It is necessary to see ''Bilim'' as a response to what was perceived as a deteriorating system of education and the measures necessary for the government to take to stop this erosion in quality and accessibility. ''Bilim'' was essentially the policy framework under which Kyrgyzstan's educational system operated between 1996 and 2000, but various supplementary programs have also been introduced addressing such issues as access, educational response to rising poverty levels, international assistance, specialization in education, and bringing technology into the classroom.

In 1997 the Education Law of 1992 was amended to allow individual institutions to determine their own educational system and their own curriculum within set national funding amounts, standards, and curriculum guidelines. Essentially the system of higher education reflected item four of the constitution by becoming more fee-based and attempting to become more responsive to market demands.

Educational Philosophies: There were three dramatic changes in educational philosophy in Kyrgyzstan in the

1990s. The first paradigm shift was the move from a repetitive, rote learning educational philosophy to more problem-oriented critical thinking. The second was the attempt to offset declining literacy rates and school attendance with a program called ''Education for All.'' This mobilized not only education professionals but also other government agencies, particularly social service agencies, and enlisted the assistance of a wide range of NGOs (nongovernmental organizations) and international aid agencies to combat the adverse effects on the school system of economic and social transition. The third is the movement toward a more national Kyrgyz identity that of necessity starts in the school system.

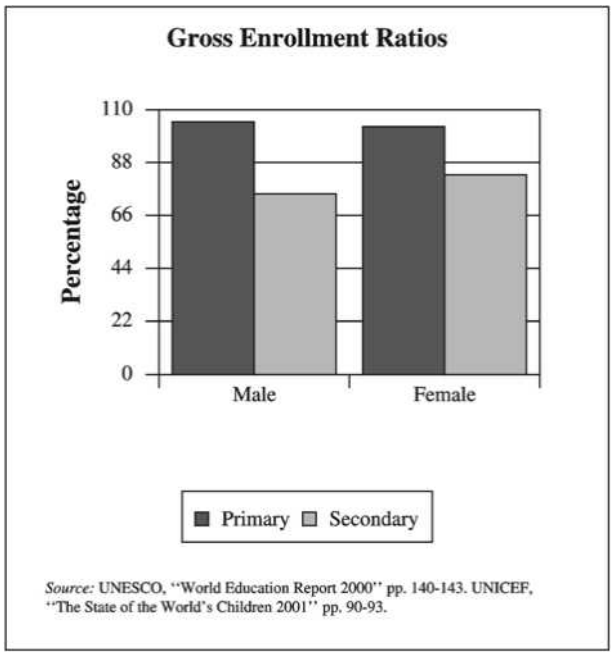
EDUCATIONAL SYSTEM—OVERVIEW

Compulsory Education & Age Limits: In 1996 Kyrgyzstan had a school age population of 674,000, which was up from 651,000 just 6 years earlier. Education is compulsory for 9 years, comprising 4 years in a primary school from age 6 through 10, followed by secondary school for 5 years up to the age of 15. At this point students can leave school or continue their studies in either an upper secondary school, a specialized secondary school, or a technical/vocational school. At 18 years of age, further education is conducted within the university system.

Academic Year: The academic year begins 1 September or as close to it as possible, and end of year exams are usually over by early June. *Attestats* (the graduation transcripts) are issued on 22 June and is usually the final event of the school year. The university year usually ends in May.

Enrollment: In 1995 enrollment in primary schools was 97 percent of the relevant age group; enrollment figures for compulsory secondary school are unknown, but in 1996 the gross enrollment percentage was 79 percent, which was down from a reported 100 percent in 1990. Thus it appears that as children get older they are increasingly not attending school but working to offset economic hardship in the family. Testament to this fact is that in 1996 enrollment for males (75 percent) was less than for females (83 percent). This suggests that the collapse of the Soviet Union has affected school enrollments.

Females & Minority Enrollments: Unlike many nations, Kyrgyzstan has full equality in education as a legacy of both the Soviet system and the new Kyrgyz constitution. In fact, the need for boys to assist in farm labor and periodic markets (*bazaars*) means girls have a better attendance record than boys. Females make up 51 percent of primary school children, 55 percent of secondary school children, and 52 percent of university students



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93.

Females also have a dominant role in the management of the educational system in Kyrgyzstan. The majority of teachers are female. Indeed, in 2001 Kyrgyzstan had an ethnic Kyrgyz female Minister of Education, Camilla Sharshekeeva. Similarly, the compulsory and universal access to education has meant that education for ethnic minorities has not been an issue at the primary and secondary level. The imposition of Kyrgyz nationalism within the educational system was a major driving force behind the establishment of a Slavonic University in 1993 to cater to the ethnic Slavic population in Kyrgyzstan.

Language of Instruction: In 1998, a total of 65.7 percent of primary and secondary schools taught in Kyrgyz, 6.9 percent in Russian, 20.1 percent mixed (Russian and Kyrgyz), 7.2 percent in Uzbek, and 0.3 percent in Tadjik. These figures indicate a rise in Kyrgyz instruction and a significant diminution (down 15 percent) in Russian in a 5 year period. In addition, of the 207 schools built between 1993 and 1998, some 138 were schools in which instruction is only in the Kyrgyz language. These percentages also reflect regional distribution of the ethnic groups within Kyrgyzstan, with most rural schools in the north and east teaching in Kyrgyz, while in the south, in the Fergana Valley, Uzbek and Tadjik are the preferred languages of instruction. The fact that prospective teachers attend and graduate from regional institutions of higher education in their own ethnic regions would seem to perpetrate this distribution.

In contrast, at institutes of higher education, Russian predominates as the language of instruction. This is due

in part to the ready availability of Russian texts as opposed to Kyrgyz language texts. In 1993-1994, 64.6 percent of university students were taught in Russian, 34.7 percent in Kyrgyz, and 0.7 percent in Uzbek.

Examinations: Students are examined at the end of every semester with the summer examination determining whether the student advances to the next grade. Examinations at the end of secondary school are partly used as university entrance examinations. These are in conjunction with examinations set by the individual university for the field of study that the aspiring student wishes to enter. A national testing system was also introduced in 1993, but suspicion and distrust of the motives behind it has hampered its use as a barometer of success.

Grading System: Grading is done by individual teachers and professors. They enter grades into an official book, called unofficially by its Russian name of *Zachotka*, which the student will carry to prospective employers. It is common practice in Kyrgyzstan and throughout the former Soviet Union for teachers and university professors to accept payment to inflate student grades. This is directly attributable to the low salaries of the teaching staff. In addition, the institution is usually prepared to change student grades in order to place students in employment positions that will reflect favorably on the institution.

Private Schools: A large number of private schools commenced teaching in Kyrgyzstan following the breakup of the Soviet Union. All operate on a fee basis but often with outside sources subsidizing the institution. The most numerous are so-called gymnasiums, lyceums, innovation schools, and the purely private institutions. The 94 gymnasiums cater to 46,000 pupils, the 70 Lyceums to 19,700 pupils, and the 344 innovative schools to 109,000 pupils. The latter primarily target gifted children. In 1999, there were approximately 25 institutions totally supported by private funds. Most (20) are aimed at secondary school students and reflect efforts by ethnic minorities to preserve their culture. Hence Korean, Jewish, and Tatar associations provide some private schooling for their ethnic minorities, while evangelical church groups have been active in establishing church schools in Kyrgyzstan. Most visible have been privately funded Turkish educational establishments, particularly in higher education where the establishment in 1998 of a Turkish university was a major addition to higher education options.

Religious Schools: The revival of Islam in a formerly avowed atheist state has been marked by a rise, albeit small, in religious schools. At present, theological students study in such countries as Saudi Arabia and Turkey and return to small institutions attached to the mosque (*Medressahs*). The curriculum is heavily dependant on learning from the Koran as opposed to general theological studies.

Instructional Technology (Computers): There is a serious lack of computers not only in the schools of Kyrgyzstan but also the country as a whole. It is estimated that fewer than 10 percent of the schools have computers. Most of the specialized institutions of higher education have computer labs working with donated and purchased computers, but state institutions, particularly in the outlying cities, have a serious lack of computers for instructional technology. In addition, the computers that are in existence are often dated and unable to accommodate technological advancements. In particular, the Internet is highly restricted and difficult to access consistently.

Textbooks—Publication & Adoption: Severe budget difficulties have meant that new textbooks have not been produced or purchased. Moreover, most of the textbooks in Kyrgyzstan originated in Russia and are therefore in the Russian language. Kyrgyz educational authorities are aware that textbooks that reflect the change in the political and economic spheres are available, but access is highly problematic because of their cost. For example, in 1998, of 72 books that were to be published, only 25 were produced, with a circulation of 553,000 copies. Ministry data indicate a set of texts for the first year of schooling cost 160 soms per student, 220 soms for fifth year students, and 430 soms for the graduating class—more than a teacher's monthly salary (US$10 equals approximately 500 soms). Thus, access to English language texts is even more restricted. Most libraries have some donated English language texts, but relevance to the curriculum is coincidental if at all.

Audiovisuals: There is a serious deficiency in audiovisual services in classrooms at all levels. In large part this is a legacy of the Soviet pedagogical method of instruction by lecture. The severe budget restrictions since the collapse of the Soviet Union has further limited the use of audiovisual materials as modern teaching aids.

Curriculum—Development: There have been attempts to change the school curriculum since the fall of the Soviet Union to reflect new political and educational philosophies. At the primary level there has been a strong movement to introduce more Kyrgyz culture into the school curriculum, particularly Kyrgyz language study and a focus on Kyrgyz history and culture (art, music, and literature). At higher levels there is continued emphasis on Kyrgyz subjects with more intensive mathematics and the sciences. In addition, health awareness and sex education have entered the curriculum. A major impediment to

the application of new curriculum materials is the slow movement away from the former Marxist-Leninist rubric, which is in large part owing to an aging teacher population unfamiliar with western educational subjects and systems. Thus one will still find economics classes that use statist and interventionist models as opposed to models of free market economics, private entrepreneurship, and western management systems. Teacher retraining has been a major focus of the state, and in 1992 the Kyrgyz Institute of Education, a major training institution, opened a retraining department. In Osh, the second largest city, a Skills Improvement Institute for practicing teachers has also enjoyed some success.

Foreign Influences on Educational System: Kyrgyzstan has been the recipient of significant foreign aid since the collapse of the Soviet Union, and education has been the beneficiary of much of this aid. The United States, through U.S. AID programs and U.S. Information Agency programs, has contributed significantly to educational development. Peace Corps volunteers have been especially active in teaching English in both urban and rural schools. Fulbright and MacArthur fellows, through the U.S. Department of Education, have been active in exchanges in higher education, particularly in the Kyrgyz-American School in Bishkek. Universities in the United States and Europe have established affiliations with a number of Kyrgyz universities. For example, Portland State University in Oregon established a link with Osh State University in the early years of independence; this has expanded to create a number of centers, including one for business. The Kyrgyz-American University has links with a consortium of Indiana universities, George Washington University, and Brown University. Private sector assistance through the Soros Foundation has been active in Bishkek, and those western businesses with a significant presence in Kyrgyzstan have generously supported Kyrgyz students and institutions. Turkish aid, in the form of a new university, has also been a marked part of foreign influence on education.

Role of Education in Development: More than 1.1 million persons are employed in Kyrgzy education, making it the most significant employer in the country. Moreover, education has been touted as a major path to bring Kyrgyzstan into the world economy. However, the educational system has regressed considerably since the days of high literacy rates and technological achievements of the Soviet era. The reasons for this are readily apparent: lack of funding for teachers, equipment, and buildings; a movement out of the country of the best and brightest graduates; and corruption at all levels.

PREPRIMARY & PRIMARY EDUCATION

General Survey: Before 1990, Kyrgyzstan had an extensive system of kindergartens that provided preschool care from the age of one year up to the time children started primary school. This system was state run and an excellent preparation for school system entry. Mass privatization and the divesting of kindergarten facilities by the state and the new private enterprises has led to a massive reduction in the number of preschool facilities. In 1990 there were 16,976 such institutions, whereas by 1996 the number had dropped to 449. Moreover, many had become private and were unable or not prepared to deliver preschool educational programs. In 1995-1996, 35,254 students were enrolled in preprimary institutions with 4,013 teachers. The Ministry of Education believes that this sector has suffered the most as a result of the change to a market economy.

In 1995-1996 there were 1,885 primary schools with 473,077 students being taught by 24,086 teachers, a ratio of 19 to 1. By 1998 the number of teachers had dropped to 19,122, of which fewer than 50 percent had a higher education. It is also believed that enrollment in primary schools is declining, particularly in rural areas where the need for child labor to help with farm and home chores to subsidize the family income is more important than schooling. Moreover, the amalgamation of some classes in primary schools as a result of unpaid teachers leaving the profession is contributing to this problem.

Urban & Rural Schools: Notwithstanding the difficulties in the school system, there were no school closures between 1990 and 2000, and enrollments increased as a result of high birth rates. By 1999 there were 1,939 schools in Kyrgyzstan, 1,614 of them in rural areas. However, as was noted above, rural primary schools seem to be suffering more than urban schools from the economic woes of the country. Class sizes are bigger than in urban schools as a result of class amalgamation, and, where high birth rates exceed capacity, schools operate in shifts. Indeed, seven schools offer evening classes to accommodate students who are unable to attend during the day. The physical condition of the schools in Kyrgyzstan is a significant problem. Many rural school buildings had no hot water or indoor toilet facilities, even in Soviet times, and since 1990 conditions have further deteriorated. Many need repair and refurbishment. City governments are wealthier than rural governments, hence urban school buildings are in better repair with utilities less disrupted and thus more conducive to teaching.

Teachers: Most rural teachers are women, usually trained at the local regional institute and teaching in a former collective school building. Teaching conditions are

difficult and taxing; salaries are often absent, delayed, or only partially paid. The average monthly salary in 2001 was approximately 500 soms or US$10. Many continue to teach because, as some say, ''We have nothing else to do, and it is our duty.'' In urban areas conditions are somewhat better, with more of a guarantee of salary and greater access to equipment and supplies.

Dropouts & Repeaters: In 1997 school authorities perceived that the decline in school attendance was becoming a serious problem. In particular it appeared that refugees from Tajikistan, as well as Kyrgyz peoples migrating from the predominantly Uzbek southern region, were moving into those regions near the capital city of Bishkek and not attending school. In 1997, a total of 8,588 children did not attend school; of these, 945 were primary school children. As a result of government action (providing school meals, clothing, and free transportation to school), the overall figure was reduced to 5,074 in 1998, but the number of primary school children not in school had risen to 2,287. The large reduction in dropouts had been achieved by reducing secondary school dropouts. The government is collecting detailed data on why these 5,074 students did not attend school, an important step in further reducing this number. The number of students repeating grades is not available, but there is anecdotal evidence that students can and do repeat. This number has been increasing as students dropout and are reinstated.

SECONDARY EDUCATION

General Survey: The drop in the number of teachers throughout the Kyrgyz Republic has been particularly marked in the secondary schools. In 1995 there were 38,915 secondary school teachers, but by 1998 this figure had fallen to 35,254. In 1995 there were 498,849 students.

Curriculum—Examinations & Diplomas: The most important diploma a student obtains is his or her Secondary School Certificate (*Attectat o srednem obrazzovanii*), which is necessary for entering higher education or a profession.

Teachers: Of the 35,235 teachers in the secondary schools, 87 percent have received a college education. Secondary school teachers tend to teach specialized subjects (9,434 of the 35,235 in 1998), such as music, physical education, the sciences, and art. With the falling number of teachers and the rising birth rate, class sizes are invariably increasing.

Dropouts & Repeaters: As in the primary schools, absent students were a worrisome feature of secondary schools in 1997. That year, 2,517 secondary school pupils were reported as having dropped out of school, the second largest age group of non-attending students in Kyrgyzstan (3,276 had never attended school). In 1998 this figure was reduced to 783. In the higher secondary schools, 1,850 students dropped out in 1997, but only 1,187 in 1998. Overall, dropout rates are low. Graduation rates are high with an average 853 pupils graduating per 1,000 students.

Vocational Education: As was noted earlier, upon completing the lower level of secondary education at the age of 15, a student can continue in the secondary school, attend a specialized secondary school, or begin specialized technical or vocational study. In 1996 there were 32,005 students in Kyrgyzstan's 115 vocational schools with 3,371 teachers teaching 350 subjects.

Nonformal Education: Private tutoring of students exists in Kyrgyzstan primarily for the purpose of passing examinations or improving language skills and for English.

HIGHER EDUCATION

Types—Public & Private: Until 1990, the only university in Kyrgyzstan was Kyrgyz State University in the capital, Bishkek. However, in regional centers around the country, a large number of institutes affiliated with Kyrgyz State University offered a wide range of subjects and degrees upon graduation. Since the fall of the Soviet Union, Kyrgyz State University still exists, but the former institutes have invariably been transformed by title and courses into universities. Thus, for example, the Osh Pedagogical Institute founded primarily for linguistic study in 1951 was renamed Osh State University in 1992 and offers programs in business. The major change within higher education since 1990 has been the need to charge admission or tuition fees, in part to offset diminishing government subsidies.

Admission Procedures: Admission commences in the summer preceding September entry. Most institutions require an application form with particulars of the student's secondary or vocational record. Institutions that specialize in English subjects or teach in English may require TOEFL tests. In July, universities offer entrance exams, which are derived by the universities, and grant or deny entry based on the results.

Administration: Institutions administer themselves, with oversight by the State, which grants a license that reads:

> University: has the right to practice teaching activity in the sphere of high professional education with a variety

of majors, levels of education, duration according to the attachment of this license and on terms of considering all the basic requirements of this document and limited contingent of students.

Enrollment: In 1995 there were 33 institutes of higher education in Kyrgyzstan serving 49,744 students. The most significant are Kyrgyz State University with 15 faculties and 7,300 students; the Kyrgyz-Slavonic University; the Kyrgyz Technical University with 7 schools; the Kyrgyz Humanities University with 3,873 students; the new Manas Kyrgyz-Turkish University with 750 students in 2000 (its third year of operation); and the Kyrgyz-American School with more than 1,000 students.

Teaching Styles & Techniques: The principal language of instruction in these institutions is Russian, but with the proliferation of higher education institutions in Kyrgyzstan, instructors use a wider variety of source material.

Finance (Tuition Costs): Typical tuition fees at private universities range from $1,500 for Kyrgyzstan nationals to $2,000 for foreign students, but fees for Kyrgyz State University and other public universities are significantly lower, about 5,000 to 10,000 soms (US$100 to US$200) per annum. Scholarships in the form of fee waivers are available at most institutions to deserving students. Only Manas Kyrgyz-Turkish University has no fee structure.

Courses, Semesters, & Diplomas: Higher education in Kyrgyzstan usually lasts five years; the two-semester system commences in September and ends in May with a one month winter recess. As was noted earlier, institutions generally select the courses they wish to offer, and students graduate with a ''Diploma of (Specialization in the field of study).'' Students can pursue a ''Candidate of the Sciences'' for a further three years, during which they usually write a thesis and finally may obtain a doctoral degree, which requires another thesis. This last tends to be synonymous with postgraduate training.

Professional Education: The only professional education in the republic is offered by western-owned businesses to train their workers and managers. Most of this training is done ''in-house,'' but there have been instances of workers being sent out of the country for professional development. A part of the U.S. AID monies of the mid-1990s was dedicated to middle management training, particularly for lawyers and government officials who, after a month overseas, returned to Kyrgyzstan to participate in privatization and democratization.

Postgraduate Training: There is a long history in Kyrgyz institutes of post-graduate teaching, which was usually linked with the award of the doctorate. Of necessity, this training is highly specialized and is found in institutes established under the Soviet system to produce an intellectual elite.

Foreign Students: Very few foreign students study in Kyrgyzstan, due almost entirely to the deteriorating state of the country's educational system. Typical of the extent of foreign student enrollment was Kyrgyz Humanities University and Osh State University with 44 foreign students (or 1.1 percent of total student enrollment) and 200 foreign students (3.3 percent) respectively in 1998.

Students Abroad: Given the difficulty of transition and the uncertain future of the nation, an ability to speak a foreign language—particularly English—with the resultant opportunities to study abroad, has become a major goal for students in higher education. Unfortunately, once students complete their studies overseas, they are often reluctant to return to Kyrgyzstan to become part of the labor force. Essentially a brain drain is occurring, and although it is on a small scale, it is enough to warrant concern. In 2001 there were 126 Kyrgyz students in the United States and fewer in Europe, with the majority of these in the United Kingdom. The major deterrent for Kyrgyz students to studying abroad is the high cost of tuition and living expenses outside Kyrgyzstan; hence most students studying outside Kyrgyzstan are on some kind of scholarship. Those few students whose studies abroad are funded with Kyrgyz money are required to return to Kyrgyzstan for a minimum of two years; however, often upon graduation, these students remain outside Kyrgyzstan to work.

Role of Libraries: Libraries have a reduced role in higher education primarily because they lack current books, texts, and periodicals. Much of the literature published before 1990 is considered by students and faculty alike to be tainted and hence of little use.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Government Educational Agencies: There are essentially two levels of educational responsibility in Kyrgyzstan. At the local level, administrative bodies (Village, Rayon, and Oblast councils) are responsible for school provision, maintenance, and teaching materials, including teachers. At the state level the Ministry of Education sets the curriculum for all primary and secondary public schools, while institutions of higher education set their own curriculum within limits set by the state. Control over education policy is exercised by the state through the financing, certifying, and licensing of education. In reality the severe economic hardships that have beset rural

areas since 1990 have required significant state intervention in the running of local schools. This is particularly significant in the area of teacher salaries, whereby the state has been required to assume payment because rural agencies have no money to pay salaries. Moreover, in recent years, unlicensed educational establishments have arisen and are functioning, and the state is desirous of bringing these institutions into the state system.

Ministry of Education: Day to day responsibility for state education resides in the Ministry of Education, Science, and Culture, based in Bishkek. This ministry also collects data for baseline reference and applied research.

Educational Budgets: Notwithstanding the rise of private funding in the post-Soviet years, state budgeting is still the primary source of funds. Kyrgyzstan's gross domestic product was $1.3 billion in 2000, of which education contributed approximately 4 percent.

In 2000, some 2.3 billion soms (US$47 million) were spent on education. This is 3.3 percent of the gross domestic product, which is less than in 1990 when it accounted for 8 percent.

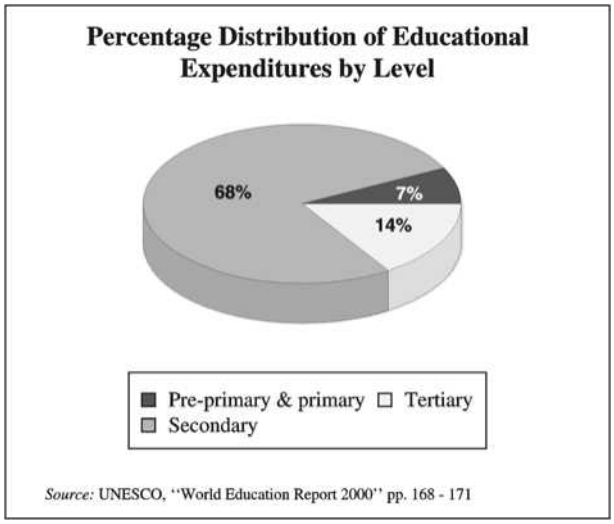
Education spending in 2000 represented 20.1 percent of all government expenditures, which was second only to that of the large category of government administration, military, and pensions. In 1991 and 1997, government expenditures on education were 23 and 22.6 percent, respectively. Notwithstanding the government's commitment to funding education, it is apparent that not only is education spending falling, but also that current allotments are inadequate to cover education needs. In addition, inflation has significantly eroded the purchasing power of these expenditures over the years.

Types of Expenditures: Notwithstanding the fall in preprimary schools, preprimary education in 1996 consumed 6 percent of the national education budget; 68 percent was directed to secondary schools and 14 percent to tertiary schools. The government believes funding for universities is still too high and that the priority for expenditure should lie in the primary and preprimary schools.

National Education Organizations: There are no national education organizations in Kyrgyzstan. Oversight is delivered in part by international organizations such as UNESCO and the United Nations Development Program.

NONFORMAL EDUCATION

Adult Education: Adult education has been recognized as a priority in the republic in order for adults to adjust to the new socioeconomic system. However, requiring students or businesses to pay for this learning seems to be a major obstacle to its success in difficult economic times. Foreign languages, bookkeeping and accounting, marketing and market economics, management, and computer literacy have been identified as priorities. External NGOs, such as Carana Corporation, have provided such training, but few business establishments offer these programs at present.



Open Universities & Distance Education: Open university does not exist in Kyrgyzstan. Distance learning is possible through existing universities in the form of correspondence courses called *externat*, but these are supplementary to the universities' normal in-residence structure. Students studying by correspondence courses with major universities make up a significant part of the part time student body. In 1998, Kyrgyz State University had approximately 6,000 students in correspondence courses along with the 7,300 students in residence, while at Osh State University more than 200 students take correspondence courses. There are no distance education courses delivered through television, radio, or the Internet because of the scarcity of such media in Kyrgyzstan.

TEACHING PROFESSION

Training & Qualifications: Thirteen higher education institutions offer teacher training, along with four dedicated teacher training colleges. Prospective teachers attend these institutions for five years before graduating. In 1999 teacher training colleges enrolled 14,000 students, and each year the nation graduates 1,000 to 1,500 new teachers. In view of the high birth rates, this number is insufficient to meet the demand. Moreover, the loss of teachers, particularly in rural areas where demand is highest, is cause for concern. Finally, there is a shortage

of teachers in English, Kyrgyz, mathematics, and all the sciences.

Salaries: The average teacher salary has increased every year since 1990 but is grossly inadequate both in purchasing power and in its ability to keep up with inflation. It remains one of the most problematic areas of Kyrgyzstan's educational system. In 1993 the average monthly salary was 100 soms; in 1996, 230 soms; 1998, 315 soms; 1999, 385 soms; and, as earlier stated, in 2000, 500 soms. (In 2000, US$1.00 equaled 48 soms). However encouraging these salary increases are, they should be seen in light of the official Kyrgyzstan figure for minimum living expenses of 1,280 soms per person per month. Finally and sadly, these figures do not indicate that, owing to significant cash flow problems in state and local governments, teacher salaries are often delayed as long as six months or not paid at all.

Unions & Associations: There are no teachers' unions or associations in Kyrgyzstan.

SUMMARY

The Kyrgyz educational system faces significant challenges. Once a model of literacy, availability, and accomplishment, it has been eroded by external environmental problems and a difficult adjustment to a necessary internal structural change. The principal challenges appear to be:

- The grave economic situation, which causes students, especially boys, to forgo school to attend to help support their families.
- The apparent inability of the central government to adequately fund education and in particular to pay public school teachers a living wage.
- The need for curriculum change to reflect the new, market-driven, privatized economy.
- The widespread corruption and associated grade inflation at all levels of the educational system.
- An increasing birth rate, particularly in the rural areas, that will add pressure to the educational system.

The former Soviet republics enjoyed a period of significant western interest in their transition for most of the 1990's. It is unfortunate that since then, for whatever reason, interest has waned, yet the problems are still present. In the initial stages of transition, much of the interest involved the use of international programs as a means of assisting in the transition. However this interest has stabilized. Those programs that remain are heavily politicized or driven by religious interests.

It would therefore appear that the most significant changes required for Kyrgyzstan's educational system to stabilize would be for the country to enjoy economic stability and prosperity, from which education could take its place as a significant contributor to the country's viability. Unfortunately, most observers cannot see this kind of stabilization and growth occurring any time soon.

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—Richard W. Benfield

LAO

BASIC DATA

Official Country Name:	Lao People's Democratic Republic
Region:	Southeast Asia
Population:	5,497,459
Language(s):	Lao, French, English,
Literacy Rate:	57%

HISTORY & BACKGROUND

The Lao People's Democratic Republic (Lao or Lao PDR) is surrounded by China, Vietnam, Myanmar (Burma), Thailand, and Cambodia in the mainland of Southeast Asia. The country's total population is only 5,497,459 million (July 2000 estimate). It occupies an area of 237,000 square kilometers, roughly the same size of the state of Oregon in the United States. Unlike many areas of Asia, Lao has a low population density of 148 persons per square kilometer. Its neighbor Vietnam has a density of 1,593 persons per square kilometer, while Thailand has a density of 811 persons per square kilometer. Despite its sparse population, Lao PDR has a high population growth rate of 2.86 percent per year. If that rate persists, the population will double to more than 10 million by the year 2025, putting a tremendous pressure on the educational system. An additional pressure on education is that 43 percent of the population is 14 years or younger.

Lao is much less urbanized than many other Asian countries; it has only four major cities that are relatively small. With the relaxation of controls on the movement of people in the early 1990s, there has been considerable migration from rural to urban areas like Vientiane and Savannakhet. The large Lao diaspora resides mainly in the United States, France, Canada, and Australia (Mayouri 1993). These immigrants are mostly former refugees who fled the Communist regime from 1975 to 1985.

Lao has one of the most ethnically diverse populations in Asia, with 47 main ethnic groups and 149 subgroups representing 47.5 percent of the population. These many diverse ethnic peoples are normally classified into the three basic groups of Lao *Loum* (lowland), Lao *Theung* (upland), and Lao *Sung* (upland). A prominent Lao Sung group is the Hmong, who are prominent among the Lao diaspora.

Although the terrain of Lao PDR is covered with rugged mountains, the country is basically agricultural with a high percentage of subsistence farming—87 percent of the harvested area devoted to rice production alone. Roughly 80 percent of the population is employed in agriculture. Lao is ranked as one of the poorest countries in the world as well as in the region. Per capita income in 1999 was US$280. This per capita income level has, however, improved significantly from US$77 in 1966 and US$80 in 1981. The United Nations Development Programme (UNDP) Human Development Index (HDI) ranks Lao 136 out of 174 countries, the lowest ranking in Southeast Asia with the exception of Cambodia (number 140). On average Lao children undergo less than three years of schooling, and the quality of that schooling is highly uneven. Life expectancy at birth is only 51.7 years.

The major leitmotif of Lao history is its amazing ability to survive as a distinct political and cultural identity despite being surrounded by powerful neighbors like China, Burma, Vietnam, and Siam. Originally Lao was known as *Lan Xang* (literally meaning the land of a mil-

lion elephants). The Lan Xang kingdom flourished from the fourteenth to the eighteenth centuries. At the time of its greatest strength and influence in the seventeenth century, it occupied much of what is now Lao, north and northeast Thailand, and parts of Vietnam and Cambodia. The kingdom was a flourishing center of Buddhism and the arts (literature, dance, drama, and music). From the beginning, Lao had a literate culture with a phonetic alphabet derived and influenced by ancient Indian scripts. Unfortunately, in the early eighteenth century conflicts among royals competing for the throne led to the subdivision of Lao into three smaller kingdoms that later fell under the control of Siam and then to French colonialism.

Traditionally, education in Lao occurred at the village temple and Buddhist monks were the teachers. After Lao became a French colony in 1893, a highly elitist system of French education evolved, which was oriented to the ''civilizing mission'' of colonial power. Even after Lao gained independence from France in 1949, the French elitist system persisted. During the period dominated by the United States, from 1954-1975, there was considerable expansion of the Lao educational system. High schools, vocational schools, and teacher training institutions were established. School enrollments in 1971-1972 were 17 times higher than in 1946. In December 1975, after years of civil war and the Cold War, the revolution was successful and the Lao People's Democratic Republic was established. The new government carried out many reforms in the educational system to make it serve the broad masses.

Constitutional & Legal Foundations

A major area of change after 1975 was in language reform, which simplified the Lao language to differentiate it more from Thai and to facilitate literacy among the people. The basic principles underlying these changes were articulated in a major policy volume titled simply *Lao Grammar,* written by a key intellectual, Phoumi Vongvichit. Actually, the Lao PDR constitution was not promulgated until August 14, 1991. Article 19 of the constitution states the legal foundations for the Lao educational system. The article emphasizes knowledge creation, patriotism, cultural preservation, ethnic harmony, and empowerment of the masses. It makes primary schooling compulsory, authorizes private schools that utilize the state curricula, and emphasizes the provision of educational services to ethnic minorities.

Educational System—Overview

As a result of French colonial influence, Lao PDR follows a Western academic calendar, September to June. After the success of the revolution in 1975, Lao became the language of instruction at all levels of education. In the current structure of Lao education, primary education is for five years (compulsory), followed by three years of lower secondary, three years of upper secondary, and then three to seven years of postsecondary education, dependent upon the field of study. While children may start primary school at age six, the modal age is actually seven, except for several urban areas. A unified standard national curriculum is used, and the use of modern technology in Lao education is extremely limited.

Preprimary & Primary Education

Preprimary education for children aged three to five is the responsibility of individual parents. Its purpose is to prepare children for primary school. Currently only about eight percent of children in this age group are enrolled in preprimary schools.

With respect to the five years of compulsory primary education, basic infrastructure problems limit primary schools so that only 34.8 percent of them can offer the complete five years. Though this level of education is ''compulsory,'' roughly 25 percent of children are not enrolled. Approximately 30 percent of villages do not have primary schools and, of 1000 students starting primary education, only 20.5 percent survive to grade five without repetition. Including repetition, another 34.7 percent survive to grade five. Overall, in 1996-1997, only 13.9 percent of Lao youth were completing primary education. There are significant disparities across provinces with respect to access to primary education; access is lowest in remote mountainous areas with large populations of ethnic minorities.

The basic curriculum of Lao primary education in grades one through five includes the Lao language, mathematics, social studies, physical education, music, and handicrafts. Of the 23 to 25 hours spent in class, 33 to 50 percent of that time is devoted to language studies. Mathematics instruction increases from three to six hours from grades one through six. Social studies instruction is about two to three hours, and the remaining time is used for physical education, music, and handicrafts.

Secondary Education

Among the various Lao educational sectors, secondary education is the fastest growing sector. Despite this rapid growth, still only 8.5 percent of Lao youth are completing lower secondary and only 4.8 percent are completing upper secondary. As with primary education, there are considerable disparities across regions of the country.

The basic curriculum of Lao secondary education includes the social sciences, chemistry, physics, biology,

the Lao language, and foreign languages. Courses in art, physical education, and technology are also part of the curriculum.

HIGHER EDUCATION

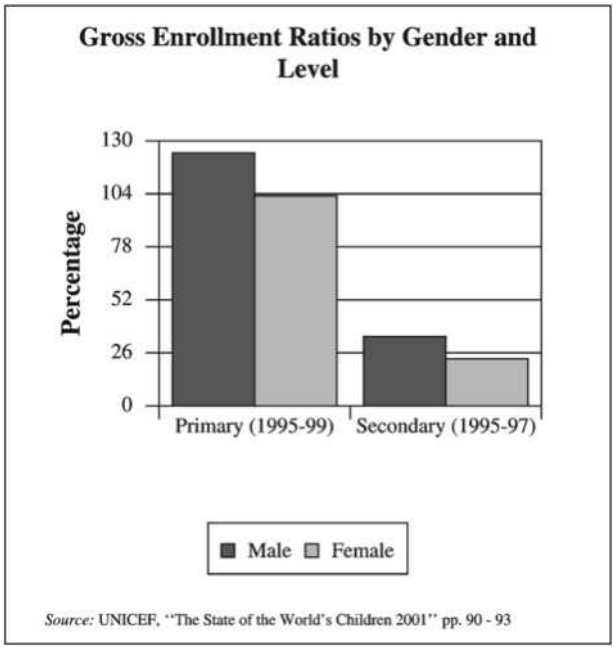
Prior to a major reform undertaken in the mid-1990s, there were 10 institutions of higher education operated by several different ministries and related to such fields as medicine, education, agriculture, forestry, communications, and technology/electronics. In June 1995, the prime minister issued a decree to rationalize postsecondary education by merging nine existing higher education institutions and the Centre of Agriculture into a new National University of Laos (NUOL), under the unified administration of the Ministry of Education. The Lao government has received significant funding from the Asian Development Bank (ADB) to assist in this consolidation and rationalization of higher education. Approximately 4 percent of Lao youth are able to complete postsecondary Education, but the Lao government does provide direct support to students at this level as bursaries or as subsidies to student dormitories. This scholarship funding is provided to quota students who are in the plan. Non-plan students must pay modest tuition fees.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Major policies are determined at the party congresses, which are held every five years. Laws in accord with these policies are debated and passed by the national assembly. Three bodies are primarily responsible for administering Lao education: the central Ministry of Education (MOE), Provincial Education Services (PES), and District Education Bureaus (DEBs). While the system is highly centralized, the governor and local areas and communities do have important influences on educational policy and implementation.

With respect to educational finance, in 1996-1997, 52 percent of national funding went to primary education, 24.6 percent to secondary education, and 6.4 percent to higher education. From 1993 to 1998, the education budget as a percent of GDP ranged from a low of 2.1 percent (1997-1998) to a high of 3.4 percent (1994-1995). As a percent of the national budget, educational expenditures have ranged from a high of 15.8 percent (1996-1997) to a low of 9.6 percent (1993-1994). Approximately 37 percent of government funds for education come from international grants and loans, primarily the Asian Development Bank and World Bank.

The major body for conducting educational research is the National Research Institute for Educational Science (NRIES). The major focus of its research is curriculum development and research related to the development and evaluation of textbooks. The Faculty of Education at the National University of Laos also has research responsibilities related to education, and the Teacher Development Center, also at NUOL, is active in text development and related training.



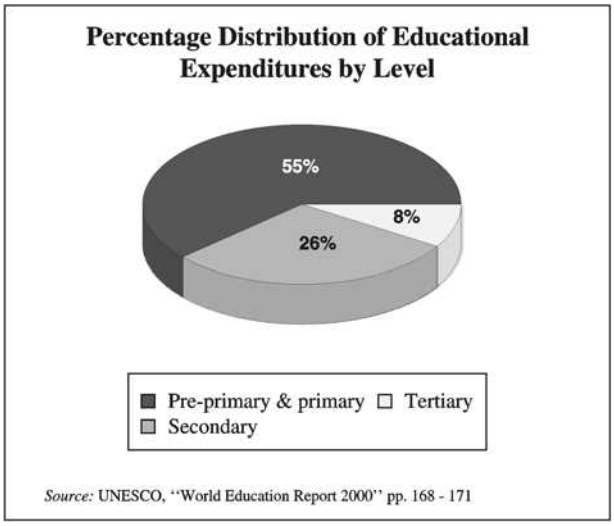
Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

NONFORMAL EDUCATION

With an overall literacy rate of only 57 percent in Lao PDR, nonformal education plays an important role. Administered by the Department of Nonformal Education in the Ministry of Education, nonformal education is targeted to serve illiterates, school-age children who are not able to study in formal schools, and school dropouts who wish to increase their level of education. To enhance nonformal education, community learning centers, jointly financed by the central government and local communities have been introduced; nearly 170 have been established around the country.

TEACHING PROFESSION

To qualify to teach at the upper secondary level, students need to have a bachelor's degree from the Faculty of Education at NUOL (15 years of total schooling). To teach at the lower secondary level, they need to have completed at least 14 years of schooling with a diploma from 1 of 5 teacher training colleges. To teach at the primary school level, they need a diploma from 1 of 9 teacher training colleges or schools and need to have 11 to 12 years of total schooling. The lack of qualified teachers has been a major obstacle to improving the quality of education in Lao. Given the extremely low salaries of teach-



ers and attractive new private sector opportunities, it is difficult to attract students to the teaching field. Anyone actually teaching in the classroom does receive a 10 percent civil service bonus. Despite this incentive, serious teacher shortages at the secondary level are likely.

To improve the quality of education, in-service training of existing teachers is extremely important. Such training is provided primarily by the Teacher Training Department, the National Research Institute of Educational Science, and the Teacher Development Center (TDC) of the NUOL. In the mid-1990s a new pedagogy was introduced by the Ministry of Education to move away from traditional rote memorization to more active, experiential, and problem-solving, student-centered type learning. TDC training and related text development has emphasized such innovative pedagogy. By 1998 major reform improved efficiency by consolidating 59 small teacher training schools into 9 larger institutions.

SUMMARY

To be responsive to its new market-oriented economy and to improve the productivity of its people, improved education and human resource development are essential for the future of Lao PDR. Sparsely populated remote areas with the presence of many ethnic minorities present special challenges to Lao educators. Approximately 50 percent of the students entering grade one are being taught in a language that is not their native tongue. The rapid population growth in Lao will also put special pressures on its educational system. The Asian economic crisis of the late 1990s adversely affected the Lao government's financial capability to improve education. Despite these serious and persisting problems, Lao PDR has an excellent long-term future. The country has a strong sense of national identity and social cohesion, a favorable ratio of resources to people, a central location between China and Southeast Asia, rich ethnic diversity, positive informal education consisting of solid moral education and parenting, and the potential to leapfrog into the information technology arena. These important factors augur well for its long-term potential to develop its human resources and improve productivity.

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—Gerald W. Fry

LATVIA

BASIC DATA

Official Country Name: Republic of Latvia

Region:	Europe
Population:	2,404,926
Language(s):	Lettish, Lithuanian, Russian
Literacy Rate:	100%
Academic Year:	September-May
Number of Primary Schools:	1,056
Compulsory Schooling:	9 years
Public Expenditure on Education:	6.3%
Foreign Students in National Universities:	850
Educational Enrollment:	Primary: 139,925 Secondary: 239,318 Higher: 56,187
Educational Enrollment Rate:	Primary: 96% Secondary: 84% Higher: 33%
Teachers:	Primary: 10,357 Secondary: 29,852 Higher: 4,486
Student-Teacher Ratio:	Primary: 14:1 Secondary: 8:1
Female Enrollment Rate:	Primary: 93% Secondary: 85% Higher: 40%

HISTORY & BACKGROUND

Since the restoration of independence in 1991, Latvia has had many difficult problems to solve, including those of consolidating a sovereign state, supporting democracy, and transitioning to a market economy. These problems triggered a decline in the economy, a growing unemployment rate, a sharp decrease in the population's purchasing power, and a number of social problems like crime. Geographically, Latvia is the central country of the Baltic States (Estonia, Latvia, and Lithuania) bordering Russia and Belarus. Its area is 64,589 square kilometers (24,937 square miles).

The Republic of Latvia was founded on November 18, 1918. It has been continuously recognized as a state by other countries since 1920, despite its occupation by the Soviet Union (1940-1941, 1945-1991) and Nazi Germany (1941-1945). On August 21, 1991, Latvia declared the restoration of its independence.

Politically, Latvia is a democratic, parliamentary republic. Legislative power resides in a single chamber parliament—the Saeima, consisting of 100 deputies who elect a president. Latvia is a member of the United Nations, Council of Europe, World Trade Organization, Organization for Security and Co-operation in Europe, Council of the Baltic Sea States, and Euro-Atlantic Partnership Council. Latvia also desires full membership in the European Union and NATO.

Economically, the most prospective production sectors are information technologies, electronics, mechanical engineering, chemical and pharmaceutical industries, wood processing, food processing, and textiles. The Latvian national currency is the lats (LVL). One lats consists of 100 santims.

Culturally, Latvia is ethnically mixed, with a population of 2,372,000 people (57.6 percent Latvian, 29.6 percent Russian, 4.1 percent Belarusian, 2.7 percent Ukrainian, 2.5 percent Polish, 1.4 percent Lithuanian, 0.4 percent Jewish, and 1.7 percent other nationalities). The largest religious denominations are Evangelic Lutheran, Roman Catholic, and Russian Orthodox. Latvian is the official state language.

Riga Polytechnic, founded in 1862, became the first higher education institution in Latvia. The University of Latvia was established on the basis of Riga Polytechnic in 1919 when Latvia became independent from Russia. Contemporary Latvia is still to a large extent resisting Russian influence; this resistance, along with a Western orientation, assists in shaping Latvian educational reforms.

CONSTITUTIONAL & LEGAL FOUNDATIONS

In 1995, the Cabinet of Ministers adopted the Latvian Concept of Education as a strategic basis for educational development. This document outlined long-term policies, the direction of education reform, its legal framework, and a research model. According to the Concept, education determines the prospects of societal development and the place of a nation among other cultures.

With limited resources of raw materials and energy, Latvia must look for a competitive edge in the highly educated and qualified population and the intellectual capacity of an economy. The implementation of the Concept with all activities, procedures, terms, desired outcomes, and estimated costs is further described in the National Program of Education and Science. This long-term educational development program allocates a period of ten to fifteen years for a transition.

The Law of Education was adopted in 1991. It provides the main principles, goals, and features for reform in education. According to this law, Latvian residents have the right to an education. The state and the local

governments guarantee this right, enabling every individual to acquire the highest possible education. The principal goal of education, as stated in the Latvian Concept of Education and the Law of Education, is to provide conditions for the development and perfection of one's spiritual, creative, physical, and professional abilities.

EDUCATIONAL SYSTEM—OVERVIEW

The main objectives of educational reform in Latvia are to replace centralism with autonomy, to ensure international recognition of Latvian diplomas, and to introduce a Western-type structure of degrees and qualifications. Latvia has introduced twelve years of education, free choice of subjects at the upper secondary school level, and the possibility of establishing private educational institutions at all levels.

The first step in this reform was to conform the Latvian educational system to international ones. With the International Standard Classification of Education (ISCED) indicators applied to Latvian schools, the system looks like this:

- First level Preschool education
- Primary education (grades 1-4); First level education
- Elementary education (grades 5-9); Second level education,first stage
- Secondary education (grades 10-12); Vocational education/industrial training; Secondary specialized education
- Higher education (tertiary/professional education) Bachelor's and Master's degree courses; Third level

In 1997, the Latvian educational system consisted of 1,147 schools with 384,642 pupils and nearly 47,000 teachers. The state guarantees free secondary (high school) education, and more than 90 percent of Latvian children attend state schools. The Latvian educational system is free, and nine years of education are compulsory.

Primary schools educate pupils from ages 6 or 7 to ages 10 or 11. Elementary schools enroll children from ages 6 to 15 and secondary schools enroll those from ages 6 to 18. Enrollment in preschools is voluntary. All children are registered and, when they reach the age of six, they are required to attend school. Boys and girls study together and are treated equally. Nearly 50 percent of the schools in Latvia teach minority children. If parents and children prefer, they can choose schools where teachers speak various minority languages. These ethnic minority schools or classes are state-financed, and courses in these schools are taught in Belarusian, Estonian, Hebrew, Lithuanian, Polish, Russian, and Ukrainian. Latvian is replacing Russian as the language of instruction. In the 1997-1998 academic year, 72 percent of primary school pupils were taught in Latvian, 14 percent in Russian, and 12 percent in both. In 1997-1998 there were also six Polish schools, two Jewish schools, one Ukrainian, one Estonian, and one Lithuanian school. The academic year begins on September 1, or the first working day of September, and ends in June for secondary schools and July for higher education.

The majority of exams are oral. Universities, institutes, and some colleges have entrance exams with many candidates competing for available slots. After an individual has met established criteria and is enrolled as a student, all the exams occur only at the end of the course (semester). At the end of any school, the last exams determine the final grades. Latvia has a 10-point grading system in which 10 and 9 are rarely given (they denote knowledge and skills significantly higher than expected), 8 is excellent, 7 is good, 6 is almost good, 5 is fair, 4 is barely satisfactory (very low pass), 3 is unsatisfactory, and 2 and 1 are never used.

Approximately 90 percent of young people attend state schools, with only 10 percent in private schools. The number of private educational institutions increases every year. In 1996-1997, 39 private schools opened their doors for 2,271 pupils, including 14 preschools (314 pupils), 13 elementary schools (588 pupils), and 12 secondary schools (1,369 pupils). Two of the secondary private schools are secondary specialized schools, and 4 trade schools function as private schools.

Information technology is recognized as an absolute necessity in Latvian schools. However, in the 1997-1998 academic year, only 19 percent of schools had Internet connections, and the ratio was 39 students to 1 computer. On June 13, 1997, the Ministry of Education and Science of the Republic of Latvia and the University of Latvia signed an agreement, ''On the Latvian Education Information System,'' which contained goals for preparing students of primary, secondary schools, and universities for life and work in the information age. Since 1999, after extensive work, schools have become computerized and many are connected to the Internet. With access to electronic mail, database information searches, and libraries, schools and students now participate in various international communication and scientific projects.

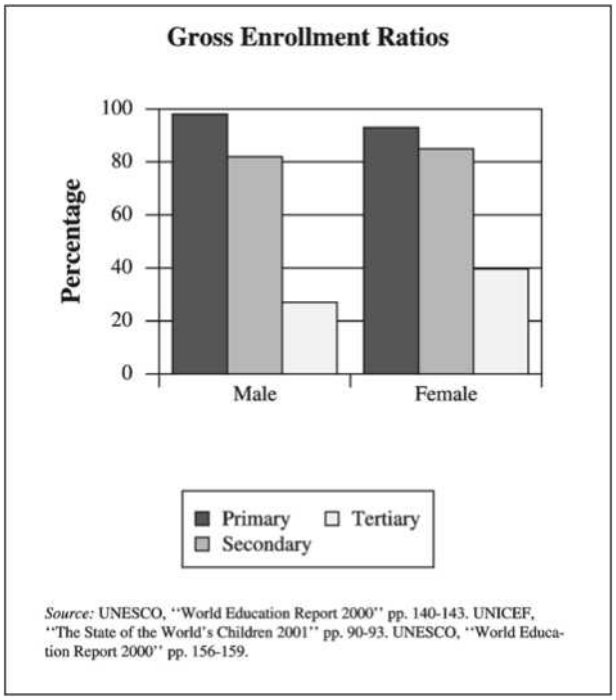
Large-scale changes in the structure of education require an enormous effort for development. New curricula, new programs, and new classes require new textbooks and new publications. Unlike the Soviet educational system, the state does not produce or distribute audiovisual materials. Most schools use old and often outdated materials. Moreover, low school budgets make it difficult for schools to purchase teaching materials from private en-

terprises, and foreign products are too expensive for the municipalities to afford.

With the main goal of integrating Latvia into the European system, the Ministry of Education and Science must:

- compile a list of professions available in Latvia,
- develop laws on mutual recognition of diplomas and qualifications,
- encourage universities to adjust their teaching programs to the European Union (EU) requirements, and
- insure implementation of the law in educational programs.

The Ministry of Education and Science established a special division for integration into Europe and opened the Center for Academic Information that is incorporated into the EU network to coordinate the recognition of academic and professional education diplomas.



Source: UNESCO, "World Education Report 2000" pp. 140-143. UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

PREPRIMARY & PRIMARY EDUCATION

In the 1990s, access to preschool education was seriously limited. Many children were unable to enroll in preschools because of the economic crisis. State enterprises, local authorities, and private firms could no longer affordto support their preschools and were forced to close them. Unemployed parents, using childcare allowances, trained their children at home. In less populated areas, the public transportation system was inadequate for transporting children to preschools.

In 1996-1997, about 72,000 children attended 611 preschools. There were 5 private preschools with 202 children enrolled. Preschools also experienced a serious shortage of qualified teachers and support staff.

At the age of 6 or 7, children enter primary school. All schools, regardless of type, provide primary education for all pupils studying in grades 1 to 4. In the 1997-1998 academic year, approximately 100,000 children attended 638 primary schools. With a lack of inspection, control, suitable materials, funds, and curricula that reflect change, preschool and primary education has declined in efficiency and quality. The absence of roads, transportation, employment, and preschools puts children living in the rural areas at a major disadvantage. Often, after primary school, they must leave home to attend a gymnasium, or boarding school.

In the 1990s, the status of the teaching profession continued to deteriorate and preschools of Latvia experienced a serious lack of teachers and staff. Moreover, the centralized system of retraining teachers dissolved. Approximately 20 percent of Latvia's teachers do not have any relevant training, and many others are poorly prepared to deal with the complexity of pedagogical work. All of these factors have caused a decline in the quality of preschool education. Many of the best and most capable teachers leave teaching because of low salaries. In 1996 only about 45 percent of graduates from the pedagogical institutions sought employment in teaching.

More than 9,000 Latvian children suffer from developmental problems and various other disorders. These children (in addition to those having discipline problems) often become repeaters and dropouts. Latvia has 56 special schools and newly opened development centers for these children. Still, there is a lack of special education institutions for children with health, mental, and behavioral problems.

SECONDARY EDUCATION

Latvian school names may appear strange to a foreigner, since they are named according to the highest level they teach: primary (1-4), elementary (1-9), secondary (1-12). Pupils attend the same local school, and the name indicates the level of education children can achieve in a particular school. In the 1997-1998 academic year, approximately 159,000 children (44.8 percent) studied at the elementary schools (1-9 grades). The next stage of education is secondary education, for pupils studying from grades 10 to 12. In 1996-1997, secondary schools offered education to 49,000 pupils (13.8 percent of pupils attending schools). Another branch of secondary education are the secondary specialized schools. In

1997-1998, approximately 19,000 children studied in 50 specialized schools. Two secondary specialized schools are private schools.

Finally, because of shortcomings in transportation and long traveling distances, the government provides boarding schools called gymnasiums. Rural gymnasiums have a smaller number of students, but the town gymnasiums are so full that students must study in two shifts.

Former Soviet-type schools had one curriculum for all schools across the union. Today, the curriculum has changed dramatically with new needs, subjects, and credit requirements influencing those changes. Pupils in the final grades in secondary schools can have electives and create their own curriculum.

Teachers control learning results by grading test papers and oral answers. At the end of the quarter (semester) grades are averaged. Exams, written or oral, are given at the end of the year. Examination procedures are also being restructured.

After completion of secondary school, a certificate/diploma is conferred. Those who graduate from vocational education institutions receive a diploma in vocational education or a diploma in secondary specialized education.

Teachers in secondary education schools must be graduates of the pedagogical university or have a Master's degree. In addition to general courses in philosophy, language, and literature, they study education-related courses, such as psychology, history of education, and general educational methodology. They also study the methodology of their specialization subject, such as the teaching of math or a foreign language.

School age children who fail to pass the required exams are repeaters. Those who fail to attend the school are dropouts. According to estimates for school year 1996-1997, there were about 5,000 children in Latvia who did not attend school. Additionally, the number of under-age criminal offenders convicted by the court was growing rapidly.

Vocational education is provided by secondary specialized institutions that may belong to the state or local government, or they may be privately controlled. The Ministry of Education and Science administers 58 vocational institutions; the Ministry of Agriculture, 38; the Ministry of Welfare, 9; and the Ministry of Culture, 15.

Vocational education can be acquired at trade elementary, secondary, or grammar schools. More than 26,000 students receive training in 78 trade schools. Only 4 of these schools are private, while the others are state-funded. Education programs at this level are designed for training skilled workers. The study period ranges from 1 to 4 years, depending on the field of education and the curriculum. Only graduates of trade grammar schools may proceed to higher education because their education program also includes general secondary education curriculum. Graduates of other trade schools who want to proceed to higher education must study a general secondary education curriculum. Approximately 40 percent of elementary school graduates and about 20 percent of secondary school graduates continue their studies at vocational educational establishments. In the 1995-1996 academic year, about 25,000 students studied at vocational education institutions.

Secondary specialized education can be pursued in technical secondary schools, polytechnics, and other educational institutions, including colleges that are authorized to educate and train such specialists. Secondary specialized education programs provide both skills and knowledge in a specific trade as well as in organizing and managing work. Elementary school graduates study from 4 to 5 years in these specialized programs, and secondary school graduates study from 2 to 3 years. These education programs include vocational education and the general secondary education program. Upon completing a secondary specialized program, graduates may apply to an institute of higher education.

Nonformal education in fine arts, performance, sewing, culinary arts, and other skills is provided at schools and clubs. Teachers, parents, or volunteers are normally the leaders of informal groups. Physical education teachers supervise all athletic extra-curricular activities to prepare the school teams for competitions at region, city, and even republic levels.

HIGHER EDUCATION

Since February 14, 1992, the Latvian Academy of Sciences (LAS), has functioned as an association of scientists. In 1994, all former academic institutes were transferred to the formal supervision of the Ministry of Education and Science. LAS is the highest educational authority. In addition to its weight in political decisions, about 50 percent of LAS' full members are professors of Latvia's higher educational institutions.

In 1997-1998, higher education (third level education) was offered at 33 institutions (15 of them private) with a total enrollment of 64,000 students. There are four higher education institutions called Academies, while other educational institutions are called schools and colleges. The higher education programs consist of undergraduate and graduate studies. The first stage, which normally takes 4 years, leads to a *Bakalaurs* (Bachelor's) diploma. The next stage leads to the *Magistrs* (Master's) degree that normally takes one and a half to two years. Next step leads to a *Doktors* (Ph.D. equivalent) degree.

The last and the highest educational degree is *Habilitets Doktors* (Doctor of Sciences), which is required for full professorship. The latter is approximately equal to post-doctoral level in the United States with several distinctive features that differentiate it. This degree is highly honored and influential, and the government sets exceptionally high requirements on those pursuing it. In order to apply for this level degree and/or to enter doctorantura, the candidate must:

- become a distinguished researcher in the field,
- provide a very broad generalization for the field of study,
- patent and implement an important (revolutionary, breakthrough) invention, or
- discover (establish) a new field of research or new science.

Higher education institutions (as well as any other schools in Latvia) can be public, that is, state-funded, or private. The Ministry of Education and Science and other ministries that control educational institutions, including vocational institutions, establish the admission and enrollment procedures, number of attendees, and general admission regulations. Qualifications for admission may vary between different institutions and even between different divisions at the same institution. Certain trades and specialties may have a minimum age requirement and some specific health requirements.

Latvian universities and institutes are divided into divisions according to the subject they teach. Each institution of higher education is headed by a rector, vice-rector, and further administered by the division deans. Enrollment in a university is based on the results of very competitive entrance exams that take place once a year. Teaching styles and techniques may differ greatly. The University of Latvia has a total enrollment of 22,000 students in 68 study programs. The University operates on the semester basis and offers academic programs leading to a four-year Bachelor's degree. At least 50 percent of the subjects must be in the major field of study, 30 to 40 percent in the minor field of study, and the rest taken as electives.

The system of professional education and training for specialists has also declined as a result of economic difficulties and the elimination of former Soviet establishments. Financial constraints reduced the minimum number of conferences and symposia where teachers could exchange their experiences, and professional journals and magazines are often too expensive to order. This all predetermines the decline of a professional training system not only in Latvia, but also in the other Newly Independent States (NIS).

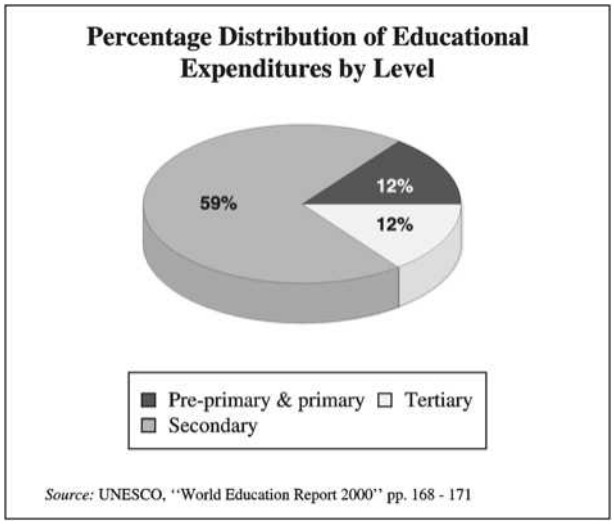
Many years of experience and publications in major scientific journals are required at the Doctor of Sciences level, which has no formal classes or exams. The dissertation (twice as large as the Ph.D. dissertation) is formally and publicly defended in the presence of the scientific council with 10 to 20 specialists at the Doctor of Sciences level. After two to three years of *doktorantura,* the scholar earns the Doctor of Sciences degree conferred by the Cabinet of Ministers. This Soviet system-based degree is still available in Latvia, and it is required to obtain full professorship. Moreover, with few exceptions, all top administrators (rectors of the universities and colleges, deans of schools, and heads of departments) have the Doctor of Sciences degree. Finally, in order to become a full member of the Academy of Science or the Latvian Council of Science, this degree is a must.

The University of Latvia (as well as some other institutions) invites foreign students to study in Latvia and offers classes for foreigners within the International Students Exchange Program (ISEP) in the Baltic/Latvian Studies Program, which is taught in English. This program offers Latvian literature, anthropology/cultural studies focusing on Latvia, and the history and ecology of Latvia/Baltic region. It also includes a Latvian language course.

Libraries are numerous in Latvia. The Latvian Academic Library is one of the oldest libraries in Europe, founded in 1524 as Bibliotheca Rigensis. The Law Library of the Riga Graduate School of Law is a modern, well-equipped information center of legal sciences with an electronic catalogue, databases, and legal information resources. Goethe Institute, an independent organization representing German culture and language in Latvia, has more than 8,000 items in the library of the institute. One more foreign library is the Library of the Stockholm School of Economics in Riga. It contains the latest publications in business and economics and a weekly, updated electronic catalogue. Many university libraries are equipped with modern technology and have Internet connections.

The highest authority in education in Latvia is the Ministry of Education and Science. It employs about 230 specialists working in several departments, including General Education, Education Strategy, Vocational Education, and centers like the Center of Education Curriculum and Examination, the Center for the Protection of Children's Rights, and the Teacher Education Support Center.

In 1999, 66 million lats (US$1 = 0.6 lats), or about 5.4 percent of the country's budget, was allocated to education, the fifth biggest budget in Latvia. This budget is distributed to local authorities and administrative units that supervise construction/reconstruction of school buildings, the acquisition of equipment, and the publishing of educational materials. The Latvian government



regularly lowers the funding for research: from 0.275 percent of the GDP in 1995 to 0.2 percent of the GDP in 2000.

Research is viewed as an essential part of every higher education institution and professorial life. Educational research directed by *Habilitets Doktors* (Doctor of Pedagogical Sciences) is conducted in numerous educational and other universities by *Doktors* (Ph.D. in Education, Educational Doctor-Candidate of Pedagogical Sciences). Research activities are funded through the university budgets, grants from abroad, and international foundations.

NONFORMAL EDUCATION

Nonformal education includes adult education, open universities, and distance education (through television, radio, and the Internet). The Ministry of Education and Science includes the Department of Continuing Education (DCE). The DCE consists of two divisions: the Division of Educational Workers (DEW) and the Division of Adult Education (DAE), which organizes the education and continuing education of teachers and adults.

The DAE is responsible for the legal basis for adult education. It organizes programs and updates educational materials, develops a network of centers, promotes the exchange and spread of information and information technologies, develops the distance education system, and coordinates international cooperation in adult education. During 1995-1996 more than 25 regional adult education centers were established in Latvia.

TEACHING PROFESSION

The teaching profession is not highly respected and has limited authority because the income of teachers is below average. In order to survive and help their families, many teachers seek other career opportunities.

The Division of Educational Workers (DEW) coordinates the education and continuing education of teachers. It creates regulations and documents, organizes the certification of teachers and head teachers, analyzes the continuing professional development needs depending on the demands of the market, as well as composes the state order to universities regarding teacher training. Several private companies offer commercial programs for teachers. Due to lack of funds, however, teachers mainly depend on the state budget and courses organized with state financing.

In 1995 the average wage rate of a preschool teacher was approximately 78.4 percent of the country's average salary and 90.9 percent of the average teacher wage rate in general education.

SUMMARY

Latvia is on a path back to Europe; Latvia aims for a quick integration with the Western society. Certainly, the absence of central funding severely hurt educational establishments. The educational system in Latvia is experiencing numerous difficulties that influence the life of pupils, students, teachers, and professors. The quality of education is lower than it was, and this situation, while worsening individual lives, will echo in the coming years causing growth in unemployment, lower revenues, and a rise in crime. Nonetheless, national and ethnic liberation holds the promise that in 10 to 15 years, Latvia, a recognized and notable member of European society, will achieve its goals, and its citizens will succeed in their goals for personal development. With the idea of reintegration with Europe in mind, Latvia created The European Integration Council (EIC). Education is considered a major part of that integration process.

Since 1991, Latvia has participated in international educational projects organized by the Council of Europe, the Educational Committee Council of Europe: Europe at School (since 1995), the European Center for Modern Languages (since 1995), and the Education for European Citizenship (since 1997). Latvia also has been encouraging learning and teaching about the history of the Europe in twentieth century, in-service training programs for teachers, and the ''CDCC Teachers Bursaries Scheme'' (1996). In addition to language and cultural programs, there are technological and communication projects.

The main issues and problems the Latvian system of education faces are material in nature. In order to function successfully in the future, the system needs monetary assistance. Additionally, the educational system of Latvia is still fighting against Soviet influence; Latvia must reorient its citizens from Soviet ideology to free market ideology.

Another problem is the transition to the Latvian language as a state language. The need for language training

and teaching is massive: textbooks, classes, schools, and faster methodologies of teaching are needed. The low level of teacher training is another significant problem. National standards for training and assessing teachers must be adopted to create a nationwide system of assessment and certification for newly trained teachers.

On the way to integration with Europe, Latvia must coordinate its standards, statistical data, and understanding of European education, which requires renaming and retraining. There has been a clear decline in the education figures of the 1990s, and these figures must be converted to the accepted European standard.

Finally, serious reforms need allies. Latvian educators need methods, research, and successes to help future generations flourish. This demonstrates to perspective investors and the Western society that Latvia and its educators are on the right path—the path to the future where they can achieve the goals set forward by the government and Latvian visionaries.

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—Andrei G. Aleinikov

LEBANON

BASIC DATA

Official Country Name:	Lebanese Republic
Region:	Middle East

Population:	3,578,036
Language(s):	Arabic, French, English, Armenian
Literacy Rate:	86.4%
Number of Primary Schools:	2,160
Compulsory Schooling:	9 years
Public Expenditure on Education:	2.5%
Foreign Students in National Universities:	18,253
Educational Enrollment:	Primary: 382,309 Secondary: 347,850 Higher: 81,588
Educational Enrollment Rate:	Primary: 111% Secondary: 81% Higher: 27%
Teachers:	Higher: 10,444
Female Enrollment Rate:	Primary: 108% Secondary: 84% Higher: 27%

HISTORY & BACKGROUND

Al-Jumhuriyah al-Lubnaniyah (the Republic of Lebanon) is a very small Arab country (slightly smaller than the state of Connecticut). It is predominantly a mountainous terrain of great scenic beauty, situated in western Asia on the eastern shore of the Mediterranean Sea. It is bordered by Syria to the east and north, by Israel to the south, and by the Mediterranean Sea to the west. As a country, Lebanon was created by accident rather than by design by virtue of becoming a French zone of influence after World War I. Thus, these borders were established during the French Mandate in 1918.

Culturally, economically, and geographically, Lebanon is considered an important part of the Arab world and the Middle East. It is the birthplace of the alphabet and has always played the role of cultural junction between East and West beginning with the Roman School of Law of *Berytus* or old Beirut, up to the American and French schools and universities in 1820 and beyond. Lebanon enjoyed a privileged status in the Ottoman Empire and thus managed to import European trends to the Middle East. For instance, the printing press was imported to Lebanon in 1702 and the production of books printed in Arabic started in the beginning of the nineteenth century promoting an Arab identity in the midst of a collapsing Ottoman Empire. Therefore, Lebanon, which represents one one-fortieth of the total area of Arabia, produced 70 percent of Arabic publications.

Arabic is the official language, but Armenian, English, and French are widely spoken and taught in schools. Education is free at government schools and universities, and students pay at private schools; Lebanon is said to have the best private school system in the entire Middle East. French and American styles of education are readily available and competing with each other in the country. Lebanon's strong and diverse educational opportunities assured the nation one of the highest literacy rates in the Middle East (75-80 percent). Also prior to the civil war (1975 to 1990), Lebanon had the highest standard of living in the Middle East.

The population of Lebanon is difficult to estimate since no official census has been conducted after Lebanon's independence in 1943, and many people also left the country during the 1975 to 1990 civil war. The 1996 estimate was that there were about 3.6 million Lebanese living in the country, and more than 3.0 million living abroad. Main cities include Beirut (capital city), Tripoli, Sidon, Zahle, and Tyre. The population growth rate is about 3.4 percent. The Lebanese population is very diverse and contains a mosaic of religions and ethnic groups. Seventeen of these groups are recognized by law and are represented in the parliament with proportional power sharing in the government. Christian sects include Maronites, Greek Catholics, Greek Orthodox, Roman Catholics, Armenian Catholics, Armenian Orthodox, Armenian Protestants, Syriacs, Chaldeans, Nestorians, Protestants, and Evangelicals. Moslems include Shiites, Sunnites, Alawites, and Druzes. There is also a small Jewish community.

The territory known today as Lebanon witnessed many occupants and invaders throughout history, starting with the Phoenicians as long as 5,000 years ago, Babylonians, Greeks, Egyptians, Hittites, Assryans, Persians, Macedonians, Romans, Byzantinians, Muslim Arabs, European Crusaders, Seljuk Turks, Ottomans, and French. Phoenicians were the most important Semitic migrants from Canaan who founded a maritime civilization that dominated the Mediterranean region with regard to trading in general, especially the transmission of cultural artifacts for about 2,000 years (2700 to 450 B.C.).

Another important point in Lebanon's history concerns the Romans and Byzantinians who converted many people to Christianity and left their marks in great castles around the country. After this, the Islamic invasion of Lebanon took place in the seventh century, while the Crusaders followed in the eleventh and thirteenth centuries. It was not until 1516 when Lebanon came under the Ottoman Empire rule, which remained until the end of World War I. At the beginning, the French authority ruled only some districts, and during that initial period, important political, social, educational, and economic reforms took

place. For example, the new educational system encouraged the use of the Arabic language as a prime cultural resource. Arabic nationalism was fed by the recent trend of education in Arabic, which had caused the Arabs to demand independence from the Ottoman rule. After World War I, the Ottoman Empire was completely destroyed and the control of Lebanon as a whole nation fell into the hands of the French authorities in the form of a mandate approved by the League of Nations. During the French domination period, a very effective health, education, and judiciary system was established.

In 1926, Lebanon was declared a republic, and a Lebanese constitution was written under the supervision of the French and a local Lebanese committee. However, foreign control of the country did not end with this declaration. Thus, Lebanon gained its independence from the French authorities on November 22, 1943, and soon became the commercial and financial center of the Middle East, as well as a major banking and trade center between the Eastern and Western worlds because of its strategic location and west-leaning stand. Many multinational companies established their Middle Eastern headquarters in Beirut and the Lebanese people witnessed their best and most prosperous days until the mid-1970s.

Until the mid-1970s, the power was mainly in the hands of the Christian half of Lebanon. The other half, mainly Muslim citizens, was excluded from real power. The escalating tensions in various parts of the Middle East, dislocated Palestinians, and the Suez crisis caused the national unity in Lebanon to break apart. Since then the power struggle between various religious and political groups (mainly Christians and Muslims) took a new turn, and Syrian as well as Israeli involvement added to the worsening Lebanese situation.

The 1958 civil war or Muslim rebellion started as a result of Lebanon's refusal to join the union that was formed between Syria and Egypt. It took the intervention of U.S. forces to calm all parties in the conflict. Also, the Arab-Israeli war in 1967 added fuel to the overall situation in Lebanon, which did not enter the conflict, and the 1975-1990 civil war tore the nation apart and destroyed the economy. The Lebanese pound, which used to equal about US$3.00 in 1980, collapsed in 1984. In February 2001, US$1.00 equaled 1,507 Lebanese pounds. Human casualties of the latest civil war and the two Israeli invasions were extremely high (more than 100,000 people). In addition, that civil war jeopardized the entire educational system because of massive destruction of school buildings, as well as other facilities, and the closure of schools for long periods of times, sometimes for months.

Because of the Lebanese social structure, which consists of many different ethnic and religious minorities, the Lebanese people conducted their communal affairs in accordance with their own religious, cultural, and legal traditions under the Ottoman Empire. Education was one of those affairs assumed by each minority (especially religious minorities). Towards the end of the eighteenth century, a western missionary activity took place in Lebanon. American, British, Danish, French, German, Italian, and Russian missionaries came to Lebanon and opened schools and universities to further their religious goals. Since the Ottoman rulers did not play a major role in education and provided only some training of state bureaucrats, private schooling flourished and became entrenched in the Lebanese educational system and social structure.

The French Jesuits were the first to establish two schools in 1770, followed by the first national school of Ain Waraqa in 1782. Then in 1830 the American Protestant missionaries opened the American School for Girls and started to compete with the French Jesuits. Al-Makassid Institution was established in 1877 as a charitable association providing for the education of Muslim children. In 1866, the American missionaries established the Syrian Protestant College, which is known today as the American University of Beirut (AUB). This led the French Jesuits to open the Saint Joseph University (SJU) in 1875. By the end of the nineteenth century hundreds of various missionary private schools opened, which laid the foundation of primary and secondary education in the country. Prior to the French mandate, secondary education was provided by private schools only.

After placing Lebanon under the French mandate, the League of Nations along with the mandatory authorities approved a constitution for the nation that provided for the freedom and encouragement of public education. Thus, the Lebanese government adopted a policy designed to lay the foundation for a public system of education that was similar to the French system in many respects. Based on that policy, the Lebanese government took the following specific measures: 1) Primary and higher primary schools were established in big cities and towns. 2) Two training centers were established to prepare primary school teachers. 3) A primary education program, which was similar to the French system, was introduced. The basic difference between the two systems was that, in Lebanon, half of the curriculum was taught in Arabic and the other half in French. 4) All private and public schools were required to teach French as a primary foreign language. 5) French was recognized as another official language besides Arabic. 6) French teachers were appointed in private and public schools to teach and supervise the teaching of the French language. 7) A system of official public examinations similar to the French system was introduced and adopted. The official certificates awarded included the primary certificate, the brevet, and the two-part baccalaureate. 8) A French government

commission administered examinations in Lebanon for the French baccalaureate, which was equivalent to the Lebanese baccalaureate.

After Lebanon gained independence in 1943, the Lebanese authorities adopted the French system of education with minor modification. Arabic became the only official language in the country, and the teaching of Arabic became compulsory. In addition, English was placed on a par with French as a primary foreign language, and in 1951 the Lebanese government established two public secondary schools in Beirut and Tripoli, officially marking the start of secondary public education in the nation.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Lebanese constitution, which was written under the French mandate, has not changed with regard to guaranteeing freedom of teaching and education in Lebanon, as long as educational institutions do not transgress upon public order and are not disrespectful of any religion. Therefore, any qualified organization or individual can establish an educational institution, provided that they adhere to the general guidelines concerning education decreed by the government and their curriculum does not incite religious bias. These guidelines are usually promulgated by ministerial decrees without parliamentary approval.

The Ministry of Education for Youth and Sport rulings governing primary and secondary education as well as the Ministry of Culture and Higher Education rulings governing post secondary education (decrees 7001-7004 of October 1946, modified by decrees in January 1968 and November 1971, as well as the 1994 educational reform and the 1995 new framework for education in Lebanon) express the aims of public education in Lebanon as follows:

1. Primary education in Lebanon aims at providing children with needed basic skills to develop their moral, intellectual, and physical character as well as to assist them in assuming the responsibilities of citizenship.
2. Intermediate education aims at helping students to discover their interests and potentialities as well as to guide them toward a branch of knowledge or vocation that may be compatible with their interests and potentials.
3. Secondary education aims at providing training to a select group of students for advanced study at the university level or for subprofessional positions requiring a certain amount of mental development.
4. The new reforms of the 1990s (*projets de restructuration du system educatif*) have aimed at consolidating the links between the pre-university teaching and higher education and at realizing an equilibrium between general education and technical or professional education.

These reforms set by the National Center for Educational Research and Development and approved by the Council of Ministers in August 1994 seem to have modernized the Lebanese educational system in accordance with the world's progressive education and technology. In addition, these reforms established in clear terms the principles and guidelines for new curricula, which draw on known international and local experiences. They also limit the different pillars possible for educational formation, the relationship between general education and technical or professional education, as well as that relationship between all forms and levels of education and the work market or the needs and aspirations of the Lebanese society. For instance, teaching two foreign languages was one of the established principles. The emphasis was on creating a citizen who is proficient in at least one foreign language in order to promote openness to and interaction with other cultures. Thus, teaching the first foreign language starts at the beginning of schooling, and the second starts in the seventh grade. The major guidelines underlying the language curriculum are: language learning is learning to communicate; language varies; learning a new language is becoming familiar with a new culture; language learning is most effective when it takes place through meaningful, interactive tasks; and language skills are interdependent.

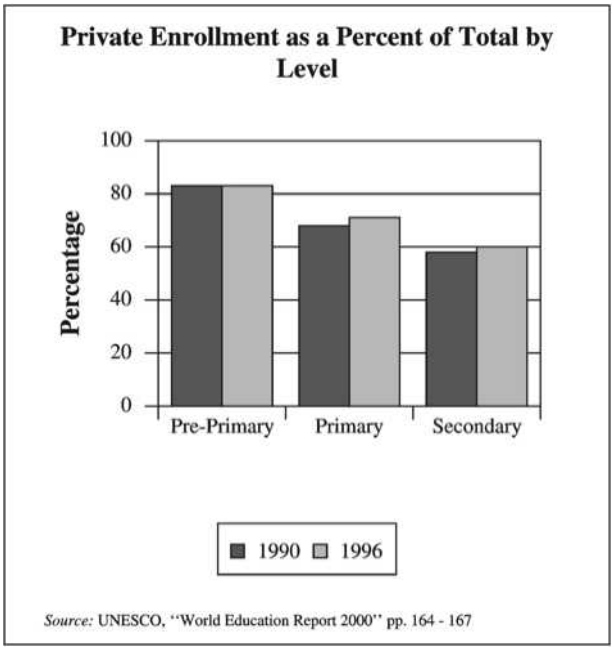
However, after three years of implementing the new curricula, the Lebanese Minister of Education for Youth and Sport (Mr. Abdel-Rahim Mourad) appeared on the Lebanese Broadcasting Company International (LBCI) on January 18, 2001, and complained about some of the gaps that resulted from implementing these new curricula. It was very difficult for that ministry to fund the most up-to-date technologies to carry out the new educational responsibilities. Also, there was a lack in human resources, for materials in the new curricula have almost doubled and there are not enough teachers to train them for the new responsibilities.

EDUCATIONAL SYSTEM—OVERVIEW

The Lebanese educational system is divided in two sectors: private schools and universities, for which there is a charge for admission, and public (government) schools and universities that are practically free of charge. This system is well developed and reaches all levels of the population. Lebanon maintained this advanced educational system structure by well-training its teachers before the conflict. Beirut, the Lebanese capital, served as an educational center for the region; however, this sys-

tem suffered heavy damage during the civil war, but has still survived.

Education was once almost exclusively the responsibility of religious communities or foreign groups, but because the number of students in public schools has risen to more than two-fifths of the total school enrollment, the government was pressured to open more public schools to meet the demands of the general public. Public and private schools differ concerning the elementary phase of the educational system. While public schools have not paid much attention to the preschool phase and have required students to be five-years-old to be accepted in kindergarten until the 1990s, private schools have always had a preschool phase and have accepted students as young as three-years-old. Hence, students in private schools spend one year at the nursery school, another year at kindergarten one, and a third year at kindergarten two. This may help explain the difference in academic performance, which is usually higher among those attending private schools than among those attending public schools.



Source: UNESCO, ''World Education Report 2000'' pp. 164 - 167

The Lebanese educational system has usually relied heavily on private schooling to accommodate the ever-growing demand for learning in the country. Private schools, which are in their overwhelming majority dependent on various religious communities, have a long and strong tradition in Lebanon. This fact has led to a great variety of educational institutions in the country, which may be considered as a reflection of the openness of the government to the international community. Aside from private schools established by western clerics (French, Anglo-Saxons, Germans, and Italians), there are many and diverse local and foreign religious and secular schools. The majority of these schools are funded by private religious groups—mainly Jesuits (Catholics who came in 1625 and, with the Maronites, established the first religious schools in Lebanon); Presbyterian missionaries who came to the Lebanese capital, Beirut, in 1866 and started a rivalry with Catholics by establishing the American University of Beirut and high schools; and *Makasids* or Muslim schools started in many mosques in big cities and supported by wealthy Islamic nations such as Saudi Arabia and other Gulf States. These religious schools led to and fostered some divisions and barriers among the Lebanese people, which have been very hard to break and, in turn, fueled the civil war for many years in Lebanon.

Even though the Lebanese educational system has depended heavily on private schools, the Lebanese Ministry of Education for Youth and Sport has been able to control the system through its licensing of private schools and its requirements for their graduates to pass the government baccalaureate examination at the end of the secondary cycle. These requirements and regulations have forced private schools not to deviate too far from the government curricula in pre-university education.

The new school curricula was launched in September 1998, and the Educational Center for Research and Development had trained 16,000 teachers in public schools and 6,000 teachers in private schools on the new uses and principles of the new program. The new system took into account economic, social, and national perspectives. The principle characteristics of this new system consist of the following:

1. The total duration in school remains intact, 12 years.
2. The primary cycle of general education has been increased by one year, and is divided into two modules of three years each, while the intermediary cycle was reduced to three years instead of four.
3. The first year of general education's secondary cycle must be considered common for all four different series of instruction, and the second year is common to only two out of four series.
4. Lebanese students are not allowed to enter formal technical education before age 12, which is the age limit of obligatory education.
5. The scholastic year was changed to 36 weeks, and 4 supplementary hours per week were added at the intermediary and secondary cycles.

Thus, the organization of instructional cycles reflects positively on career choices in all sectors of production. Also the ties between instruction and the work market

have become consolidated, which guarantees professional opportunities for those who desire them. In addition, the reform of the educational system included elaborate scholastic programs that were inspired from the principles of the new constitution emanated from the Taef Accord. It took into account the future of the Lebanese citizens and their sacred values (tolerance, liberty, and democracy).

In short, the new formal educational system of Lebanon, like in many other countries, divides the years of instruction as follows: 6-3-3 (six years for the primary cycle, three years for the intermediate cycle, and three years for the secondary cycle), followed by the higher education cycle. Primary school education is followed either by a six-year intermediary and secondary program, leading to the official Lebanese baccalaureate certificate, which was originally based on the equivalent French school diploma, or by a three- to six-year technical or vocational training program.

Lebanese vocational education started in the late 1940s. It is mostly available in the private sector rather than in the public domain, and it is offered mainly at the secondary level as well as at the Lebanese University or other institutions of higher education. There are 1508 public and private intermediary and secondary schools for the general instruction program in Lebanon, while there are only 262 schools for the technical and professional instruction program divided between the public sector (29 schools) and the private sector (233 schools). So, the number of schools designated to professionally and technically teach students constitutes less than 12 percent, and the number of students oriented toward the formal technical and professional program represents less than 9 percent of the overall total number of students. A definite equilibrium between the two types of instruction is, therefore, needed in the country. In addition, this percentage becomes even weaker when considering the intermediary level alone (1.3 percent). Formal schools have not concerned themselves much with professional instruction at this level, leaving it for the secondary level in general.

Education is compulsory until the end of the intermediate cycle, is available to all Lebanese students, and is attended by nearly 95 percent of school-age children. However, compulsory education has not been fully implemented by Lebanese authorities, especially in urban slums and remote rural areas. Low cost government schools are available to all but are of generally low quality compared to private schools. Therefore, those who can afford to pay the cost of sending their kids to private schools would do so and end up paying for their primary as well as their secondary schooling because of the high quality education they receive. When it is time to enter college, students are usually faced with a required competency entry test before they can be accepted.

The school year starts in early October and ends in late June. The school day consists of six hours starting at 8:00 a.m. with two hour lunch break and ends at 4:00 p.m. The length of class periods ranges from 50 to 55 minutes. Both public and private schools are supposed to observe official holidays, which are decided by the government; however, Christian-administered, religious private schools take Saturday and Sunday off every week, while Moslem-run religious private schools take Friday and Sunday, and Jewish-run private schools take off all of Saturday and Sunday afternoon only.

As to special education concerning handicapped students, there were about 10,000 handicapped people in 1975 (prior to the Lebanese civil war). During the Israeli invasion of Lebanon in 1982, this number reached 13,000; it is more than 15,000 in 2001. About 2,500 handicapped people were being educated and made ready to enter the work market. In addition, there was a pedagogic plan affirming the necessity of organizing the schooling of gifted students and devoting specific pedagogic programs to them that may address and respond to their fundamental needs. One of these programs is called *al-Makfoufine* (Blind Program), which consists of mixing blind students with other students in the same classrooms; this has proved to be an effective program.

The number of students going to schools and universities was expanding each year until the beginning of the civil war; it then began to decline because of unstable political and security conditions, substantial damage of school facilities, the mass exodus of people fleeing the war, and the scarcity of qualified teachers. This decline, however, changed after the civil war and took an upswing. For instance, the total student enrollment increased for four consecutive academic years after the civil war ended and people returned to their areas or houses. There was a steady increase from 770,599 students in 1993-1994 to 799,905 students in 1994-1995 to 829,338 students in 1995-1996 and, finally, to 878,102 students in 1996-1997. In addition, females appeared to have a slightly higher percentage than males with regard to attending schools and universities. After age 25 male attendance becomes almost double that of female attendance. Females get married at an earlier age than males in Lebanon and, when married, they mostly assume the traditional role of taking care of housekeeping responsibilities. They, therefore, have little time to go to schools and universities in order to further their education.

According to the CAS Survey, the literacy rate was 88.4 percent in 1997, as compared to 68.2 percent in 1970. The Lebanese Republic traditionally had an advanced educational structure and well-trained technicians

and engineers. Prior to the conflict, Beirut served as an educational center for the region. However, a substantial part of its human capital was reduced during the conflict, and the educational system suffered damage and lack of investment. In spite of the turmoil, however, the educational system has survived and still retains high standards.

The Lebanese schools are unevenly distributed among the five *mohafazats* (provinces). The Greater Beirut area has the highest concentration of all schools and universities. The large population concentration in and around Beirut accounts for its schools' high enrollments. The Lebanese government provides facilities for public schools, but these facilities are poorly equipped in general. Few of them have libraries, laboratories, and playgrounds. Private school facilities are mostly better equipped than public school buildings.

Due to the Lebanese people's negative attitude toward manual work, especially in industry and agriculture, students of lower socioeconomic status enroll mostly in vocational and technical schools. Therefore, there is a big difference between the two major types of instruction, as well as the relative numbers of schools and students enrolled in each of these types. For example, in the academic year 1993-1994, the total number of public and private schools for the general instruction program was 1,508 (878 were public and 630 were private). However, the total number of schools for the technical and professional instruction program was 262 (29 were public and 233 were private). Fields of training in vocational schools include automotive and airplane mechanics, communication, electricity and electronics, printing, watch making, and welding.

Progression from one level to another depends generally upon passing official external examinations administered by the government at the end of each school cycle. The primary certificate (first official examination), which used to take place at the end of the primary school cycle, is now eliminated from the new educational system. The *brevet certificate* (intermediate studies examination) takes place at the end of the ninth grade, and the baccalaureate exams (part I and II) are given at the end of the second and third years of the secondary cycle. The brevet certificate is only required by public schools, vocational schools, and teacher training institutes. The baccalaureate part I exam has two main tracks: literary and scientific. The baccalaureate part II has four main tracks: literature and humanities, which includes language, literature, history, philosophy, education, arts, and religion; sociology and economy, which includes economic sciences, politics, business and management, law, and sociology; general sciences, which includes mathematics, physics, chemistry, and their applications at the level of engineering; and life sciences, which includes biology and life sciences, chemistry and their applications in the area of medicine, health, agriculture, and other related subjects.

Most institutions of higher education require entrance examinations besides the baccalaureate part II, which is required by law. These exams vary from one institution to another, but they usually cover language competency (native and foreign), science, and mathematics.

The grading system is generally based on scales of 0 to 20 or 0 to 100, with 10 or 60, respectively, as passing grades. This system also differs between French-oriented and English/American-oriented private schools. The French-oriented private schools, as well as the Lebanese public schools, grade on a scale of 0 to 20, with 10 as a passing grade. The English/American-oriented private schools use either a letter grade system, with A, B, C, and D as passing grades, or a scale of 0 to 100, with 60 as a minimum passing grade.

The curriculum in Lebanese schools is somewhat rigid, for all students must pursue the same programs in all three cycles (primary, intermediate, and secondary) except in the second year of the secondary cycle when students begin to branch out to one of the emphasis areas and continue to branch out further in the third year of the secondary cycle, which eventually prepares them to more easily pursue their higher education. The syllabi are usually set by the Ministry of Education, Youth, and Sport. The textbooks are commercially produced in order to meet certain specifications of the syllabi. Both private and public schools are free to choose their textbooks; however, after the creation of the Center for Educational Research and Development (CERD) in the early 1970s, the government began to adopt (for the public schools only) books that were produced by the research unit of this center. Private schools can choose textbooks that meet their syllabi, except in the civics area where the Ministry of Education, Youth, and Sport requires them to use the center's textbooks.

Arabic and either French or English are the languages of instruction in the Lebanese schools. The subjects taught in Arabic have been limited to Arabic language and literature, history, geography, and civics. All of the other subjects have been taught in either French or English, depending on the school orientation or affiliation. While Arabic language dominates in public schools as a major language of instruction and French or English are taught as subjects at the primary cycle, in private schools, however, French or English dominates since all the subjects except Arabic language and civics are taught in a foreign language. In addition, the type of language that a person uses to communicate with others is usually related to politics, loyalty, religion, and social status.

The methods of instruction used in Lebanese classrooms are mostly traditional. Teachers spend a great deal

of time lecturing, giving homework and reading assignments to students, and correcting exercises completed in the classroom. Students play a generally passive role in the instruction process. They listen quietly to their teacher, rarely question what is presented, and copy material dictated by the teacher, who uses textbooks as major sources of instruction. Later on, oral recitation by students is used for grading purposes. Memorization of facts and events is greatly emphasized in Lebanese schools, especially for the purpose of passing external formal exams. Therefore, it is not unusual to see standard answers given to questions on official examinations because certain teachers require their students to memorize model answers for certain topics. Implementation of new ideas and methods has been hampered by the lack of adequate educational facilities and well-trained professionals in that regard. However, private fee-charging schools practice more progressive and advanced methods of instruction, which are geared toward the increasing involvement of students in the instructional process. These interactive methods made some private fee-charging schools more famous in the Middle East region and attracted many students from other Arab or Near East nations.

Because of their quality education and high tuition fees, these private schools attracted students from the richest families, while poor families, who cannot afford to pay tuition fees for their children's education, have been somewhat satisfied, but not happy, to send them to either public or private tuition-free schools, which are usually subsidized by the government. Private schools are mostly sectarian and controlled by different religious denominations. Other types of private schools are owned by individuals or run by associations or committees, like *al-Makassid.*

The United Nations Reliefs and Works Agency (UNRWA) provides funds supporting a private nonsectarian school system for Palestinian Refugees in the Middle East. This type of private schooling has been very effective in offering education and social services for children of Palestinian Refugees residing in Lebanon. Besides the many primary, intermediary, and secondary schools, the UNRWA runs a two-year secondary teacher education program, which prepares primary and intermediate school teachers who serve their schools. In addition, the agency sponsors a technical training center for students who intend to pursue a vocational or technical career.

PREPRIMARY & PRIMARY EDUCATION

Preschool or preprimary education did not receive serious attention in Lebanon until the 1940s. Since then, it remained in the private sector till the beginning of the 1970s. Actually, in 1968 the Ministry of Education had defined in decree number 9099 the four stages of preuniversity education: *le jardin d'enfants* (kindergarten), *le primaire* (primary), *le moyen* (intermediary), and *le secondaire* (secondary), without mentioning the *la prematernelle* (pre-maternal). In addition, the decree 9099 was not put into effect till the end of 1971. Thus, the age of acceptance at this phase of this cycle remained uncertain, changing between three and four years of age, making this phase of the cycle two years in the public schools and three years in the private schools (decree 295 of August 1974 and decree 720 of September 1993).

The new educational system recognizes the fact that preschool education starts at conception and continues until the age of four, so the preschool phase is divided into two stages, before and after birth. First, before birth, parents are prepared to form a sane family through the help of different administrations of the ministries of Education, Health, and Social Affairs, and other municipalities as well as special international agencies. Second, after birth and until the age of four, the prior-mentioned administrations continue to help and advise the parents so the infants grow in an atmosphere conducive to their physical, cognitive, psychological, and social development.

At the age of four, children are admitted into a preschool education program wherein they spend four hours daily for a minimum of five days a week. The preschool curriculum consists of four types of activities. First, children are greeted, their health situation is put under control, and they are given the opportunity to express themselves (free individual activities) and, thus, be prepared to participate in their other daily activities. Second, children get engaged in collective activities in class or outside of class on the playground, such as playing, singing, drawing, and other activities aiming at providing an appropriate educational climate, which can help the progressive development of the children's physical, intellectual, psychological, social, and emotional abilities so as to enable a smooth transition for them from the home environment to the school one without any major difficulties. Third, there are guided activities, which aim at giving children coherent and complementary experiences to the previous activities. Finally, the fourth type of activity consists of free plays in the presence of kindergarten teachers and under the control of a psycho-sociologist. This last type of activity is usually interrupted by certain breaks reserved for nutrition and rest. The role of teachers consists of helping children adjust and like school through playing with them, telling them stories, and teaching them to recognize differences between colors, between shapes of objects, or between letters and how to pronounce them.

The primary cycle of education lasts for six years instead of five as it was in the old system. It starts at the age of 6 and expands till the age of 12. It is obligatory for all citizens and can be considered as the primary phase of compulsory education, which progressively becomes an investment until the age of 15. This cycle is divided into two modules of three years each. The first module comprises the first, second, and third grades, and the second module comprises the fourth, fifth, and sixth grades. Students are admitted in the first grade when they are six years old by December 31 of the year of registration in school.

The number of periods in each year of this cycle is 30 per week and 6 per day. The duration of each period is a minimum of 45 minutes in the first module and can be augmented in the second module. This cycle is considered as the preparatory one for the other following cycles. The major objectives of it are to master the language and communication with others; to comprehend the basics of sciences and mathematics; to scientifically understand the social environment; to get attached to the national identity, country, and moral values; to practice sports, artistic, and manual activities; and to stimulate confidence in themselves, autonomy, and cooperative work in school as well as outside of school.

The curriculum in the primary cycle consists of teaching Arabic language (six to seven hours per week, depending on whether students are in the first or second module), French or English language (six to seven hours per week, depending on whether students are in the first or second module), and mathematics (five hours per week in each of the two modules). The remaining of the 30 hours per week are reserved to teach civics, history, and geography (one hour each per week); sciences (two to five hours per week depending on the module and year); arts (three to four hours per week depending on the module and year); physical education (two hours per week); and other activities. Certain schools reserve at least one hour a week for teaching religion, even though religion is not an obligatory subject in the curriculum. The new educational system allows Lebanese students to progress from the primary cycle to the intermediate cycle without having to take any external official examinations as was the case in the past.

According to the new educational system, the intermediate cycle consists of three years and is designed for students aged 12 to 15. However, since independence it was approached in two different directions. On one hand, it has been considered an integral part of secondary education aimed at training or educating the national elite who are gifted, as decree number 7001 of October 1946 defines it. On the other hand, it is considered as an extension of the primary cycle that aims at preparing students to either enter into the technical schools or the active life of work, as delineated by decree number 6999 of the same year (1946).

At the end of this cycle, students take an intermediate certificate examination (*brevet certificate*), which is administered by the Ministry of Education, Youth, and Sport. Public schools require students to pass this exam before they can be admitted to public secondary schools or to the teacher training schools. Private school students can take this exam, but they are required to pass their private school exams or entrance exams before they can be allowed to enroll at the secondary level.

The intermediate cycle curriculum includes teaching Arabic language and literature (six hours per week), foreign language (six hours per week), a second foreign language (two hours per week), sciences (six hours per week), and mathematics (five hours per week). The remaining of an overall 34-hour total is divided among civics, history, and geography (one hour each per week); information technology (two hours per week); arts (two hours per week); and sports or physical education (two hours per week). The number of weekly periods for all the classes in this cycle are 34 total, with a minimum of 50 minutes per period. These periods are divided over five days a week.

Major objectives of this cycle are introducing students to information technology; instructing them a second foreign language; increasing the time allotted for sciences; increasing diverse artistic, manual, and sport activities; familiarizing students with professional activities as well as the new technology and its multiple uses; helping students become civilized citizens; permitting them to discover their individual capacities to pursue their academic careers or integrate into an active life; developing their fundamental competencies to communicate and express themselves in a creative manner; establishing a positive attitude in them toward manual professions; and developing their confidence in themselves as free, cooperative, and responsible individuals.

The intermediate cycle, along with the primary cycle, constitute what may be called a fundamental education. The weekly periods for all the classes of this cycle are 34, with a minimum of 50 minutes for each period.

SECONDARY EDUCATION

The secondary cycle of education is divided into two major fields of study: general education and technical education. The general field consists of three years and is known as the general baccalaureate. Students have to pass a comprehensive official examination in order to be offered that certificate. The first year is considered as common year, offering the majority of the necessary dis-

ciplines that help students choose what may suit them in the following classes. In the second year, there are two options (humanities and sciences) available to students. In addition to these two options, there are four other choices starting in the third year (literature and humanities, sociology and economy, general sciences, and life sciences).

The number of weekly periods are 35 for all 3 secondary years and options, with 7 periods a day and a minimum of 50 minutes each. However, in the second and third years where students branch off into different options, the studied materials differ in emphasis according to the option students choose to study. The periods of instruction are divided into three modules for all three secondary years. There is a great emphasis on teaching languages (2 to 6 hours a week depending on three important elements: the module, the school year, and students' option). Also the same is true for all other topics of study such as, mathematics, all types of sciences, sociology, economy, management, civilization, civics, history, geography, physical education, arts, and information technology.

The technical field of education comprises the initial formation and continues to the technical and professional years. It is known by two diplomas: first, the technical baccalaureate, which permits students to practice the profession they studied; second, the professional certificate of a master permitting students to attain the work market. The secondary technical cycle consists of three years, and the brevet certificate is a necessary condition to attain this cycle. There are three domains in this cycle: the services, such as finance, commerce, management, tourism, information, hotels, health; agriculture; and industry.

The first year is common to all choices in the services sector, and diversification starts in the second year. With regard to agriculture and industry, diversification takes place in the first year. The total scholastic periods for the services sector varies between 2,800 and 3,000 periods, which constitute an average of 950 periods per year. Also, the total periods concerning the agriculture or industry varies between 3,000 and 3,300 periods, which is the equivalent of 1,050 periods per year. The periods are distributed throughout 30 effective weeks per year (without counting the holidays). There are 35 periods per week, with a minimum of 50 minutes each.

The periods of instruction in all specialties are divided into four modules. The first module consists of teaching general materials, such as Arabic language, first and second foreign languages, mathematics, sciences, and sociology (40 to 50 percent in the first year and 35 to 40 percent in the second and third years). The second module is a specialty domain and consists of teaching specialty materials as well as sciences that are associated with one's specialty (45 to 50 percent in the first year and 55 to 60 percent in the second and third years). The third module concerns sports and various other activities (10 percent in the first year and only 5 percent in the second and third years). The fourth module is reserved for field studies and practice/hands on experiences (35 to 40 percent in the first year and 40 to 45 percent in the second and third years).

Students who succeed in three modules of this technical cycle are permitted to take the official examinations for the technical or professional baccalaureate certificate. The structures of this new model, especially concerning the superior professional formation, constitute an effective operational approach for continuing the initial development of students. They also consolidate the links between learning and practice in accordance with the needs and characteristics of the work market in Lebanon. The aims of the new curriculum are to prepare students for effective social interaction, academic achievement, and cultural enrichment. The best way to achieve these aims is through the adoption of a thematic, integrated, content-based approach to teaching and learning. The same concepts and skills are taught at various times across the grades but with increasing levels of complexity and sophistication as children get older. Unlike the old curriculum, the new one highlights the role of group work and stresses the need for the creation of an interactive classroom environment.

Many of the objectives and performance tasks included in the new curriculum call for pair and group work in line with the cooperative learning model of classroom interaction. In addition, the new curriculum emphasizes the development of the proper study skills, which helps students to develop into independent learners. In short, the new curriculum moves from a system of education based on rote learning and cramming of information to a system that promotes autonomous learning, thinking skills, and communicative competence.

HIGHER EDUCATION

According to Carla Semaan at the Lebanese Embassy in Washington, DC, there are 13 universities in Lebanon. These universities had a total of 79,141 students during the academic year 1994-1995. Nearly 23 percent were foreign students, compared with approximately 75 percent in 1974-1975 prior to the start of the civil war in the country. Lebanon's universities also had a total of 84,446 students during the academic year 1995-1996 and a total of 87,957 students during the academic year 1996-1997. The principle universities in Lebanon consist of the Lebanese University, with five branches (approximately 40,000 enrollments). It is the only one operated by the government; the others are owned and run by private enti-

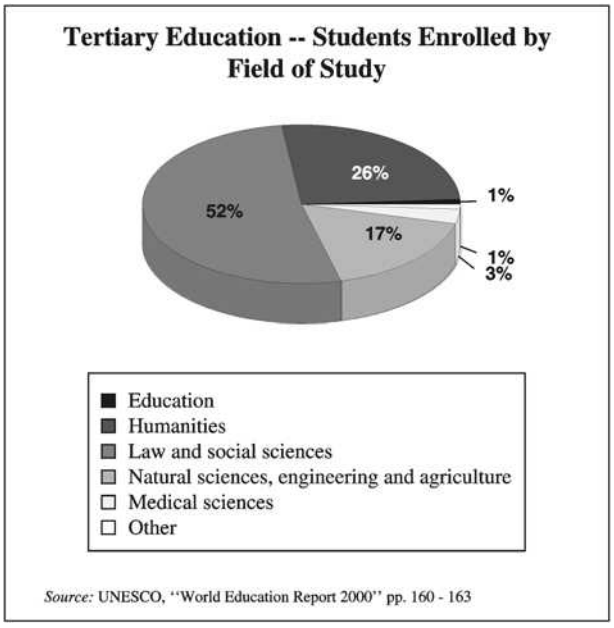
ties. It had the highest enrollment in the academic year 1996-1997 (40,000 students); followed by Beirut Arab University (BAU), which is sponsored by the Egyptian University of Alexandria (14,000 students); Saint Joseph University, which is founded and run by French Jesuits (6,145 students); American University of Beirut (5,500 students); Lebanese American University (4,432 students); and Kaslik University (3,100 students). The other universities have less than 3,000 students enrolled. The Lebanese University (LBU), University Saint Joseph (USJ), and American University of Beirut (AUB) have medical schools.

The Lebanese University is a public (government-run) institution, with five campuses around the country (East and West Beirut campuses, Tripoli campus, Sidon campus, and Zahle campus). It was founded in 1951 with a major aim to train teachers for secondary schools. Since that time, its program has been expanded to include training for other professions as well. Instruction is relatively free, for students pay only nominal fees for registration, and those enrolled for teacher training purposes receive stipends. It was the first university to introduce an education major to Lebanon. It began with 68 students and, in 1959, it was given the license by the Lebanese government to teach all of its schools of study. Due to the civil war in the country, in 1976 the Lebanese University opened branches in Mount Lebanon (East Beirut), South Lebanon, North Lebanon, and the Bekaa, which was located in West Beirut. This was done to assure that students' educations would not be postponed. The Lebanese University has a nondiscriminatory policy due to religion, race, sex, nationality, or physical handicaps.

The Lebanese University offers academic programs in agriculture, communication (advertising and journalism), business administration, education, engineering, fine arts, law, literature and humanities, medicine, management, political science, and social sciences. Graduates can be awarded bachelor's, master's, and Ph.D. degrees.

The university follows the French model of higher education in most of its colleges and institutes and the U.S. credit system in a few of them. The grading system is based on a 0-20 or 0-100 scale, with 10 or 60, respectively, being recognized as the passing grade. To be admitted to the Lebanese University, Lebanese students are required to have the baccalaureate degree and pass an entrance exam in many programs, but foreign students are required to have an equivalent official secondary certificate.

The Beirut Arab University (BAU) is a private institution of higher education that was established in 1960. It is financially supported by Alexandria University of Egypt and operates under the auspices of the Moslem Philanthropic and Benevolent Society of Beirut. Accordingly, Alexandria University provides many of BAU's faculty members, controls its academics, and awards degrees to its graduates upon the recommendation of the BAU Council. BAU is a founding member of the Union of Arab Universities established in 1964 and a member of the International Union of Universities. It does not discriminate on the basis of religion, race, sex, nationality, or physical handicaps.



BAU's academic programs include architecture, arts, business administration, engineering, law, and life and health sciences. This university grants bachelor's, master's, and doctoral degrees in certain specialties. Arabic is the language of instruction, but English is used in programs like architecture, engineering, and sciences. Admission requirements and the grading system are mostly similar to those of the Lebanese University.

St. Joseph's University (USJ) was founded in 1875 by a group of monks. The Jesuit order administers it and has strong ties with the University of Lyons in France. Seventeen institutions joined together to form St. Joseph's University. Its main branch is in Beirut, with other branches in Tripoli, Saida, and Zahle. Courses of study are given in French and other languages as well. USJ's goal is to train students to enter all work fields, be it locally or abroad, with the power and knowledge for guaranteed success. Its programs include business administration, economics, engineering, humanities, law, medicine, pharmacy, political sciences, and theology. This university grants two-year diplomas, bachelor's, master's, higher diplomas, and doctoral degrees. Its requirements are similar to those of the Lebanese University, with emphasis on the entrance examination and profi-

ciency in French. Its grading system is based on a scale of 0-20. USJ is directed and financed by the Jesuits. The deans and chairs are Jesuit priests. The French government and private French institutions offer grants and subsidize this university. It is a very influential institution in Lebanon.

The American University of Beirut (AUB) was founded by the Evangelical Mission to Syria in 1866 in Beirut, Lebanon. It was named the Syrian Protestant College then, and its present name was adopted in 1920. The purpose of the AUB, as an institution of higher learning, is to share in the education of the youth of the Middle East, in the service of its peoples, and in the advancement of knowledge. It is a residential institution, and its pattern of organization, administration, and standards are similar to the best educational institutions of the United States. The AUB is a secular university, financed by an endowment fund that can be supplemented by grants from the U.S. government as well as from private national and international institutions or individuals. Because of its high tuition rates, only well-to-do families can send their children to pursue their higher learning in it.

This university emphasizes scholarships, which enable students to think for themselves. It stresses high academic standards and high principles of character. In its service to students, the university strives to realize the ideals of its motto: ''That they [students] may have life and have it more abundantly.'' The AUB admits students regardless of race, color, religion, gender, disability, or national origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school. To be admitted to this university, students must be competent in English (have received a minimum score of 500 on the entrance exam or a minimum score of 575 on the test of English as a foreign language, known as the TOEFL). The grading system is based on a scale of 0-100, with 60 as a passing grade.

Its academic programs include colleges of arts and sciences, agriculture and food sciences, architecture and engineering, as well as medicine and health sciences. It grants bachelor's, master's, and doctoral degrees. English is the language of instruction, but Arabic is used in several fields of studies also. The academic year starts in September and is divided into three semesters following the time divisions of the U.S. universities (fall, spring, and summer). The AUB is considered one of the most influential institutions of higher education not just in Lebanon, but also in the entire Middle East region.

The Lebanese American University (LAU), once known as Beirut University College, is a multi-campus, career-oriented institution that prepares students for responsible living, fully aware of the rich heritage and multiple needs of their respective communities. LAU, which was founded by the U.S. Presbyterian Church, is an institution that shares the spiritual concerns of its founders. It is an internationally stimulating community responsive to the dynamics of its environment. It aims at serving the educational needs of Lebanon and the Middle East with its three campuses in Beirut, Byblos, and Saida. LAU is at the crossroads of many interacting educational systems. Lebanon's academic freedom is essential to a climate of intellectual growth and the integrating cultures at LAU and other institutions of higher learning. The country's rich, multi-faceted heritage enhances the student body's international character, representing more than 50 nationalities on its campuses. LAU is very similar to the AUB in its grading system, requirements, and programs of studies, with the exception of medicine and engineering colleges. Thus, its major emphasis lies in the arts and humanities.

There are other institutions and universities of higher education in Lebanon such as Notre Dame University, Balamand University, Haigazian University, Antonine University, Beirut Islamic University, Holy Spirit University, Louaizeh St. Mary University, Sagesse University—College of Law, and the Lebanese Academy of Fine Arts.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Lebanon's emphasis on education is evidenced by the existence of three active ministries relating to educational matters. They are the Ministry of Education, Youth, and Sport; the Ministry of Vocational Education; and the Ministry of Culture and Higher Education. However, the educational system and its administration are still highly centralized in the country despite continuous efforts to give more control to regional and provincial departments. Instead of only one ministry of education controlling everything, now the government has three ministries that control all important aspects with regard to the educational system in the country and the way it is financed. The three ministers are always members of the Council of Ministers and belong to political parties. The General Director of each ministry is directly responsible to the respective minister concerning everything in the ministry. In addition to these general directors, the Lebanese University and the National Conservatory of Music are controlled by the Ministry of Culture and Higher Education; the Center for Educational Research and Development is controlled by the Ministry of Education, Youth, and Sport.

The Central Administration, which is located in the capital (Beirut), includes the following departments: Primary, Intermediate, Secondary Education, and Examination. In addition to these, there are the following central

offices or sub-departments: Private Education, Teacher Preparation, Educational Research, Cultural Affairs and Fine Arts, and the National Library. Besides these departments in the Central Administration, there are regional sub-administrations composed of the following departments: National Education for North Lebanon, National Education for Mount Lebanon, National Education for South Lebanon, and National Education for the Bekaa. Vocational Education is controlled by the Ministry of Vocational Education and contains the following departments: Administration and Execution, Supervision and Examinations, and Technical Affairs. In each ministry, there is a directorate for administrative affairs who coordinates administrative services among the different sections of each ministry through the offices of Auditing, Personnel, Equipments and Common Affairs, and Legal Studies and Statistical Information.

The Central Inspection Administration, which was established and maintained as a separate entity in 1959, inspects and supervises the Lebanese educational system through inspecting all public offices and agencies according to rules and regulations set out by the ministries of education. This administration is directly and closely supervised by the Council of Ministers. Each of the three ministries regulates its institutions' curricula and administers the official external exams after completion of certain educational levels. Because of these functions, some uniformity in academic programs and levels has been accomplished. Each ministry appoints teachers on a competitive basis, except graduates from the teacher training institutes who are automatically hired and assigned to certain positions or locations as needed. Teachers are considered government employees and, thus, get paid salaries by the government through their respective ministries.

Financially, public schools mostly depend on the central government's budget. A very few local groups or international agencies may provide some support in the form of donations for public schools. An average of 16 percent of the government budget is normally devoted for educational purposes.

The bulk of educational research is conducted by the Center for Educational Research and Development. However, the various colleges at the Lebanese University and teacher training institutions constitute major contributors to educational research. Most of the research is in the applied or experimental areas, which has resulted in improving the quality of textbooks and producing an abundance of theses and dissertations.

NONFORMAL EDUCATION

The new educational system, with regard to nonformal education, established a field of professional studies following the warrants of the job market, notably for the students who finished their first educational cycle and wish to acquire an immediate profession. In the centers of professional modular formation, the student receives a professional formation at three stages and in a way that the initial formation is conducted inside of the modules of autonomous learning, which give the student possibilities to pass vertically (that is, from one determined module of learning to a higher one) or horizontally to another profession at the same level inside of the same series of professions.

After passing every module of learning, trainees receive an official work certificate permitting them to practice the profession for which they were trained so that they may have the possibility to pursue their formation further according to the specific module of learning following the Lebanese ladder of adopted qualifications. In every module of formation, trainees receive between 600 to 900 hours of formation (25 percent theoretical and 75 percent practical work). That ladder of information is an echelon of qualifications starting with a novice worker, who knows about 10 percent but knows how to do things about 90 percent, and who can be granted a degree of formation attestation. Second, there is a qualified worker, who knows about 25 percent but knows how to do things about 75 percent, and who can be granted a formation attestation degree like the novice worker. Third, there is a specialist worker, who knows about 40 percent but knows how to do things about 60 percent, and who can be granted a C.P.A. degree. Fourth, there is a technician, who knows 50 percent and also knows how to do things 50 percent, who can be granted a technical or professional baccalaureate degree. Fifth, there is a superior technician, who knows 60 percent and knows how to do things about 40 percent, and who can be granted a technical or professional qualification degree. Sixth, there is the specialist or expert, who knows 70 percent and knows how to do things about 30 percent, and who can be granted a technical license degree.

In terms of the third module of learning, trainees may obtain the C.P.A., which permits them to work at establishments of production, construction, and in the service sector under the title of special workers. They can, if they wish, pursue their formation at the superior formal or nonformal technical level following the proper procedures of the establishment where they have been working and in coordination with the official direction of those who are concerned.

Students who abandon the basic education field or any other field of study can follow available courses in this area of modular learning. These courses are equally open to adults who wish to profit from these programs in order to move to another profession or for promotion pur-

poses in the same professional domain. These programs open very diverse horizons in front of every individual and prepare for the practice of professions needed in the work market. Programs offered by vocational institutions are diverse and vary from one institution to another in terms of courses and training, depending on whether the institution is public or private. These programs include: home economics, secretarial training, needlework, pottery, masonry, and farming.

As to the conditions of admissions into the diverse modules of learning, they are linked to the demands of every specialty and they become precisely regulated when necessary by the Ministry of Technical and Professional Education in collaboration with the Ministry of Labor and through the National Agency for Employment. The General Directorate of Technical and Professional Education is responsible for the concepts and organization of the stages related to all the modules of learning.

TEACHING PROFESSION

While there are a small number of private institutions licensed to train teachers for the first two levels of education such as *al-Makasid,* the British Lebanese Training College, the French *École des Lettres*, and the French *École Libanaise d'Éducatrice,* the majority of teacher training institutions are in the public sector where teacher education is conducted at the secondary and university levels. Eligibility to teach at primary and intermediate schools requires training in secondary level institutions, whereas university training is required to teach at secondary schools. Therefore, to teach at primary public schools, teachers should graduate from one of the primary teacher training institutions with a baccalaureate degree in teaching (*baccalauréat d'énseignement*).

These teacher training institutions offer three years of academic and professional training for students who enter them and have already the brevet certificate or its equivalent. Student admission to the program requires passing a competency examination in Arabic, English, or French; social studies; math; and sciences, as well as submitting evidence of Lebanese citizenship and good moral character. In addition, students who passed the two first years of the Lebanese baccalaureate are eligible to apply and train for one year at these institutions before they can be allowed to teach in primary schools. The curricula at these institutions have both academic and professional courses. They include natural and social sciences, pedagogy, school administration, and practical teaching. Specialties may include training in fine arts, foreign languages, general academics, physical education, and preschool instruction.

To teach at the intermediate level, teachers must graduate from one of the intermediate teacher training institutions or colleges. Admission of students in these institutions requires passing the three years of secondary school with the Lebanese baccalaureate in hand, passing a competency entrance exam, submitting evidence of Lebanese citizenship as well as good moral character. Subject matter specialties are usually offered in clusters.

Teacher education training for secondary schools can take place at any of the public or private universities in Lebanon. The program of study lasts for four years in any university and leads to a bachelor's degree in education or to a bachelor's degree in a subject area with a teaching diploma.

Lebanese private school teachers have a union with optional membership. Its basic function is to lobby for salary increases and social security benefits. Also, private school owners and directors have an association that represents their interests. Even though the Lebanese government has reconstructed its educational system and started to train teachers to adopt new methods of instruction, still teachers play a mostly traditional and authoritative role in the classroom.

Tuition at public teacher training institutions is free. Trainees receive scholarships that cover their living expenses. After graduation, trainees must teach five years in the public sector or reimburse all the expenses of their education. Research and innovation are emphasized in the process of training all teachers.

SUMMARY

Despite the lack of enough public-funded high schools and more than 15 years of civil war in Lebanon, the literacy rate remains one of the highest in the Middle East region. In a country that has been shattered and almost destroyed by a prolonged civil war, extended family solidarity has become crucial in supporting individual family members and providing funds for the education of the young. Whether working in the country or traveling abroad for better work conditions and income, those extended family members kept sending money to help those who stayed behind. Strong family ties still exist in Lebanon and they are very important to many. Dealing with the peace of the 1990s has been as tough and draining for many Lebanese as had been surviving the fighting of the 1970s and 1980s. Restoring order to thousands of Lebanon's institutions, especially its schools, has been an uphill battle. Because of a high inflation rate, the devaluation of the Lebanese pound, an electric power shortage, a decreased water supply and increased pollution, the destruction of regular phone lines and increasing reliance on cellular phones, divisions between the rich and poor have widened and health as well as educational standards have become mainly restricted to those who can afford them.

The new Lebanese educational system is promising. It integrates, in the new structure, the diversity and equilibrium among the fields of study so that every student can see the multiple horizons open in the domains of general or professional education, as well as at the nonformal level. This fact assures the same chances of learning for all (independent of their age and sociocultural status) the passage from one profession to another without any major problems, the development of a permanent recycling system in the heart of a same profession, and the increase of possibilities for promotion.

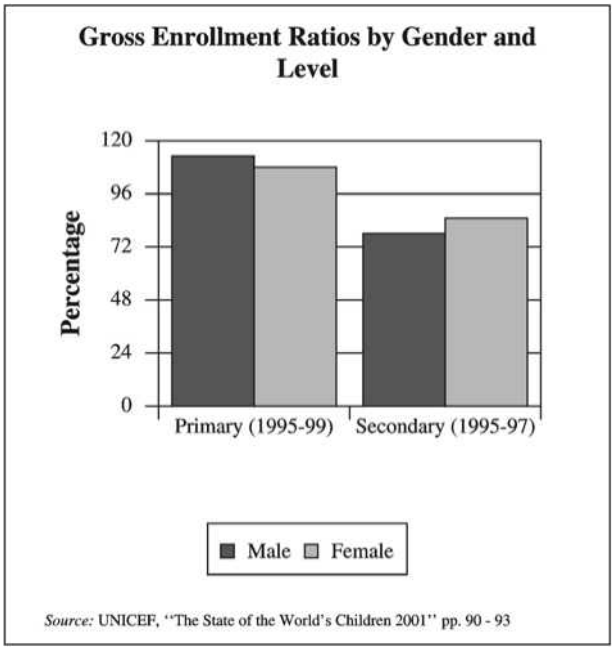
It is complementary and balanced because it consolidates the relations among the diverse cycles and domains of learning from the maternal level all the way to the threshold of the university level. It also coordinates with the needs of the Lebanese and Arab labor markets in all of the domains (economic, development, and public services). In addition, it collaborates financially and materially among the establishments of production and scholastic institutions. Furthermore, it assures more diversification starting at the secondary cycle of instruction, which would contribute to the creation of an equilibrium between general and higher education as well as with the labor market.

The new system is flexible, which gives the students a possibility to change their field of study at a minimum cost. It also takes into account the problems of failure, getting behind, and dropping out of school along with reducing their demoralizing effect on the students as well as on their parents. In addition, this new system provides harmony with the majority of the educational systems, which are applied in the developed nations. Furthermore, it introduces progressive methods leading to pedagogical and educational innovation that can be found in a world of perpetual transformation. It also promotes obligatory education till the age of 15, which does not contradict the code of labor for employing children.

This system has become increasingly less centralized because of the large number of the private schools, which have more freedom to teach what they want as long as they do not contradict the laws of the land and can meet the minimum requirements set by the three ministries of education. These private schools have mostly foreign connections and, thus, have exposed the Lebanese to foreign languages and various foreign studies and cultures.

In addition, the Lebanese educational system, even before its reconstruction, has produced one of the highest literacy rates in the Middle East (75 to 88 percent). Enrollment rates at various levels have been considered the highest in the region (with the exception of the civil war period).

As in many other countries, the new Lebanese educational system has its own problems, which could sometimes lead to negative outcomes on the students and the Lebanese community as well. The Lebanese educational system is modeled after the English-American and French systems and, hence, does not adequately prepare students to face the various intellectual, psychological, and societal challenges of the Lebanese society, which is at a crossroads of cultures. Foreign schools affiliated with different cultures have participated in dividing the loyalties of the Lebanese youth and helped to fuel the civil war in the country.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

There is an emphasis on religion and languages. Religion runs very deep in Lebanon, as is the case in most of the Middle East nations. This emphasis has led to animosities instead of understanding and appreciating religious diversity. By the same token, emphasis on foreign languages led Lebanese to mix their Arabic with French or English while speaking. This has created major gaps between the rich and poor (the more educated and less educated) as well as between people who are pro-eastern cultures and those who are prowestern cultures.

The classroom remains mostly teacher-oriented, with little attention devoted to individual students to learn at their own pace and according to their own needs. However, there is a great hope that the implementation of the new system is going to slowly change the methods of instruction toward a more cooperative style of learning through in-class problem solving and structured learning activities.

Official public examinations are difficult and cause much stress to students and their families. These exams rely heavily on memorization rather than comprehension

of concepts and can lead to a high rate of failure or dropouts. This fact has led many school teachers to waste much time explaining and teaching the content of previous examinations so students may learn how to answer them correctly.

The poorly equipped public schools, along with lack of adequate facilities for many of them coupled with high tuition fees in private schools have been problematic throughout the years. Therefore, public schools are crowded, have high teacher-student ratios, and admission to private schools has become virtually impossible for many students (especially not so well-to-do families). The end result is that wealthy students have a better chance of passing official examinations and pursuing their education than poor students.

The Lebanese economy has been suffering for a long period of time because of the civil war and the currency devaluation. Thus, it cannot absorb a large number of graduates who face unemployment and seek it outside the country. There are few vocational and technical schools in Lebanon, especially in the public sector, and most of these are concentrated in the capital and a very small number of big cities. This has made it difficult for poor students to continue their education beyond the mandatory period.

Although education is mandatory until ages 12 through 15, it is not implemented in all areas of the country because the government lacks adequate facilities and the proper equipment for them in some of those areas. Also, considerable effort, money, and time have been invested after the civil war to modernize education in Lebanon. The new educational system, which is currently implemented, has been the fruit of reconstructing the old educational system and making it comparable to the most modern systems around the world.

In addition to the new educational system, the Lebanese government may take some initial steps to help the less fortunate people by implementing compulsory education in rural regions and by using new technology to providing distance learning to remote areas in the nation, which would alleviate the burden of living in big cities or leaving the rural areas for the sake of studying. Furthermore, Lebanon needs to build more adequate facilities and equip them with the most up-to-date technology for purposes of teaching. The government needs to also build and open more public vocational and technical schools so that the country could admit more students who do not want to pursue their higher education.

Moreover, Lebanese curricula should be unified, become less theoretical and more practical so as to address the needs of the students. More importantly, evaluation of students' work should not be based solely on external official examinations at the end of each level, but on intermittent internal evaluations throughout each year so as to lessen the stress on teachers, students, and their parents and to minimize the number of failures and dropouts.

Finally, students should be the center of attention rather than teachers in the classroom. Therefore, more emphasis should be placed on cooperative and distance learning as well as other new methods of instruction rather than lecturing and memorizing contents for the purpose of passing official tests.

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—Mahboub E. Hashem

LESOTHO

BASIC DATA

Official Country Name:	Kingdom of Lesotho
Region:	Africa
Population:	2,143,141
Language(s):	Sesotho, English, Zulu, Xhosa
Literacy Rate:	71.3%
Academic Year:	January-December
Number of Primary Schools:	1,249
Compulsory Schooling:	7 years
Public Expenditure on Education:	8.4%
Foreign Students in National Universities:	133
Educational Enrollment:	Primary: 374,628 Secondary: 68,132 Higher: 4,614
Educational Enrollment Rate:	Primary: 108% Secondary: 31% Higher: 2%
Teachers:	Primary: 7,898 Secondary: 2,878 Higher: 574
Student-Teacher Ratio:	Primary: 47:1 Secondary: 24:1
Female Enrollment Rate:	Primary: 114% Secondary: 36% Higher: 3%

HISTORY & BACKGROUND

The Kingdom of Lesotho, a land of sunny skies and pleasant climate, was formerly known as Basutoland. A tiny mountain country, Lesotho is completely surrounded by South Africa, and Lesotho's history is closely related to that of its powerful neighbor. When wars swept southern Africa during the late 1700s and early 1800s and wiped out large numbers of the population, remnants of the various nations fled into the highlands of what is now Lesotho. Moshoeshoe (pronounced Mo-shwe-shwe) the Great gave them protection. Building a stronghold called *Thaba Bosiu* (Mountain of Night) about fifteen miles from the capital city of Maseru, in 1824 Moshoeshoe united his approximately 21,000 followers into the Basotho nation. Known for his wisdom and statesmanship, Moshoeshoe is the subject of many works in African literature. The spirit of Moshoeshoe lives on in the pride of the citizens of Lesotho in their independence, their traditional crafts, and in their families.

In the mid-nineteenth century, from 1856 to 1868, the British and the Boer settlers tried unsuccessfully to defeat the Basotho. When in 1868 Moshoeshoe asked Britain for protection, Basutoland became a British Protectorate. After Moshoeshoe died in 1870, the territory was placed under the rule of the British Cape Colony, which tried to disarm the Basotho but was repulsed. In 1884 Basutoland was reestablished as a British protectorate governed by a British colonial administrator. Whites were forbidden to acquire land, and Britain ensured that Basutoland would not be absorbed by neighboring white-ruled colonies. In 1966 the protectorate of Basutoland became the independent Kingdom of Lesotho. During the 1980s political instability in South Africa, where 250,000 Lesotho nationals worked in mines, and South African control of the Highland Water Project, exacerbated Lesotho's own internal conflicts. A bloodless military coup in 1986 led to several years of changing government structures and political instability. In 1998 South Africa and Botswana intervened in an outbreak of civil violence that devastated the capital city Maseru.

In 2001 King Letsie III ruled as the head of a parliamentary constitutional monarchy. There being little land suitable for agriculture, the people of Lesotho are primarily herders who live in small family units far from their neighbors. The people speak Sesotho (also known as southern Sotho), a Bantu language they share with many of the Bantu inhabitants of South Africa from whom they were separated by the boundaries imposed on Africa by the European colonial powers. English is the second official language.

Historical Evolution: French missionaries of the Paris Evangelical Missionary Society first brought Western formal education to Lesotho during the 1830s. The schools were few in number and low in enrollment. Schools concentrated on teaching reading and writing at a very elementary level and teaching simple vocational skills for boys and housecrafts for girls. In the second half of the nineteenth century, Roman Catholic missionaries settled in Lesotho and also opened schools. During the 1930's Roman Catholicism expanded, and by the middle of the 1980s, the Roman Catholic Church and the Lesotho Evangelical Church, the successor of the Paris Evangelical Missionary Society, each enrolled 40 percent of the country's primary school student population. The

focus in the early days was on religious purposes and economic necessity. Secondary schools only came into being in 1948 when the first four were built, of which only one had senior classes. Examinations for junior and senior secondary schools were set in South Africa until 1961 when the senior schools switched from the South African Matriculation exam to the Cambridge Overseas School Certificate (COSC).

Thus, for more than a century education was almost exclusively the domain of the missionaries. Even though Lesotho was a Protectorate, the British had no real interest in the education of the Basotho, and until after Independence in 1966, the missionaries were responsible for most aspects of education—school organization, curriculum provision, payment of teachers' salaries, teacher professional support, and provision of facilities. Much of the time church halls were used as classrooms, and often teaching and learning were conducted in the open air. Lesotho's harsh winters were not conducive to effective learning.

Originally teacher training was done in colleges governed by the missions. In 1947 there were four colleges, and this was increased to seven by 1959. In 1975 the National Teacher Training College replaced the various small Teacher Training Colleges operated mainly by churches. Missions were equally concerned with vocational training, and ''industrial schools'' were founded to teach both boys and girls relevant skills. The Lerotholi Technical Institute was founded after the people of Lesotho, on the initiative of Paramount Chief Lerotholi, contributed money toward the building costs. During the 1970s the Lerotholi Polytechnic was expanded, and vocational subjects were introduced in a number of high schools.

Whenever possible citizens of the then Basutoland would go to neighboring South Africa, a fellow British Commonwealth country, to obtain an education. However, when South Africa introduced the Bantu Education Act, its first educational legislation bringing into effect the segregationist values espoused by *apartheid*, the landlocked mountainous nation had no option but to develop its own educational programs, and today its education system reflects little of South Africa's system. The Lesotho educational system has, in several respects, developed in opposition to that evolving in South Africa. Lesotho's geo-political situation has encouraged a certain amount of external financial aid, a great deal of which has been for educational development. Consequently, multinational characteristics are apparent in some of the developing educational structures.

Yet, despite the outside help, and even though the government of this country has been involved in education since the 1920s, sharing responsibility for its provision with the churches, much of the formal education system is still run by missions and is largely administered by the three largest churches—the Roman Catholic Church, the Lesotho Evangelical Church, and the Anglican Church of Lesotho—under the direction of the Ministry of Education. Until the mid-1970s Lesotho shared a common examinations board and a common university with the other two former British Protectorates in the region, Swaziland and Botswana.

Lesotho, with one of the highest literacy rates in Africa of 72 percent for males and 93 percent for females, has a traditionally British-style formal education system that still is Euro-centric rather than Afro-centric. The Cambridge Overseas School Certificate (COSC), set in England, is the final external exam that students take at the end of Form E, the fifth year of high school. The criteria for education and examinations, as well as the higher education that follows the school leaving exam, are thus still to a large extent set in England and not in Maseru. English is both the medium of instruction and a subject taught. It is compulsory to obtain a pass in English if one wishes to pass the COSC. Other areas of the curriculum such as history, geography, biology show evidence of similar concerns. None of the textbooks are written for the African situation. Most references are to flora and fauna, or geographical places that occur only in Europe and the United States. Historical events are never portrayed from an African perspective. Abstract concepts provide few opportunities for practical, hands on learning experiences. Attempts to complement materials received from England and from the United States have been undertaken.

At Independence in 1966 the United Nations and donor agencies helped identify the educational programs they felt most needed to be supported and supplied ''experts,'' mostly of foreign origin, and funds. The focus was on curriculum development, and national programs became attached to international activities. When the efforts of the United Nations and other donor agencies slowed, the World Bank became one of Lesotho's chief educational advisers. While the Bank stressed ''self-reliance,'' it also focused on the perceived need of its financial backers and of transnational corporations to make the largest possible profit. Consequently, there was what many have described as a new kind of economic colonialism. The focus in education was less on what the people in the country needed to help their children mature to their true potential and more on the need to educate and train workers who would supply the international markets with goods and services. Because of the inherited structures of authority that place complete trust in the wisdom of the King, and as parents were often illiterate and unable to fulfil their role of letting the King know their wishes and anxieties, educational structures foreign to the

needs and the character of the people of Lesotho have once again been imposed on them. The criteria set for them by others cannot be met. The resultant descent into international debt and the consequent destruction of the education system, which has become less important than the servicing of the international debt, will continue to put education far beyond the reach of many.

Political, Social, & Cultural Bases: As has been the case in other African countries, Lesotho's choice of English as a national language and as the medium of instruction, in a country where Sesotho is the mother tongue for the majority of the people, has created a dilemma for educators and students alike. Officially the medium of instruction in Lesotho's schools is Sesotho until about the fourth grade when the medium of instruction becomes English. In reality, however, a mixture of languages is often used until secondary schools, and even then students have very little opportunity to use English. The National University of Lesotho has special programs to improve the communication skills of new entrants. These programs do not, however, come to grips with the underlying issues faced by students and educators in the Kingdom of Lesotho.

It is an extremely exacting requirement for students whose first language is Sesotho to speak English as fluently as those who speak it as a first language, to study all subjects in a language totally foreign in style, cultural base and concept to their own, and to have to compete with others in their mother tongue. Furthermore, in a newly independent nation, being able to decide on the national language rather than having one imposed on the country, is a moment of great national and cultural pride. Not being able to use that language as the medium of instruction throughout the education system creates the implicit suggestion that country's own language is inadequate and therefore inferior. And this is definitely not a desirable attitude to have in a nation that is going through the process of decolonization.

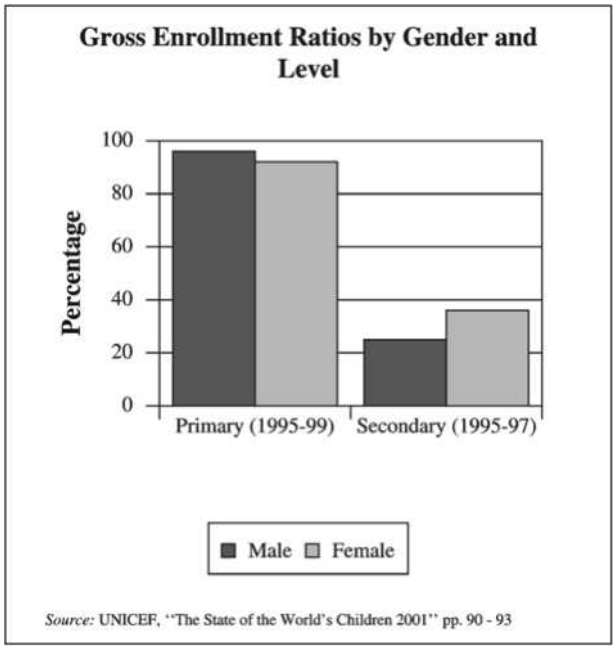
Since one-half the world's scientific knowledge is available in English and those who have attained the necessary English language skills have access to the international world of science, technology, commerce, and politics as well as the Internet, it would seem that a Eurocentric bias in education would allow greater access to international education and research. It can, however, also be seen as one of the reasons for the high failure and drop out rate, especially in those cases where students are not adequately prepared to live between two cultures in a way their parents were never expected to.

The dichotomy that the children of Lesotho live in becomes apparent when one remembers that, even in modern times, traditional African society is centered around the extended family homestead, the principal social unit. Education of the young is the responsibility of the entire community that tries to instill values of respect and obedience. Each member of the community shares responsibility for the whole community. Thus, asking a young boy to be a herd boy and take responsibility for the community's cattle and sheep is not considered child labor, but merely the chore assigned to this member of the community. The whole community transmits the cultural knowledge, ways, and traditions that are related to children's surroundings, to prepare them not only for adulthood and for employment, but for every stage of life, from birth to what is called being ''almost an ancestor.''

By contrast, Western formal education, an import often in direct contrast to traditional African education, strives for change. It relies less on the lived values and knowledge of the community than on curriculum and an abstract examination system set by faceless entities. In Lesotho's case the latter are totally uninvolved people who reside somewhere in Britain, setting the Cambridge Overseas School Certificate with British children in mind who have grown up far from the arid mountain regions of Lesotho. The students of Lesotho negotiate this cultural rift every day, yet little attention has been paid to helping them deal with what can often be an almost schizophrenic experience between two realities. Despite the disruptive nature of Western style formal education, parents generally wish their children to have access to a Western style education, especially because it will give access to formal sector employment. Yet, they also wish them to be grounded in the traditional practices of the Lesotho culture. At present the students in Lesotho's education system have few role models who can accompany them on this path.

The process of acculturation and of learning to live between cultures is made even more difficult for the children of Lesotho when fathers are part of the migrant labor force and spend long periods in the gold mines of South Africa and the mothers have to take on more responsibility than usual. The continuous absence of large numbers of the male population is destructive to cultural structures in general. The extended family system has traditionally provided a great deal of security for all its members. Yet with so many of its members gone, there is a new tension that has lasting effects on the academic progress of Lesotho's children. Consequently, the place of the children in the society often becomes ambiguous, and they exhibit negative attitudes toward formal learning. The absence of fathers could be part of the problem behind both the high drop out rate in Lesotho's schools and the relatively small number of students who go beyond primary school.

Approximately 25 percent of children do not attend school, particularly in rural areas where families involved



in subsistence activities need the help of their children to survive. In many cases families cannot afford the costs associated with school attendance. Uniforms, books, and other educational materials are beyond the means of many families where family stress, poverty, the spread of HIV/AIDS, and divorce have led to a rise in child homelessness and abandonment, creating growing numbers of street children. Boys are more affected by nonattendance than girls. Even though in traditional rural Basotho society, livestock herding by young boys is a rite of passage and a prerequisite to manhood in the community, the absence of fathers makes this a heavy burden when boys must often tend flocks all day for months at a time. The legal working age is twelve.

Some of the main challenges facing Lesotho's educators are the lack of financial resources needed to meet the growing demand for well educated local teachers, the need for literacy and for vocational and technical training outside the formal academic setting. Attempts are being made to introduce more practical subjects and so to make education relevant. However, one of the spillovers of British education is that these subjects are still regarded as second rate, inferior to a purely academic education that leads to a position of status in the community as well as to white collar jobs.

In 1998, the government announced plans to eliminate school fees to help more children gain access to education. Yet, although the government has devoted substantial resources to primary and secondary education, and education takes up approximately 25 percent of the country's budget, children's rights and welfare have not been adequately addressed.

Education is not compulsory even at primary levels as the government lacks the resources to finance it fully. This situation is due partially to the increasing international debt, and Lesotho's increasing structural dependence on the rest of the world, South Africa in particular. The country is increasingly reliant upon remittances from migrant workers. Additionally, the interests rates imposed on foreign loans made by the international banks and the restructuring demands made by the World Bank and the International Monetary Fund, affects the country's ability to provide essential health and education services.

CONSTITUTIONAL & LEGAL FOUNDATIONS

After Independence, education in Lesotho did not attain the hoped for results. By 1977 the drop out rate continued to be high, the quality of education deteriorated, and student and teacher motivation declined. Instead of appointing another Commission of Inquiry that would function in the usual top-down bureaucratic manner, the government organized a *Pitso*, a nationwide dialogue on education. Using the traditional channels of authority and communication, this dialogue started in the Chief's Courts in the various villages and culminated in a national Education Dialogue in Maseru. This commission directly involved the people at the grassroots level making those most affected by education participants rather than a target group for a ''learned commission.'' Recommendations were made that influenced a number of developments in education. Following these recommendations the Lesotho Government decided on an Education Sector Survey Task Force that made recommendations on all aspects of the education process. It remains difficult to provide education for all, to respond to the needs of the people, yet still meet the developmental needs of Lesotho and the increasing demands of a profit oriented capitalist world intent on globalization. However, despite all these obstacles, some of the results are to be seen in significant developments that took place shortly after the Maseru Education Dialogue.

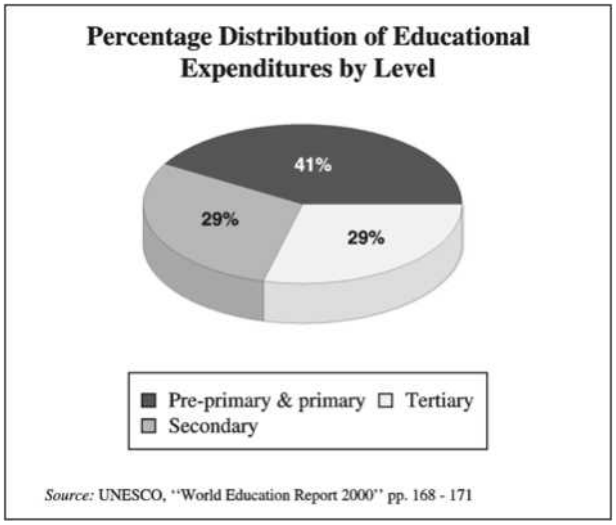
An efficient nonformal Distance Teaching Center and a Curriculum Development Center have been set up. A book supply unit has been set up, and a program to build classrooms was launched. Two associations dealing with formal and nonformal education were formed: the Lesotho Educational Research Association (for formal education) and the Lesotho Association (for nonformal education).

EDUCATIONAL SYSTEM—OVERVIEW

Lesotho's school system consists of twelve school years. The seven years of primary, or junior school

(Grades 1-7), culminate in the Primary School Leaving Certificate. The three years of junior secondary school (high school—Forms A, B, C) culminate in the Junior Certificate (JC). The two years of higher secondary school (high school—Forms D—E) lead to the Cambridge Overseas School Certificate (COSC) at the Ordinary Level (O levels).

There are very high dropout rates throughout primary and secondary school. In 1990, 22.6 percent of students enrolled in primary education were repeaters. The government has insufficient resources to provide enough secondary schools and to provide alternate education or training for those who do not complete primary or secondary school. Poverty and traditional constraints play a major role here.



PREPRIMARY & PRIMARY EDUCATION

General Survey: There are very few preprimary or nursery schools in Lesotho and only one in Maseru. Nearly all preprimary schools are privately operated. Consequently, only a very small percentage of children are enrolled.

While the Ministry of Education has authority over syllabuses and examinations, and the government aids individual schools, often by subsidizing the salaries of some of the teachers, most primary schools are operated by the missions of the three main religious churches. Influenced by the British colonial system, primary education, for which a tuition fee is charged and which is not compulsory, consists of seven levels called *standards*. Until the end of 1966, there was an eight-year primary system, beginning with Grades A and B and continuing through Standards 1-6. The seven-year primary school system was introduced in 1967. In 1980 only 12 percent of those who entered Standard 1 completed Standard 7. In 1990 only 14 percent of children who entered primary school proceeded to secondary education.

At the age of six or seven, children attend comprehensive, academically oriented schools and study a core of general education subjects. Sesotho is the medium of instruction in the early grades, and English is taught as a school subject. The transfer to English is made as soon as possible, during the third or fourth year of schooling, and definitely by the time students reach high school. Sesotho is then taught as a school subject. Other subjects taught are mathematics, science, and social science. Gardening, handiwork, needlework, physical training, art, music, handwriting, and religious knowledge are also offered.

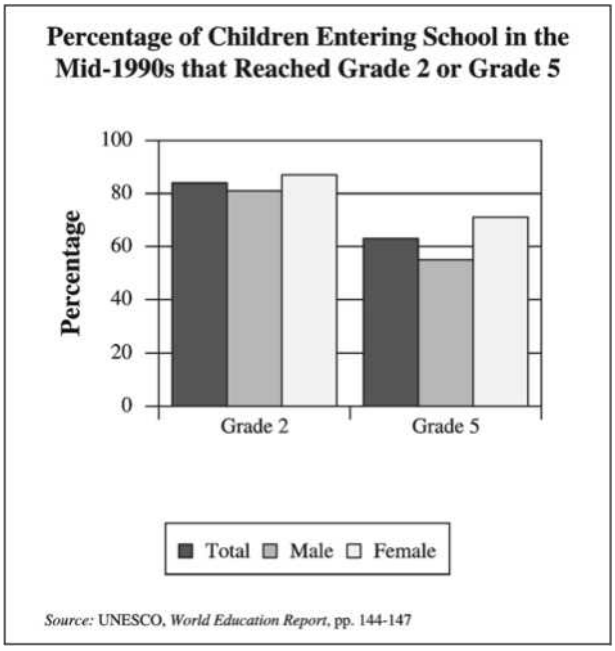
Often there are much older children and even some adults in the elementary school classrooms. However, this circumstance is not as common as it used to be when Western style formal education was first introduced, and it is not generally regarded as a problem either by the students or the teachers.

At the completion of the seventh year of junior school, an exam prepared by the Department of Education is administered. The result of this exam is the most important criterion for admission into secondary education, or high school. However, because of the shortage of secondary school places, passing the Lesotho Primary School Leaving Certificate, does not guarantee admission into a high school. Only about one in seven or eight of the more than 113,000 students enrolled in primary school can go on to secondary school.

Urban & Rural Schools: Primary school teaching varies in the different areas and is largely dependent on the qualification and level of sophistication of the teachers. The latter will vary in the rural and in the urban areas. The acute shortage of teachers has of necessity led to the use of unqualified teachers.

SECONDARY EDUCATION

General Survey: More than 60 secondary schools in Lesotho provide an education for approximately 20,000 students. Once students have completed their primary education and parents can afford tuition and board, students begin secondary education, or high school. Entrance into a secondary school depends on whether students have passed the Primary School Leaving Certificate Exam and whether seats are available in a secondary school. Secondary education is neither free nor compulsory, fees are charged for tuition and books, and all secondary schools are comprehensive, geared towards the goal of obtaining entrance to a university. More recently more practical education in the form of optional vocational courses are



being offered. Most schools provide study periods within the school day for preparation of homework. Extracurricular activities such as sports and clubs occur after the school day. Many schools provide boarding facilities for students.

Curriculum—Examinations, Diplomas: Forms A through C, the first three years of junior secondary school, lead to the Junior Certificate (JC), administered originally by the Examinations Council of Botswana, Lesotho, and Swaziland, but more recently by the Lesotho Ministry of Education. Forms D and E, the last two years of High School, prepare students for the Cambridge Overseas School Certificate (COSC) Examinations at the Ordinary (O) level. Only three schools in the three countries, and none in Lesotho, offer classes that lead to the Advanced (A) level examinations. As the JC is the most common entry-level qualification for employment, there has been greater emphasis on the curriculum for Forms A through C. Consequently, the syllabus leading up to the O level exam has often been unrelated to the syllabus of the previous years, causing students to have to cram the entire syllabus into their last two years of study. Efforts have been made for greater coordination between the two levels.

The curriculum leading to the JC exam is based on seven subjects a year, with forty 40-minute periods each week. The core subjects are English—nine periods a week; integrated science—eight periods a week; mathematics—seven periods a week; Sesotho—four periods a week. Four periods a week are devoted to development studies, geography, or history. And four periods are devoted to a practical subject such as agricultural studies, typing or bookkeeping, domestic science, or woodwork.

In order to comply with the requirements of the Cambridge Overseas School Certificate Examinations (COSC), the Lesotho Ministry of Education recommends that students choose the arts curriculum that consists of seven subjects requiring forty periods per week and requiring the following subjects: the core curriculum— English language, five periods per week; English literature, four periods per week; mathematics, seven periods per week; biology, seven periods per week; Sesotho or French, five hours per week; development studies, geography, or history, four or five hours per week of two subjects from the group; one practical subject, five hours per week.

Should students wish to follow the Cambridge Science Curriculum, the core curriculum consists of five periods per week of English language, seven periods per week of mathematics, five or six periods per week of biology, and eight hours per week of physical science.

Promotion at the end of each year is based on final exams and on overall evaluation of the students' work during the year. The principal, the teachers, and the community set the grading standards. Often grading standards vary due to the fluctuating availability of teachers and because some courses are often not taught in the more remote parts of the country. Consequently, the examination results do not always reflect the students' aptitude for further education.

Increasingly there has been diversification at the secondary school level. At the JC level technical and commercial subjects are available. And in Forms D and E, agricultural and higher primary teacher training is offered. More than 50 percent of students in Lesotho leave school after Form C. The high dropout rate is largely due to the fact that tuition, books, and boarding are too expensive for students from that part of the world.

Teachers: Secondary school teachers are, theoretically, trained at the postsecondary level. In practice, however, there is a severe shortage of qualified secondary school teachers and those who are qualified will often elect not to teach in remote areas or in areas where there is no electricity or running water. Courses offered depend on the ability of any area to attract qualified teachers. As a result of the teacher shortage, there is a heavy reliance on expatriate teachers, in some areas as high as two-thirds, supplied amongst others by the United States or through the Peace Corps. This state of affairs provides neither continuity nor cultural understanding of the pupils in the educational system.

HIGHER EDUCATION

In the first half of the twentieth century, Basotho students could study at Fort Hare College (the University of Fort Hare) in the Cape Province in South Africa. The colonial government paid the college three hundred pounds per year for this service and was represented at its board of governors. In 1958 this agreement was terminated by South Africa.

The National University of Lesotho situated in Roma, about 34 kilometers. from Maseru, the University of Botswana, and the University of Swaziland are offshoots of a common university. The Universities had their origin in the Pius XII College, a Catholic University College that was founded by the Roman Catholic Hierarchy of Southern Africa on April 8, 1945 on a temporary site at Roma. The objective of the College was to provide African Catholic students with a post-matriculation (high school exit exam) and religious education. In 1946 the College moved to its permanent site, and by 1959 the student population had increased to 171 students from the original five. By 1963 the number of students had grown to 180 and necessary facilities had been added.

From 1954 to 1964, Pius XII College was an ''Associate College'' of the University of South Africa in Pretoria, a distance education institution that examined the students and offered degrees in Arts, Science, Commerce, and Education. In the early 1960s, as *apartheid* legislation in South Africa became more restrictive, problems arose with regard to student residence requirements. Consequently an independent, non-denominational university was established by Royal Charter through the High Commission for Basutoland, Bechuanaland, and Swaziland. On January 1, 1964, under a Charter granted by Queen Elizabeth II of England, the Pius XII College became an integral part of the independent, non-denominational University of Basutoland, Bechuanaland Protectorate, and Swaziland. The University was funded equally by the governments of all three countries, but the main campus was in Lesotho, and there was no university presence in the other two countries, with the exception of the beginnings of the Faculty of Agriculture in Luyengo, Swaziland. After independence in 1966, campuses were established in Gaborone, Botswana, and in Kwaluseni, Swaziland. In 1966, after independence was granted to the present day Botswana and Lesotho, the name was changed to the University of Botswana, Lesotho and Swaziland, which offered its first degrees in 1967 in four-year programs in Science and Education, and a Law degree which included two years of study at the University of Edinburgh.

On October 20, 1975, the Roma campus in Lesotho withdrew to become the National University of Lesotho. In 2001, the student population was around two thousand, of which about twenty were postgraduate (master's degree or higher) students. Degrees are offered in the faculties of Agriculture, Humanities, Law, Science, Social Science, and Education. Advanced degrees are offered in the faculties of Education, Humanities, and Social Sciences. The University also houses the Institute of Extra Mural Studies, the Institute of Southern African Studies, and the Institute of Education.

Admission requirements to degree courses are the COSC with a credit in English language and in mathematics if the student wishes to follow the B.Sc. Program or the Matriculation Certificate of the Republic of South Africa, provided credit has been gained for English at the Higher Grade Level. Bachelor's degree programs are generally four years in duration with the academic year broken into two semesters of fifteen weeks each. A final exam is administered at the end of each year. In the grading system, the grade of A, a First Class degree, is rarely given. Grades of B and C are considered very strong grades and to receive a D is to receive a respectable grade. In order to receive a degree, an overall D average must be obtained.

In line with the British influence, master's degree programs are normally research oriented, though some course work may be required. Master's degrees are offered in the Arts, Science, and in Education. Ph.D. programs are research oriented. The professors at the National University of Lesotho are well qualified. Many are expatriates, which gives the university an international character.

At the National University of Lesotho, the building housing the Thomas Mofolo Library, named after the Mosotho author Thomas Mofolo, was built with funds provided by the World Council of Churches and the World University Services. It was officially opened on April 1, 1966. The library has more than 125,000 volumes of books and bound periodicals, and its Information System is currently being automated. The library is to join the Southern African Bibliographic Network based in South Africa and to use its facilities to catalogue library materials and inter-library lending and is preparing records for input into the Pan African Development information System based in Addis Ababa, Ethiopia. The library houses the BOLESWA collection, the materials concerning the Universities of Botswana, Lesotho and Swaziland, and is a depository of United Nations materials in Lesotho.

The National University of Lesotho has offered part-time courses since 1960 when it instituted in-service courses for teachers as well as the Postgraduate Certificate in Education and the Bachelor of Education (also a postgraduate degree). During the 1994-1995 academic year it was decided to use distance education methods to

reach students from all over the country. The Institute of Extra-Mural Studies is headquartered in Maseru and has regional centers, which can be used as resource centers for part-time learners in the south, the north, and in the mountains. Courses are offered through the medium of printed correspondence texts, audio, and video materials, tutorial support, monthly two-day weekend meetings, four week residential courses, and, where possible, through video cassettes and radio broadcasts.

NONFORMAL EDUCATION

Vocational Education: Two types of technical and vocational education are available: (1) pre-service vocational education in fields that include agriculture, commerce, or nursing, obtained in a school setting within a formalized system of education; (2) in-service, out-of-school education where apprenticeship is the primary element of the program. Most of these programs, though supported by the government, have been established with foreign technical and financial assistance and are influenced by foreign educational systems.

The Lerotholi Technical Institute (LTI) in Maseru offers training in basic engineering, bricklaying, carpentry, electronics, electrical installation, and plumbing. The Commercial Training Institute, attached to L.T.I, offers secretarial subjects and a technical training school trains supervisors for the road department. The admission requirement to the Institute is the JC, and the programs are two or three years in duration.

Full-time, residential agricultural colleges offer courses in agriculture and domestic sciences to students with a JC and a two-year Diploma in Agriculture to those with the COSC with passes in at least math, science, and English. The Ministry of Agriculture, rather than the Ministry of Education, is responsible for these colleges.

Formal & Nonformal Distance Education: It is not always easy to distinguish between formal and nonformal education. Because of economic constraints and the physical terrain of the country, school provision is often inadequate and large numbers of the population obtain higher education through distance education. Prior to 1974 correspondence education had been provided from institutions operating from South Africa to the few who could afford the services. In 1974 the Lesotho Distance Teaching Centre (LDTC) was established by the International Extension College (IEC) at the request of the Lesotho Government's Ministry of Education so as to democratize the education system. The services offered by the Centre span the formal and nonformal sectors of the country's educational system and reflect the Lesotho government's vision of the role of education in the development process. As the level of literacy was low, especially among the large proportion of the population living in the mountainous rural areas, LDTC provides basic practical skills to these people. It further offers opportunities for out of school youth and adults to develop their literacy and numeracy skills and attempts to expand distance education by including correspondence courses at Junior Certificate and Cambridge Overseas School Certificate levels. The LDTC acts as a service agency for other organizations involved in formal and nonformal education. Thus it provides support and materials, mainly in the form of visual aids, pamphlets, training for field workers, instructional booklets and radio programs for the in-service training of unqualified teachers at the National Teacher Training College who are automatically enrolled in the correspondence institute. Additionally, the LDTC provides educational materials and radio programs to the Agricultural Information Service and the Health Education Unit.

In 1980 several African countries comprising mainly the so called front-line states, i.e., those countries most affected by the political struggle in South Africa, and also most economically dependant on the southern African economic giant—Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia, Zimbabwe—joined together to form the Southern African Development Coordination Conference (SADCC). In 1992 they were joined by Namibia. In 1994 South Africa became the eleventh member of the organization that was renamed the Southern African Development Community (SADC). The role of the organizations was to encourage economic independence for its members through the improvement of national and inter-country communications infrastructures, the growth of inter-country trade and cultural ties. By implementing joint training facilities and organizing joint training sessions in these countries, the Southern African Transport and Communications Commission (SATCC), one arm of the SADCC, promoted cooperation in human resource development. The SATCC also promotes cooperation among the telecommunications administrations of the region via the Pan African Telecommunications (Panaftel) microwave network and satellite links, international gateway exchanges, and earth stations. These projects undertaken by Panaftel are vital for the furthering of distance education in Lesotho. Possibilities for further development of telecommunication based distance education exist, but at present Lesotho does not have the necessary infrastructure to make this a viable proposition for such initiatives by organizations such as the Commonwealth of Learning that at present sponsors the LDTC.

During the 1980s when Lesotho hosted a number of refugees from the urban areas of the Republic of South Africa, the International Labor Organization, based in Geneva, Switzerland, together with the United Nations

High Command of Refugees, implemented small projects designed to assist and train especially female refugees in developing small enterprises, in learning basic occupational skills, and so make them less dependant on the host country during their period of exile, which could range from anywhere up to twenty years or more.

Access to Global Information: The predicament for many developing countries is whether a relatively poor country with a high illiteracy rate, few skilled people, high unemployment, disease, malnutrition, and even starvation should exchange scarce foreign exchange and perhaps even increase its international debt burden to import computers. Purchasing computers also creates strong dependency on vendor countries: those countries that are merely consumers rather than producers of technology are exposed to the dangers of cultural invasion.

There are several reasons why even poor countries would want to put computers into classrooms and universities, the chief reasons being a wish to prepare students to be computer literate, to use computer-assisted learning, to have access to international information. However, added to the investment of installing computers in schools and universities is the added expense of importing software. Developing and marketing suitable educational software is so costly that few countries attempt it, yet educational and cultural reasons cause dissatisfaction with the software that is available.

Lesotho counts as one of the poorest countries in the world. Microcomputers are fairly readily obtainable at reasonable prices. But in 1987 there were few people trained to use them. A private school that had started to teach computer studies was forced to abandon the project because of staffing and resource shortages. In some schools hand-held battery-powered electronic aids were used to help students in the learning of English. However, this trend did not spread to other schools.

By the end of 1999 all African countries except Eritrea, Somalia, and Libya had local Internet access, with South Africa leading the number of Internet service providers and the number of computers connected to the Internet. In the other countries, including Lesotho, Internet access is limited to the capital cities. While Internet access presents especially African academic and research institutions with the possibility of admission to libraries and research institutions worldwide, there is growing concern that there is very little African content available on the Internet. The Global Information Infrastructure is not only dominated by the English Language, its content almost exclusively targets the needs of users in the United States and the United Kingdom. A 1999 survey of the United Nations Economic Commission for Africa (UNECA) has shown that Africa generates only 0.4 percent of global content. If the South African contribution is excluded, the figure is merely 0.02 percent. While a great deal of research has been done on the African continent, this research is unfortunately only available in the sponsoring institutions. And yet a specialized research institution like the Institute for Southern Africa Studies (ISAS) of the National University of Lesotho has the capacity to produce and publish the information and the research done by its faculty and students and thus add to the African content on the Internet. Similarly, while the foreign languages (English, Portuguese, French) spoken in Africa are well represented on the Internet, little has been undertaken to advance African indigenous languages through this medium. There is no reason why a country like Lesotho which has an indigenous national language, should not publish language materials produced in Sesotho.

TEACHING PROFESSION

Teacher training takes place at both the secondary and tertiary levels. Programs are offered at both teacher training colleges and universities. While the Primary School Leaving Certificate is generally regarded as too low a standard of admission, it may be accepted, especially because of the shortage of teachers. Most programs, however, require either a JC or the COSC with passes in English and Mathematics. Students who are admitted with a JC are expected to catch up with COSC holders. Most programs require two years, some require three.

Programs at the Lesotho National Teacher Training College: The Primary Teachers' Certificate requires a JC plus two years Secondary education. Advanced Primary Teachers' Certificate requires the COSC plus two years tertiary education. The Secondary Teachers' Certificate requires the COSC plus two years tertiary education. The Diploma in Education requires the COSC plus two years tertiary education. The Certificate in Primary Education requires the Primary Teachers' Certificate plus one credit in COSC plus two years experience plus two years part-time tertiary education. The Diploma in Primary Education requires the Primary Teachers' Certificate, plus the COSC, plus two years experience plus one year tertiary education. The Diploma in Secondary Education requires the Secondary Teachers' Certificate, plus two years experience plus one year tertiary education.

The Secondary Teacher Training Program consists of education courses and a basic core of English, social studies, and preparation of teacher aids. Students may specialize in either home economics or elementary technology. They may also choose English, in which they cover general composition and general literature, Sesotho, or religious knowledge as their major area. For the Diploma in Secondary Education, students may choose

either a humanities or a science concentration. They attend the first year with all other first year students.

The teacher training colleges also offer professional certificates for in-service study. These certificates range from lower certificates for upgrading unqualified and under qualified teachers to higher certificates for furthering the training of qualified teachers. Each of the professional certificate programs atthe National Teacher Training College in Lesotho includes an internship year during which students teach in a school and are responsible to both the college and the regular school management. Students are paid during their internship year, and the certificates lead to promotions and higher pay.

The National University of Lesotho offers university level education programs that may lead to a Bachelor of Education (B.Ed.), a Concurrent Diploma in Education, a Post Graduate Diploma, or a Masters of Education (M.Ed.).

SUMMARY

Despite international perceptions of Lesotho as an economically deprived country, it has a long history of intellectual, academic, and literary involvement. Some of southern Africa's foremost writers, Thomas Mofolo being only one of them, have deep cultural roots in Lesotho. Much of its present educational dilemmas are due to the legacy left by colonialism and the resultant loss of geographical, cultural, and political identity. In many ways King Moshoeshoe tried to protect his people precisely from such a predicament. By establishing himself in the almost impregnable mountain hideout of Thaba Bosiu, by whenever possible using diplomacy rather than confrontation to reach some kind of co-existence with the invading and war-like Zulu, Boer, and British, and finally by asking for the protection of Britain rather than be conquered and absorbed into another nation, Moshoeshoe attempted to create a national and cultural identity within geographically defined borders. Ironically, Independence in 1966, which should have seen the fulfillment of this ancient dream, in many ways saw its collapse. The international necessity to make English, the language of the ''protector'', the national language; the economic necessity for the men to become part of a migrant labor force and thus cause the breakup of the basic social and cultural unit, the family; the financial necessity to put the education of their own children in the hands of the World Bank, the International Monetary Fund and Foreign NGOs, and not in the hands of their own people, have all contributed to the crisis in education in Lesotho. An important step in the right direction was taken in 1978 when through the national *Pitso*, the traditional system of communication, the views of the nation concerning education were taken into account.

There is no reason why Lesotho with its proud history, should not once again be a major participant in the educational and intellectual global arena. Much depends on whether the international community with its fascination with the profit-making aspects of globalization and with ''efficiency,'' often at the expense of other values, will allow this little mountain Kingdom the freedom to develop its educational system in such a way that its citizens rediscover their national and cultural character and mature to that stage where the contribution they make will be on their terms, rather than on those of the economically dominant modern superpowers.

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—Karin I. Paasche

LIBERIA

BASIC DATA

Official Country Name:	Republic of Liberia
Region:	Africa
Population:	3,164,156

Language(s):	English
Literacy Rate:	38.3%
Compulsory Schooling:	10 years
Educational Enrollment:	Primary: 147,216 Secondary: 54,623

HISTORY & BACKGROUND

The Republic of Liberia is a democracy located on the west African coast. Bordered by the Atlantic Ocean along its entire diagonal southwest coastline of 579 kilometers, Liberia borders Sierra Leone to the northwest, Guinea to the north, and Côte d'Ivoire to the east. Liberia measures 111,370 square kilometers in area, of which nearly 10 percent is water, and is slightly larger than the U.S. state of Tennessee. Much of Liberia is covered with tropical rainforest, and the country's terrain ranges from coastal plains to plateau to low mountains. Liberia's climate is tropical.

Colonized by former slaves from the United States who returned to Africa in the early nineteenth century after securing their freedom, Liberia became the first independent country in Africa during the period of Western colonization. The first president of independent Liberia, President Joseph Jenkins Roberts, was a Monrovia merchant who emigrated to Liberia from Petersburg, Virginia in 1829 and served as governor of the Commonwealth of Liberia starting in 1841, appointed by the American Colonization Society. In 1847 the Free and Independent Republic of Liberia was proclaimed, and President Roberts became the country's first president. He was elected to office in 1848 and headed the country until 1856. Roberts then served as president of Liberia College for many years, after which he again assumed the presidency of Liberia from 1872 until 1876. Following a century of uneasy and often contentious relations between the Americo-Liberian former slaves and the indigenous African ethnic groups of Liberia's interior, Liberia experienced seven highly destructive years of civil war between 1989 and 1996, which finally ended in 1997 with a peace treaty brokered by the Economic Community of West African States (ECOWAS). Democratic elections were held in July 1997 with Charles Ghankay Taylor elected president. He was inaugurated in August 1997.

As of mid-2001 full peace and stability had not yet returned to Liberia. According to a U.S. Department of State briefing of May 2001, ''The presence of many ill-trained and armed government security personnel continues to constitute a potential danger. The northwestern part of the country is unsettled as rebel activity in Sierra Leone and Guinea continues to affect stability along the Sierra Leone-Guinea-Liberia border areas. In particular, there have been reports of intensified hostilities in upper Lofa County [in the north of Liberia].'' Liberia in 2001 had not yet recovered from the political, social, economic, and infrastructural damage caused by the war. Neither had certain key transitions to peacetime activities and development-oriented policies been made. Describing the situation in Liberia in May 2001, the State Department noted, ''Although a democratically elected government was installed in August 1997, limited progress has been made toward the following goals: resettlement of refugees and displaced persons, reintegration of former combatants, reconstruction of the country's infrastructure, respect for human rights and the rule of law, a stable environment for economic development, and the elimination of corruption.''

In July 2000 Liberia's population was estimated to be about 3.2 million, comprising of some 15 to 20 ethnic groups, which are grouped into 3 main categories. The ethnic composition in the late 1990s was estimated as follows: about 95 percent indigenous African tribes (including Kpelle, Bassa, Gio, Kru, Grebo, Mano, Mandingo, Krahn, Gola, Gbandi, Loma, Kissi, Vai, and Bella), about 2.5 percent Americo-Liberians (descendents of African-American slaves who had immigrated from the United States), and about 2.5 percent ''Congo People'' (descendents of former Afro-Caribbean slaves who had immigrated to Liberia). Estimates of religious affiliation vary widely, depending on the source of information. Between 40 and 75 percent of the population is said to adhere to indigenous beliefs while between 10 and 40 percent of the population is Christian and 15 to 40 percent is Muslim. Many languages are spoken in Liberia. English is used by about 20 percent of the population and serves as the official language.

Approximately 44.3 percent of Liberia's population lived in urban areas in 1999 with many Liberians living in and around Monrovia, the national capital. That year, the total fertility rate was estimated to be 6.1 (i.e., a woman bearing children throughout her childbearing years at current fertility rates would have 6 children). This high rate is due in part to the desire to compensate for the extremely high infant and child-mortality rates in the country, where malaria and other tropical diseases are prevalent, HIV/AIDS claims an increasing numbers of victims, and many families do not have enough to eat. In 1999 the infant mortality rate in Liberia was 112.8 per 1,000 live births—more than 1 children in 10—while the under 5 years child-mortality rate was an astounding 188.0. About 43 percent of Liberia's population was 14 years old or younger in 1999, some 54 percent was 15 to 64 years of age, and only about 3 percent of the population was 65 or older, due to the very low life expectancy

at birth prevailing in Liberia (51.0 years in the year 2000—49.6 years for men and 52.5 years for women).

Estimates of Liberia's GDP are difficult to come by, since the country's economy is not functioning at present in anything approaching a normal way. With the economy and infrastructure of the country destroyed by the seven years of civil war, Liberia's basic utilities have yet to be rebuilt. Running water and electricity are still lacking in most of Monrovia, and many war-damaged buildings remain in severely dilapidated condition, waiting to be rebuilt. War-damaged housing to some extent has been replaced throughout the country with rebuilt temporary homes, financed by UN agencies and other international, bilateral, and nongovernmental donors. However, much of the country still appears as though it has just emerged from war, although crops have been replanted, and many internally displaced persons (IDPs) and refugees have attempted to return to their home communities. With a very limited number of wage-paying jobs open in Liberia after the war and little means for many of Liberia's residents to earn a living, many households are barely surviving. The unemployment rate is estimated to be about 70 percent. In 1999 an estimated 70 percent of the labor force was employed in agriculture (mostly as subsistence farmers), 8 percent in industry, and 22 percent in services—quite different from many other countries in the region and around the world, including in developing areas, where the industrial and service sectors employ a larger segment of the population. The contribution to the national economy in terms of percentage of GDP by sector was estimated as 50 percent from agriculture, 15 percent from industry, and 35 percent from services in 1999. Real GDP per capita was only US$150-200 in 1998-1999, an improvement over income levels during the war but far less than the still meager prewar GDP per capita of US$450 in 1987. With rich diamond and titanium reserves and many natural resources, including exotic forest timbers, rubber plantations, and fertile land well suited for rice cultivation and the growing of cash crops like coffee and cocoa, Liberia could once again flourish economically given the right conditions. The potential clearly exists for the equitable development of Liberia to the benefit of all her citizens, provided that Liberia's human resources are concomitantly developed.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Liberia is a constitutional republic with a strong presidency shaping the direction of Liberian economic, political, and social life. The country's Constitution of 6 January 1986, outlines the basic structures of governance. Liberia's dual system of statutory law features a legal system for the modern sector based on Anglo-American common law and a system of traditional African customary law transmitted by oral tradition for the indigenous sector. All Liberians, women and men alike, are eligible to vote at age 18; men are considered fit to serve in the military from ages 15 through 49 years of age. Despite these age limits, significant recruitment of child soldiers has taken place during Liberia's unsettled recent decades. The UN estimated that up to 20,000 children might have taken part in Liberia's 7 year civil war from 1989-1996, serving with both the government and the opposing warring factions. Some of the child soldiers reportedly were as young as six years.

Liberia's chief executive is the president, elected by popular vote to six year, renewable terms of office. The president is both head of the government and chief of state. Since 1997 the elected president of Liberia has been Charles Ghankay Taylor, a faction leader from Liberia's civil war who rose to power with the death of former President Samuel Doe, Liberia's president from 1989 until 1990 who was killed in the armed uprising. The executive branch of Liberia's national government also includes a cabinet of ministers, appointed by the president and confirmed by the Senate.

At the national level the Liberian legislative branch consists of the bicameral National Assembly composed of a House of Representatives and a Senate. The House has 64 members, elected to 6-year terms by popular vote, and the Senate has 26 members, elected to 9-year terms by popular vote as well. The third branch of the national government is the judicial system, which consists of a Supreme Court.

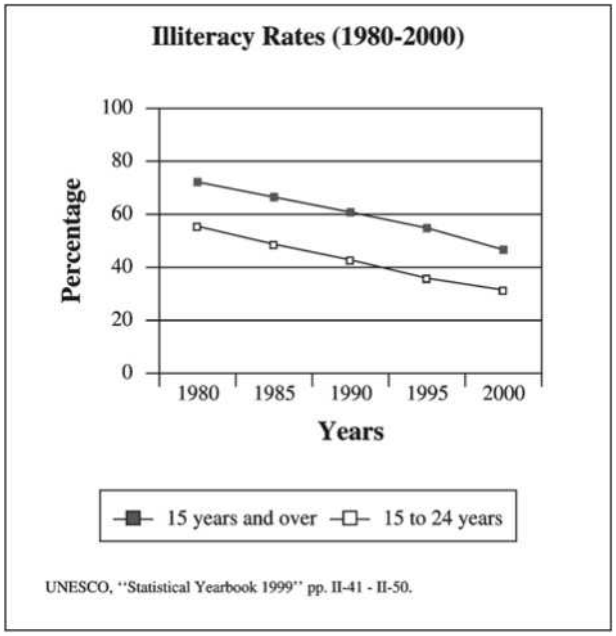
Despite its problems with numerous human rights abuses and continuing political unrest and military insecurity, Liberia received rather substantial overseas development assistance from international agencies and intergovernmental and nongovernmental organizations during the late 1990s after its civil war ended. By 2001, however, many bilateral and international donors allegedly were growing weary of providing assistance to support sustainable development in a country where the government itself seemed to be doing little to help its own people, despite the mineral wealth and other natural resources Liberia had at its disposal. As of 2001 Liberia was not receiving any World Bank assistance due to the country's failure to repay its loans. US$3.5 million of funds from the International Finance Corporation had been allocated to acquire and recommence a large rubber operation owned by the Liberian Agricultural Company, whose work had been halted by the civil war, but this and other international support was being held in reserve in 2001 pending improvements in the country's security status and governmental willingness to cooperate with international partners on a number of issues. Cross-border trading in illicit diamonds, weapons trading, and support

to other armed conflicts in the West African region allegedly by persons associated with the Liberian government were having a decidedly negative impact on the enthusiasm of other states and nongovernmental organizations who otherwise might have chosen to do business in Liberia or support development projects in the country.

EDUCATIONAL SYSTEM—OVERVIEW

In 1995 the adult literacy rate for Liberia was estimated to be only 38.3 percent—53.9 percent for men 15 years of age or older and just 22.4 percent for adult Liberian women. That year Liberia had an estimated 1 million adult illiterates, nearly two-thirds of whom (62 percent) were women. School attendance in Liberia has been considerably lower on average for girls than boys, especially in the rural areas. (Education-related statistics for the 1990s were not regularly recorded due to the social disruptions and physical damage caused by the civil war, making accurate and reliable counts for this period hard to come by.) School attendance quite naturally declined sharply during the war. The scale of disruption of normal social relations was enormous, especially for those children and youth pulled into the violence as direct participants in the fighting and as ''soldier's wives'' (the euphemism for the many young women and girls kidnapped by combatants and forced to submit to repeated sexual violence). Studies of the demobilization programs following Liberia's civil war of the 1990s indicated that significant problems had arisen in ending and recovering from the war. Approximately just 4,000 child soldiers of up to 20,000 who had participated in the fighting had been demobilized by 2001. Furthermore, many of the child soldiers who were awaiting demobilization (89 percent of the total) disappeared before the demobilization process was completed in 1997, with large numbers suspected of having returned to the bush or government side to continue the fighting. Clearly, special efforts continue to be needed to encourage young women and men who were part of the violence to return to school, recover from their trauma, and rebuild their lives. Flexible and responsive education programs are most definitely in order to suit their special needs.

The Ministry of Education is the principal government agency charged with overseeing the planning and implementation of education and school policies in Liberia. Though the reconstruction of the country's social infrastructure has taken place at a rather slow pace, educational opportunities also have been provided to Liberian students by a range of nongovernmental organizations (local, national, and international) and with the financial support of bilateral partners and intergovernmental agencies. For example, in the year 2000 UNESCO celebrated 50 years of partnership with the Liberian Ministry of Education in development programming, and



UNESCO, ''Statistical Yearbook 1999'' pp. II-41 - II-50.

UNESCO has continued to provide substantial funding to Liberia in the post-war years to support a wide variety of educational and cultural programs.

English is the official language of instruction in Liberian public schools, aimed at fostering a sense of national unity and facilitating communication across the country's many ethnic groups by the use of a common language. The country's low economic development and inconsistent electric supply complicate access to educational technology, computing, and Internet services. Very limited Internet access is available in Monrovia in those parts of the city where electricity is either generated by the consumer or provided by the government. For most schools in Liberia, finding sufficient texts and school supplies at a much more basic level than computers is still a formidable challenge.

PREPRIMARY & PRIMARY EDUCATION

The first 10 grades of schooling in Liberia technically are compulsory, comprising of a preprimary grade followed by nine years of basic education—6 years at the primary level and 3 at the junior secondary level. However, schooling is not free, and parents increasingly have had to hold their children out of school to avoid having to cover their expected educational contribution—school fees—due to the country's dire economic situation. The primary grades normally include 6- to 12-year-olds; although with high repetition rates, older students generally are included as well.

Participation rates dropped dramatically in preprimary, primary, and secondary education during the 1990s

due to Liberia's civil war. School enrollment rates in rural areas also have been considerably lower than in urban areas of Liberia. Moreover, educational enrollment and attainment statistics were not regularly or reliably collected during the 1990s. As a point of comparison with other countries, one source of educational statistics reported the 1985 gross enrollment ratio at the primary level in Liberia to be 40 percent (51 percent for boys and 28 percent for girls). In 1995 the overall ratio had dropped significantly to just 33 percent, due primarily to the war and Liberia's ravaged economy. Another source identified male and female gross primary enrollment ratios for the year 2000 to be 72 percent and 53 percent, respectively, with corresponding net enrollment figures of 43 percent for boys and 31 percent for girls. One more source noted the net primary enrollment ratio to be 40 percent in Liberia in 2001.

SECONDARY EDUCATION

At the secondary level of education, gross enrollment ratios were reported by UNICEF in 2000 to be 31 percent for boys and a very low 12 percent for girls. This nonetheless marked an improvement over the reported rate 5 years earlier, when the overall secondary education gross enrollment ratio was supposedly only 15 percent. Secondary schools in Liberia are designed to provide education for children and youth between the ages of 12 and 18: 3 years of junior high school for students ages 12 through 15, leading to the Junior High School Certificate upon graduation, and 3 years at the senior secondary level, with programs for students ages 15 through 18, culminating in the Senior High School Certificate. Following the three junior high years, viewed as a guidance cycle where general instruction is provided, Liberian students take their senior high school instruction in either a technical secondary school or a classical secondary school. At the end of grade 9 and again when they complete grade 12 (i.e., at the close of the 3 junior and the 3 senior high years), students take an examination covering mathematics, science, social studies, and language.

The demand for vocational and technical education carefully matched to labor market needs increased appreciably in Liberia during the 1990s, particularly with the collapse of the economy and the destruction of the social and physical infrastructures. UNESCO in 2000 consequently sponsored a consultant in technical/vocational and science education who was to develop strategies for the implementation of an accelerated technical and vocational training program for Liberia in the post-war years.

HIGHER EDUCATION

An entrance examination provides the means to access higher education in Liberia. In 1995 the gross enrollment rate for higher education in Liberia was only 2.5 percent overall—3.7 percent of males and 1.2 percent of females of higher education age attended tertiary level schools. Nearly 5,000 students were enrolled in tertiary studies in the mid-1990s. Of the Liberian population older than 25 years of age, just 2 percent in 1995 had completed their tertiary education. Liberia has just one publicly supported university, the University of Liberia at Monrovia. In addition, Cuttington University College (a private institution associated with the Episcopalian Church) and William V.S. Tubman College of Technology provide education at the postsecondary level. The national legislative charters all degree-granting institutions of higher education in Liberia, and each educational institution has its own appointed board of trustees or directors whose tasks are specified in the charter for that institution. In the case of the University of Liberia, the Ministry of Education and the Board of Trustees are in charge of setting and implementing policy. Non-university postsecondary education also is provided in Liberia through two year courses in junior colleges that provide students with instructional programming leading to an Associate's degree. Some non-university programs also provide mid-level technical training and education in the liberal arts.

Bachelor's degree programs are the principal form of education offered at universities in Liberia, where the length of study is generally four years: two years of basic and general courses followed by two years of specialization in a particular, chosen area of study. (A plurality of students graduating at the Bachelor's level from the University of Liberia in February 2000 opted for a specialization in business—no doubt anticipating this would provide them with the practical training needed to become at least somewhat better off financially in Liberia's decidedly difficult economic climate at the time.) To obtain a Bachelor of Laws degree, students follow a course of study that includes at least two years of higher education followed by three years of specialization. Master's degree programs in regional planning, offered at the University of Liberia, culminate in the Master of Science degree after two years of graduate study beyond the Bachelor's. Medical degrees are awarded after seven years of study at the university level: three in the natural sciences followed by three in medical studies.

Teacher training is provided through three-year courses of study for students planning to pursue careers as primary school teachers. Successfully completing these programs allows graduates to teach in Liberia's elementary and junior high schools. Secondary school teachers are trained at the Teachers' College of the University of Liberia and through Cuttington University College's Department of Education. If prospective teachers already hold a higher education degree and wish to teach in another subject area, they can qualify by following a

two-year study program that leads to a Grade A Teaching Certificate. Otherwise, training for a secondary level teaching career requires four years of study, after which the Bachelor's degree in Education is awarded.

NONFORMAL EDUCATION

Distance education in Liberia has been somewhat impeded by the lack of economic means of most Liberians, the relative lack of computers and Internet service in the country, and the general absence of necessary physical infrastructure, such as electrical supply. Additionally, state censorship of the media acts as a brake on the free transmission of ideas in the country, public discussions, and on teaching methods emphasizing the development of creativity, critical thinking, and problem-solving skills in students. This said, there were about 70,000 televisions and 790,000 radios in Liberia in 1997, all of them potentially useful for distance education. In 1999 Liberia had six FM radio stations and four short-wave radio stations, while the number of television broadcast stations in the country in the year 2000 was two. In the year 2000 UNESCO was involved in collaborating with UNICEF and UNDP to develop a ''Distance Learning'' program for Liberian teachers that would include sponsorship of an academic chair in the University of Liberia's Tubman Teachers College.

Many self-help-oriented programs exist in Liberia that are funded by international donors and run by nongovernmental organizations. Through such programs Liberian youth have developed their knowledge and abilities not only in specialized marketable skills, such as carpentry or tailoring, but also in starting, running, and managing their own businesses so they can better ensure their gainful employment after graduation. Fewer wage paying jobs existed after the war, and students generally have been encouraged to develop self-help skills, business skills, and entrepreneurial strategies to provide themselves with the means to generate their own employment, even—and perhaps especially—when they have been trained in vocational or technical skills. Micro-enterprise training and support programs run by nongovernmental organizations (local, national, and international) often include seed money and tool kits for trainees upon their graduation so that new skills can be put to immediate use to the financial benefit of the graduates, since regular bank loans generally are not available to those of low financial means and only some banks have resumed their normal operations after the war.

SUMMARY

At the turn of the millennium, Liberia, in collaboration with UNESCO, was implementing a special UNDP-funded project, the Rehabilitation Support to the Education Sector project, designed to strengthen Liberia's national capacity in planning, supervising, monitoring, and evaluating; to enhance training opportunities for educational personnel; and to produce new curricular materials. US$1.3 million has been allocated for this project, whose positive impact will extend far beyond those educators and administrators directly served. By developing personnel who can plan more appropriate educational programs and carry out their projects with efficiency and understanding, fortified with the necessary teaching materials to properly implement the programs, projects like this one can have lasting effects.

The development of a vital civil society in Liberia has been encouraged since before the civil war ended. This occurs through technical and financial support from a range of intergovernmental and nongovernmental agencies and organizations in Liberia, such as UNESCO. Peace building, conflict resolution, and tolerance education programs also have been developed and implemented by a number of the same organizations in these crucial post-war years. As Liberia further emerges from its years of political and social unrest and violent upheaval, additional programming in the areas of psychosocial trauma counseling and community reconciliation will need to be more broadly disseminated among the population, implemented by professionals whose goal is to further the peaceable, democratic development of their country with respect for all ethnic groups and individuals.

A broader range of support directed toward rebuilding Liberia's internal structures, including its educational system, must become the top priority in the minds of many more individuals responsible for tending to the welfare of the Liberian people. The role of appropriate educational programs directed toward building a more peaceful, stable society dedicated to promoting human rights and guaranteeing that the basic human needs of the inhabitants of the country are met without fear of backsliding into war is an essential role indeed. Liberia is fortunate to have had so many willing partners to share in the joint enterprise of educating her children and youth up to this point. The country may well prosper again in the very near future if sufficient attention and resources are directed toward finding the ways and means to develop an educational system for all—not one that neglects the needs of the impoverished by catering to the wealthy, but a system where all learners from all walks of life can come together to celebrate the rich diversity of this verdant country that once welcomed her forsaken children back to their original shore, regardless of what had transpired in between.

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—Barbara Lakeberg Dridi

LIBYA

BASIC DATA

Official Country Name:	Socialist People's Libyan Arab Jamahiriya
Region:	Africa
Population:	5,115,450
Language(s):	Arabic, Italian, English
Literacy Rate:	76.2%
Compulsory Schooling:	9 years
Educational Enrollment:	Primary: 1,357,040 Secondary: 294,283 Higher: 72,899

HISTORY & BACKGROUND

Libya is the fourth largest Arab nation in the world. It is 1.7 million square miles in area, making it larger than the U.S. state of Alaska. It is known to Libyans as the Socialist People's Libyan Arab *Jamahiriya* (Republic). Libya's population is nearly five million people. Its population is growing at 2.4 percent, and 97 percent of Libyans are Sunni Muslims. Over half of all Libyans are less than 15 years of age. Education, especially free education, is a major issue for this youthful population. Ninety-seven percent of Libyans are Berber and Arab in ethnic makeup; the remaining population is Tuareg and indigenous African. The average life expectancy is 74 years for men and 78 years for women. There is 1 doctor for every 948 people, and, since most people live in cities, hospitals and doctors are within easy reach. Education is free and compulsory between the ages 6 and 15 years of age. It is free if students decide to continue their studies thereafter. Adult literacy is high at 76.2 percent; this approaches levels seen in developed nations. The capital Tripoli has a population of 1.6 million people. Roughly one out of every four Libyans lives in the capital city.

Libya is a highly urban society in which 86 percent of its citizens live in cities along the Mediterranean coast. The north is cool and provides many employment oppor-

tunities, while the south is hot and dry, sparsely populated, and offers few jobs. Libya is a largely barren, flat, undulating land. It has flat plains and plateaus, as well as depressions. Fertile oases punctuate this landscape that is dry and, in most places, extreme desert. There is a long Mediterranean coast along which most Libyans live. The Cyrenaica province is one of three major provinces that divide Libya. Like the other two provinces, Tripolitana and Fezzan, it has a narrow coastline behind which rises a plateau called the Jabal al-Akhdar or ''Green Mountain.'' Here lies the city of Benghazi, one of Libya's largest cities. This is an industrial seaport. Libya's coast has 13 other major cities. Libya is one of the most urbanized countries in Africa and the Middle East. This province shares its eastern border with Egypt. On the west lies the province of Tripolitana, which is anchored by the city of Tripoli, Libya's capital. Sandwiched between these two great provinces lies the province of Fezzan and Libya's rich, low sulfur oil fields. Here also lie the country's rich uranium fields that extend into neighboring Chad. This province also borders Algeria, Niger, and the Sudan. Libya is the largest producer of oil in Africa, and one of the largest producers in the world. Oil income has transformed Libya from a poor nation into a rapidly developing nation. It has one of the highest per capita incomes in Africa. The principal languages are Arabic, English, and Italian.

Before the 1969 revolution almost 40 percent of Libyans lived in tents or shanty towns. There were 300,000 houses and 365,000 families. Thus, 65,000 families were homeless and an additional 120,000 lived in caves and shacks. Between 1969 and 1974 over 110,000 new homes were built.

Early History: Until recently Libya had no separate identity. It had always been part of some other nation or empire, except in ancient times when Libyans warred with the pharaohs of ancient Egypt. Many foreigners, such as the Egyptians, Greeks, Romans, Arabs, Ottomans, Italians, British, and the French have dominated Libya. The Tripoli Tania province has always looked seaward to the north for salvation, trade, and cultural ties with Europe. The Cyrenaica province has always looked east for trade and cultural ties with Egypt and the Arab world. The Fezzan is African and looks south for trade, political and military links, and African cultural influences. Before the 1969 revolution, these provinces looked outward more than inward. This made national unity difficult and foreign influence great. Libyan fear of external domination is firmly rooted in experience and justified by their history with outsiders.

Having been divided often, Libya had little sense of a common national identity until 1951. The *Sanusiya* movement unified eastern Libya. This was a movement dedicated to purifying and reforming Moslems and leading its followers back to a simple community of faith ruled by just leaders. Of all of Libya's invaders, the Arabs have had the most enduring influence by forcing their religion onto Libyan culture. This movement began in the nineteenth century.

History of Education in Libya: The Ottoman empire encouraged Koran schools from the sixteenth to the twentieth centuries in Libya. Small *kuttabs*, or Arab Koran schools, were affiliated with mosques and taught children to read the holy Koran and write Arabic script. Higher order religious training was available through institutes, such as Murad Pasha and Darghut Pasha. Here students could also study law (*figh*). *Zawiya* stressed the study of astronomy, science, geography, history, mathematics, and medicine, as well as religion. Some *zawiya* also taught military arts to defend the faith.

Italy expanded educational opportunities as compared with the Ottomans. By 1939, Libya had 93 Italian schools. However, these were for the exclusive education of Italian settlers and children of administrators. These schools rivaled schools in Rome, but Arabs and Bedouins could not attend them. In addition to the Italian schools for Italian youth, there were 16 Jewish schools, 1 Greek school, and 418 Arab schools, which were religious schools or *Kuttabs* for the most part. Libyans graduating from these *kuttab* schools were not able to compete with Italians. The only secondary schools in the country were built to educate Italian children; Arabs and Bedouins were again not allowed to attend.

Under Italian rule, Libyans were denied education beyond the fourth grade and discouraged from learning either the Bedouin or Arabic language. They were taught Italian, to love Italy, and not to trust Arabs or Bedouins. Poor Italians did menial labor, semi-skilled, and skilled work. Little was left for the Libyans.

Italian schools continued to function, but Libyan Arab education was added. Textbooks and syllabi were rewritten in Arabic. Government primary and secondary schools were built throughout Libya and it reopened Koran schools that had closed during the independence struggle. This gave education a strong religious element. A shortage of qualified Libyan teachers led to rote learning, rather than reasoning. Despite these limitations, school enrollments rose rapidly, especially primary education. Jewish schools declined and closed as Jews migrated to the new state of Israel. Vocational education was added, and Libya's first university was opened in 1955 at Benghazi. Women began to attend school in growing numbers, and adult education was added to the system. Total school enrollment at the end of the colonial era was 34,000. Between 1951 and 1962 enrollment in-

creased to 150,000 and by 1969, just before the revolution, enrollment had increased to 360,000 students. Mobile classrooms became common, as did prefabricated classrooms. Classes were even held in tents in desert oases. Through these efforts, enrollments totaled 1.2 million students by 1986. There were 670,000 males (54 percent) and 575,000 females (46 percent). One third of the Libyan population was enrolled in school or in some other form of educational endeavor. Between 1970 and 1986, Libya built 32,000 new classrooms for primary, secondary, and vocational schools. The number of teachers rose from 19,000 to 79,000 during the same time period. The student teacher ratio also rose and the quality of education suffered.

In 1951, about 10 percent of Libyans were literate. At that time there were no female teachers. Secondary school teachers numbered 25, and only 14 Libyans held university degrees. A national education system was built virtually from scratch. By 1977, literacy rose to 51 percent. The literacy rate for women during the same timeframe rose from 6 percent to 31 percent. By the late 1980s more than 70 percent of men were literate as compared to 35 percent of women.

In the early twenty-first century, education at all levels is free, and university students are given very generous stipends to encourage them to pursue higher education and modernize the workforce. For students ages 6 through 15 years of age, education is compulsory. Roughly 8 percent of Libya's entire budget is dedicated to supporting education up through university level. The revolutionary regime has considerably expanded the educational system that it inherited from the monarchy. All types of education are seen as equal, since human knowledge is viewed as inherent to building a modern civilization. Many schools are needed to fulfill these aims.

Libya still suffers from a shortage of qualified Libyan teachers at all levels, and female attendance at the secondary and higher levels is low. Attempts to close all private and religious schools since 1970 has created problems. Vocational and technical training lag the rest of the system. In 1977, fewer than 5,000 students were enrolled in 12 technical high schools. By 1990, most doctors, dentists, and pharmacists were expatriates, despite having nearly 17,000 Libyan students studying for degrees in these disciplines. Libyan youth avoid scientific and technical training, preferring white-collar jobs associated with prestige and high social status. Reliance on foreign technicians will characterize Libya's economy well into the foreseeable future.

From 1981, compulsory military education for males and females formed part of the curriculum for all secondary schools and universities. Male and female students must wear uniforms to class and attend daily military exercises and physical training. University students are not forced to wear uniforms, but they must attend military camps for training. Females are encouraged to attend special female military academies. These measures are not popular, especially among the families of many females. A backlash might be expected in the future. The increase in female enrollment is remarkable, considering the fundamentally conservative and religious nature of Libya society on gender issues.

Libya's first university was founded at Benghazi in 1955, and it had a branch in Tripoli. These two campuses became separate universities in 1973. In 1976, they were renamed Gar Yunis University and Al Fatah University, respectively. A technical university, specializing in engineering and petroleum, opened at Marsa al Burayqeh in 1981. Al Fatah added schools of nuclear engineering, electronic engineering, and pharmacy during the 1980s. An agriculture college was constructed at Al Bayda and technical institutes exist at Birak, Hun, and Bani Walid. The expansion of opportunities in higher education is seen as vital to meeting personnel requirements by the revolutionary regime. Eventually, many secondary schools will be converted into special training institutes whose curriculums dovetail with those of vocational, technical, and universities.

Technically trained students are compelled to work in the areas of their training, which causes some discontent. The idea is to end dependence on foreign technical workers, but this is unlikely in the near future, especially in light of recent cutbacks in spending on technical education. Enrollment trends for higher education have moved steadily upward from independence to the present. There were 3,000 university students in 1969. By 1975 this number increased to 12,000, and by 1980, it reached 25,000. In 1992, this figure soared to 72,899, of whom 46 percent were female. The increase in female university enrollment is especially impressive, considering that in 1970 females were only 9 percent of the university student population.

Libya formerly paid totally for students to attend foreign universities and, by 1978, some 3,000 Libyans were studying in America. But in 1985, Libya cut back on fellowships for foreign study, forcing many Libyan students to continue their education locally. University students were among the few groups to openly express dissatisfaction with that. Students feel that university education is the path to personal and social advancement best left free from government interference. They resent constant efforts to control their thought and to politicize education at every level. For example, in 1976, university students mounted violent protest in Benghazi and Tripoli over compulsory military training. Students studying French and English at Al Fatah University frustrated efforts to close their departments and destroy their libraries.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Constitutional Provisions: The 1969 constitution decreed compulsory free education through the ninth grade. It mandated adult education and began providing more opportunities for women to become educated. This same constitution stated education's aims. Article 28 states that every Libyan shall have the right to an education. The state shall ensure the diffusion of education by means of the establishment of public schools and private schools, which it may permit to be established for Libyans and foreigners under its supervision. Article 29 states that teaching shall be unrestricted so long as it does not constitute a breach of public order and is not contrary to morality. Public education shall be regulated by law. Article 30 states that elementary education shall be compulsory for Libyan children of both sexes; elementary and primary education in the public schools shall be free.

By 1951, a new constitution made primary education free, compulsory, and open to all. The government supervised foreign schools. As of 1967, there were 248,942 students enrolled in Libya's 1,044 schools. Two universities were started, Gar Yunis or the University of Benghazi, specializing in the Arts and Education, as well as commerce and law. The second, Al-Fetah University or the University of Tripoli, specializing in agriculture and teacher training.

Educational Philosophies: When the Free Officer's Movement overthrew the monarchy on 1 September 1969, they initiated a socialist revolution rooted in Muslim values. Colonel Qadhafi was part of the Revolutionary Command Council (RCC). They rapidly set up a General People's Congress (GPC) as an executive and legislative body with 1,000 members. This organization was reproduced repeatedly down to the local level, where it is known as General People's Committees. Their idea was simple: bring government close to the people and let the ''will of the people'' rule. This was supposed to bring decision making down to the local level and create widespread participation. Such direct democracy is called ''natural socialism'' by Qadhafi. It seeks to establish social and economic equality as its ultimate goal. In February 1981, Qadhafi said, ''If this nation is to win, then it must not differentiate between men and women, since the enemy is against each one of us.'' He went on to add, ''Education is not a purpose in itself. The purpose is to create the new man. Specialization can be imported from their origin, but the independent citizen cannot. The difference is vast between specialization and liberty. The cost of the first is money, and of the second is 'blood.''' In the Green Book, Qadhafi states, ''society should provide all types of education, giving people the chance to choose freely any subjects they wish to learn. This requires a sufficient number of schools of all types of education. . .knowledge is a natural right of every human being which nobody has the right to deprive him of.'' He also stressed the need for religious education in schools.

Teachers are told they can contribute more than their traditional work in the classroom. Their ''duty'' involves going out to the people's circles and groups around the schools and teaching and guiding everyone toward a better understanding of Libya's revolution. Qadhafi claims that, ''If every teacher makes a revolution in his own circle, we will find that the Jamahirya will be covered with all these revolutionary circles. Similarly, doctors, nurses, agricultural instructors, and others need to make such a revolution in their own circles. . .for the total transformation of our society.'' Even children are taught that they must learn to make revolution because the people are the state. Libyans believe there can be no such thing as individual action. Achievements are made by mass action of the entire nation through people's congresses, committees, and unions. Children are taught that they must participate in revolution, not just accept and obey what their teachers tell them. Students are told that they must transform Libyan society through continual revolution. This is said to be the student's patriotic duty.

EDUCATIONAL SYSTEM—OVERVIEW

Compulsory Education: In the Libyan Jamahiriya education is free to everyone from elementary school right up to university and post-graduate education, both in Libya and abroad. Pre-university education is divided into primary, preparatory, and secondary education. Schools are everywhere. For nomads, there are mobile classrooms and teachers.

Age Limits: Education is compulsory between age 6 and 15 years of age. Where preschools are available, children begin school at age four. Because of herding responsibilities, some Bedouins do not start school until a more mature age.

Enrollment & Female Participation: In 1978, there were 819,012 students enrolled in Libyan schools. Roughly 18,956 or 2.3 percent were in private schools. The government closed private schools during the 1980s. Most enrolled children of foreign workers. Enrollment in religious schools increased after the revolution. In 1974, there were 15,303 Libyan students enrolled in religious or *kuttab* schools. By 1980, this number increased to 59,779 with the Islamic University of Sayid Muhammad Ali Sanusi at the zenith of religious education. By 1994, there were over 1.3 million students enrolled in primary school; 49 percent were female. Another 310,556 stu-

dents were enrolled in secondary schools, and 72,899 university students were enrolled in school, of whom 46 percent were female. (UNESCO 56)

Women are making great progress in Libyan society if education is a barometer of change. In east Libya, schools are coeducational, but in west Libya male and female students attend separate schools. In rural areas, out of economic necessity, because the number of students is so small, boys and girls attend class together, but boys sit at the front of the class and girls at the back.

Academic Year: Libya's school year consists of 35 weeks of instruction. Students attend school 6 days per week or 280 days per year. School begins in September.

Language of Instruction: Arabic is the language of instruction. English and French are taught as second or foreign languages.

Examinations: Rigorous examinations screen students from one level within the system to the next. Beyond classroom examinations, there are two major statewide examinations. Those who pass earn a Primary School Certificate. This allows them to enter intermediate secondary school or junior high school. After graduation from junior high school, students take a state-administered examination to determine entrance into secondary schools and institutes. Those who pass are awarded a certificate that admits them to upper secondary school. During their last year of secondary school, students must pass another state examination to be admitted to universities and other institutions of higher education. Students who pass the upper secondary school examination earn a diploma. These state examinations are created and administered by the Secretariat of Education and Scientific Research. Examination results are published in major newspapers.

Religious Schools: Private schools were discontinued during the 1980s, but religious schools were encouraged. In 1975, there were 181 Koran schools that enrolled 15,303 students. There were 12 Islamic intermediate schools with an enrollment of 674 students. Just 162 students attended religious secondary schools that year. By 1981, with government encouragement, 59,779 students were enrolled in religious schools.

Curriculum: In six-year primary schools, students study mathematics, natural sciences, hygiene, art, crafts, literature, and physical education. In secondary schools, students can choose a literary or scientific program of study. Language studies at this level include English, French, and Italian, as well as Arabic.

After primary school some students follow a vocational or technical school program throughout secondary school. Others continue on to religious secondary schools and universities, which emphasize Islamic law and Arabic.

Textbooks: All textbooks and pedagogical materials are produced by the Secretariat of Education and Culture. Books used in religious schools must also be approved by the Secretariat of Education.

Role of Education in Development: Libya uses education as a tool of development. It makes an inventory of skills needed by Libyan workers and then sets the curriculum and incentives to encourage students to study those fields so that expatriates can be replaced by skilled Libyan workers. A ''libyanization'' of the workforce is the goal. They hope to break their dependence on foreign labor, given their deep-seated historically rooted mistrust of foreigners. They have been very successful thus far, especially in recruiting women into non-traditional occupations. Modern jobs are being filled by Libyans in industry and agriculture. Schools at each level are directing greater numbers of Libyan students into science and technology to fill Libya's manpower requirements.

PREPRIMARY & PRIMARY EDUCATION

General Survey: Few Libyan children attend preprimary schools. In 1997, only 5 percent of preprimary school aged children actually attended such schools in Libya, and most of these were foreigners. Libyans usually begin school when they are six years old or older. In 1989, there were 852,593 students in 31,296 classrooms for an average of 27.2 students per class. School years begin in September and last 280 days, with students attending classes 6 days per week. As of 1992, 92 percent of eligible children were enrolled in primary school, and approximately 48 percent were female students. By 1994 this number had increased to over 1.3 million students, of whom 49 percent were female. This means that 97 percent of eligible students were enrolled in primary schools. Students were strongly encouraged to study science and mathematics. There were 36,591 primary school teachers in Libya in 1980, but by 1996 there were more than 100,000 primary teachers, of whom 47 percent were female teachers. In 1980, Libya had 765,000 illiterates, 28.5 percent of whom were male and 69.4 percent of whom were female. By 2000, Libya had 708,000 illiterates, of whom 9.1 percent were male, and 32.4 percent were female. Illiteracy fell from 47.1 to 20.2 percent of the population because significant strides were made in primary education for the entire Libyan population.

Age Limits: Education is free and compulsory between ages 6 and 15. Preprimary students may enter school as early as four years of age and full-grown adults may at-

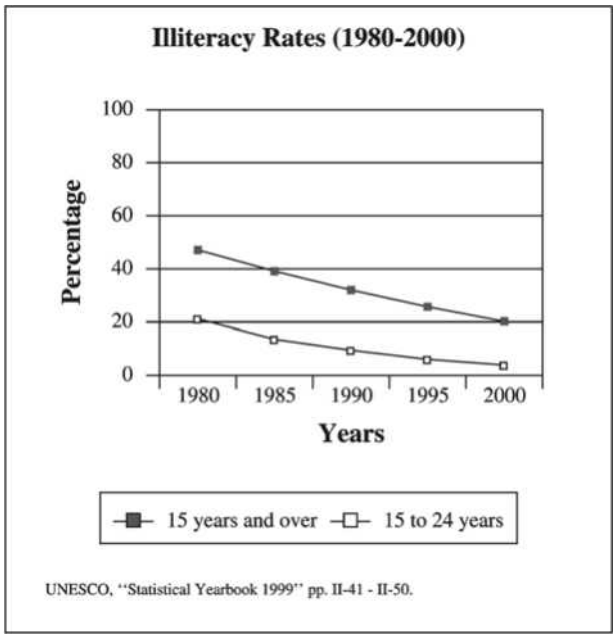
tend primary school if they missed it earlier in life. There is no upper limit on age.

Curriculum & Examinations: The six-year primary school's aim is to teach students to read, write, and count, as well as the natural sciences, hygiene, arts and crafts, and physical education. During their final year of primary school, students must pass an examination to qualify to enter junior high school. Junior high school, or Intermediate school, adds three more years to primary education, making it last for nine years in Libya.

Urban & Rural Schools: Urban schools are usually housed in buildings built of permanent materials which are durable. Rural schools are often mobile homes, which are made to serve ''double duty'' as portable homes for teachers following nomadic students and as mobile classrooms.

Teachers: There were 36,591 primary school teachers in Libya in 1980. By 1990, there were more than 85,537 primary teachers, of whom 47 percent were female teachers. Moreover, most teaching positions were no longer dominated by foreign teachers from Egypt, Palestine, and other nations. Libya has trained Libyan teachers to fill most positions, and 47 percent of these teachers are now women. The teacher to student ratio is 18 to 1.

Repeaters & Dropouts: In 1980, some 9.2 percent of Libyan primary school students repeated a grade. Dropouts declined once Libya abandoned its system of national examinations. Promotions are dependent solely upon passing in class examinations. Nonetheless, 4 percent of females and 2 percent of males dropped out of primary school.



UNESCO, ''Statistical Yearbook 1999'' pp. II-41 - II-50.

SECONDARY EDUCATION

General Survey: Upon completion of junior secondary school (junior high school), Libyan students advance to secondary school, which is divided into two tracks. The first academic track consists of general preparatory education and pre-college education. A parallel or vocational track leads to the general teacher training institutes. This lasts four years and prepares teachers to educate preprimary and primary school students. Students on this track may also choose to study agriculture, commerce, or industry, as well as enter teacher training.

Curriculum—Examinations & Diplomas: The academic track has two phases, and each takes three years to complete. Phase one is preparatory (junior high school) and leads to a certificate. Phase two (high school) also takes three years to complete and terminates in a diploma. The first year of secondary school students take general education requirements, including Arabic, religious studies, geography, science, mathematics, and history. During the second year, they choose either the science program, including geometry, trigonometry and algebra, physics, chemistry, and biology, or a humanities program for the remaining two years of study. This culminates in a national examination leading to a diploma, which enables students to enter Libyan universities. In 1989, there were 95,576 students attending secondary schools in 2,922 classrooms. Average classes had 32 students. Academic track students can choose to study languages, such as English, Italian, French, or Arabic. The curriculum in advanced Koran schools is similar to public schools, except that Islamic law and religious education are stressed. Between 1980 and 2000, gross secondary school enrollments jumped from 76 percent to nearly 100 percent. Of these, 89 percent of males attended, and 63 percent of females who were eligible attended secondary school in 1980. No figures are available for subsequent years.

Teachers: There were 12 students for every 1 secondary school teacher in 1980. That same year, Libya had 24,323 secondary school teachers of whom 24 percent were female.

Repeaters & Dropouts: Approximately 10 percent of secondary school students repeated a grade. The dropout rate was 6 percent, but it was greater for boys (9 percent) than girls (3 percent). Family attitudes account for most dropouts.

Vocational Education: There are 18 vocational and technical training schools in Libya. In 1978, they enrolled

6,267 students. These institutions had 487 teachers. They studied petroleum science, auto mechanics, electricity, mechanics, drilling technology, carpentry, and a variety of other practical subjects needed by Libya's economy.

HIGHER EDUCATION

Public & Private: Libya has three major universities that grant bachelor's degrees: Gar Yunis University, Al-Fetah University, and Marsa Berga Technical University. In 1992, Libyan universities enrolled 72,899 students, of whom 46 percent were female. Females were concentrated in the humanities and males in science, engineering, and business faculties. Government encouragement has led to increased participation of females in the sciences, especially in medicine. Social attitudes concerning the properness of females and males working together either in school, or later in the workplace, inhibit more rapid advancement of women into nontraditional professions. By 1992, some 72,899 students were enrolled in Libya's universities.

Admissions Procedures: Students who earn a secondary school diploma are eligible to enter Libyan universities. Extremely rapid expansion of educational opportunities has led to a decline in the preparation of students and very high grade repetition rates in Libyan universities. In 1976, an estimated 79 percent of engineering students had to repeat their first year at university. Comparable rates in the arts were 74 percent.

Administration: Universities are administered by ''People's Committees,'' consisting of six faculty members, four students, two members of the instructional staff, and one woman. The chancellor of the university is the chair of this committee. The Secretariat of Higher Education exercises oversight and is responsible for the quality of graduates from schools at all levels throughout the Libyan educational system. The language of instruction in universities is Arabic.

Tuition: Because of Libya's tremendous oil wealth, education is free. The Libyan government spends between 9,000 and 13,000 LD per year on each university student, but in return they can more rapidly achieve their goal of placing Libyans in all essential jobs.

Foreign Students: Roughly 16 percent of Libyan university students are non-Libyans from other African and Arab nations. Many foreign students are on scholarships offered to them by Libya as a means of spreading its influence, as well as sharing its wealth.

Libraries: The National Archives are located in Tripoli and are the official repository of historical documents for Libya. This unit consists of 5 libraries containing 55,000 books and documents. In addition, the Government Library is also located in Tripoli and has 35,000 books. There is an Agricultural Research Center Library in Tripoli with 6,000 books and 220 periodicals. The National Library of Libya is located in Benghazi, as is the Public Library of Libya, which contains 11,000 books. Qurinna Library and the University of Gar Younis Library are both located in Behghazi. The Gar Younis Library has 294,844 books; 2,360 periodicals; 70,000 documents; and 10,000 microfilms and rare books.

Beyond this, there are libraries on the campuses of Al-Fateh University, Al-Arab University, Bright Star University of Technology, Sebha University, the African Centre for Applied Research and Training in Social Development, the Arts and Crafts School, the Faculty of Engineering, the Higher Institute of Electronics, the Higher Institute of Technology, the National Institute of Administration, and the Post and Telecommunications Institute Library, all of which help to disseminate knowledge and encourage lifelong learning in Libya.

In 1975 Libya published 129 books, but by 1994 this number had dropped to 26. Hardest hit were books in the Social Sciences, which fell from 28 in 1975 to 2 in 1994, and the Pure Sciences where 21 books were published in 1975, but only 2 in 1994. In 1996, Libya had 4 daily newspapers with a daily circulation of 71,000 papers; this means that 16 out of every 1,000 Libyans are reading a daily paper. Many Libyans get their information through radios, of which there were over 1.3 million in 1997, and televisions, of which Libyans had 730,000 in that same year. They share information by talking, as indicated by the fact that there were 380,000 telephones in Libya or 6.8 telephones per 100 inhabitants in 1996 (UNESCO).

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Government & Educational Agencies: Like many things in Libya, education is centrally controlled. The Secretariat of Education and Scientific Research regulates all public schools, Islamic schools, special education schools, teacher training institutes, and vocational and technical institutes and colleges, such as the commercial and applied engineering colleges. The Secretariat of Education supervises all examinations for schools under its authority and establishes educational policy as well. These activities are supported by revenue from oil exports. Post secondary school students at universities receive government stipends to help with living expenses.

The country is divided into education zones, and officials in charge of each zone implement government education policy in their area. Libya has 10 *muhafadha* or

education regions. In 1974, Libya spent more on its students than most other nations in the African and Arab world. Approximately 7 percent of Libya's national budget was devoted to education. Libya spent 400 LD on each primary school student in 1980. About 6,000 LD were spent for each student who earned a secondary diploma. In 1986, Libya spent 7.7 percent of its budget on education or 636 million dinar, which was 9.6 percent of its GNP that year. Capital expenditure that same year was 130 million dinar. No information was available on the amount spent on each Libyan student studying abroad or on education research.

NONFORMAL EDUCATION

Adult Education: Libya confronts colonial neglect when it attacks adult education and tries to remedy past abuses. In 1973, 51 percent of the population was illiterate. By 1980, this had fallen to 47.1 percent or 765,000 people, of whom 253,000 or 28.5 percent were male, and 512,000 or 69.4 percent were female. In 2000, this number declined to 20.2 percent, of whom 9.1 percent were male, and 32.4 percent were female (UNESCO). A variety of successful programs have been directed at illiteracy, and as the numbers show, progress has been made.

There are centers for literacy training in each district. *Baladiya* or centers for literacy training often have vocational and technical programs attached to functional literacy programs. About 7,000 students per year benefit from these programs. The Secretariat of Labor also runs other programs to help upgrade workers. The Secretariats of Commerce and Electricity run programs to upgrade skills in road maintenance, construction, airport management, telecommunications, and public transportation. The Secretariat of Agriculture trains 700 students per year in tractor operation and management, farm machinery, tool use, and maintenance. Worker development programs help the government impart skills and attack illiteracy simultaneously. Government employees are given full pay and release time to encourage personal growth. Programs vary in intensity and last from one month to four years in duration, depending on the goal of the program. The government's goal is to have each worker reach a fourth grade level in reading and math, as well as to develop specific job related skills. Despite great strides, illiteracy is still considered a major problem in Libyan society. Because of the demand for skilled labor, there is great competition for graduates of each program.

Distance Education: *Barnamaj Nahw al-Nur* and similar television programs attack adult illiteracy by providing the basics of reading and mathematics to adults in a creative and inviting manner. Through such programs remote populations can be reached, which might otherwise be neglected, but the cost per student is very high.

TEACHING PROFESSION

Training & Qualifications: A few teachers work in schools set aside for gifted children. The same is true for special education, as some teachers are trained to work with students who are learning disabled or physically handicapped. These children attend special schools.

Most teachers begin training for primary school teaching after completing a five year post-primary or two year postsecondary diploma. Teacher training programs often take four years to complete. Trainees take general education courses, after which they specialize in one of the following areas: mathematics and science, arts, religion, Arabic, physical education, social studies, English, or music education. Graduates receive a general teacher's certificate. Upper level secondary school teachers attend classes at one of Libya's universities and take courses in the Department of Education leading to a bachelor's degree in education. Some secondary school teachers specialize in education in college, but most specialize in history, math, physics, literature, or the subject they teach.

Rapid expansion of the entire educational system since 1970 has forced Libya to dramatically expand teacher training programs in each region. Several new facilities exclusively train women. The government is encouraging women to take up teaching as a profession. In 1978, there were 11,303 female teachers. This number has increased substantially since then, but no firm numbers are available. Despite major efforts to produce as many teachers as they need to staff an expanding system, Libya still lacks enough qualified teachers. In 1980 Libya had 36,591 primary school teachers, and by 1990 this number rose to 85,537 teachers, of whom 47 percent were female. During the same time frame, Libya had 24,323 secondary school teachers, 20 percent of whom were female. The student-teacher ratio for primary school was 18 to 1 and for secondary school it was 12 to 1 for the period under review.

As noted earlier, Libyans are very sensitive to foreigners; they fear foreign domination. In 1977, of 40,480 teachers, 17,545 were non-Libyan. This number has declined as trained Libyans have been produced to fill these positions, but no current data is available to judge the extent of the change. Libya is committed to replacing non-Libyan teachers with Libyan teachers. But, given continued expansion of the entire educational system, it may be years before this goal can be reached. Non-Libyans will continue to make great contributions to Libyan youth at the secondary and university levels.

SUMMARY

Qadhafi and the Free Officers Movement ushered in an era of monumental change that created universal edu-

cation as its goal. Educational opportunities expanded in a very dramatic manner at breathtaking speed. This expansion, while good, occurred so fast that Libya ended up with an educational system of average quality. To its credit, education is free for all. Libyans still look down upon manual labor and trades, thus it remains difficult to recruit students for vocational and technical training. Despite making education free and compulsory, some children do not attend school and instead stay home to help their fathers herd camels and livestock in remote rural areas. Females, especially from ethnic minorities such as the Berbers, are more likely than males to miss school. Many rural families still do not believe that girls need an education and that their role is only to marry and produce strong families. Many feel that what schools teach is irrelevant to what a person needs to succeed in life. Illiteracy still makes it difficult to train some Libyans on the job or for job. Many adults do not want to learn anything beyond their special area of job related interest. Closed minds make it difficult to build an open and modern society. Libya's four universities produce thousands of qualified professionals annually, which brings Libya closer each year to its goal of libyanizing the economy. All things considered Libya has done remarkably well in the field of education when considering where they began in 1951.

Examinations, like most things in Libya, are centrally created and implemented. They have little value in terms of predicting future performance either in school or on a job. Decentralizing planning, implementation, and evaluation of examinations might improve the system in the future and make it more reliable. Regions should be allowed to plan their needs with input from the central government but not with centralized control. This prohibits creative solutions by those teachers closest to the problems who would know best how to remedy them. Central planning tracks students into careers for which they may have aptitude, but no interest. Career counselors in each school could work with students to encourage them to enter fields in which they have a genuine interest. This would reduce academic failure, student apathy, and accelerate the rate at which Libya reaches its goal of filling jobs with Libyan personnel.

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—Dallas L. Browne

LIECHTENSTEIN

BASIC DATA

Official Country Name:	Principality of Liechtenstein
Region:	Europe
Population:	32,207
Language(s):	German, Alemannic
Literacy Rate:	100%

HISTORY & BACKGROUND

The Principality of Liechtenstein is located between Switzerland and Austria in the Alps of central Europe. Liechtenstein, one of Europe's smallest countries, was acquired by the Liechtenstein family. Prince Hans Adam of Liechtenstein purchased the Imperial Free Territory of Schellenberg in 1699 and the County of Vaduz in 1712, uniting the two territories in 1719 as the Imperial Principality of Liechtenstein, a member state within the Holy Roman Empire. Compulsory education was mandated in 1805. The responsibility for school construction and financing was given to the municipalities resulting in lack of enforcement and unequal educational opportunities for the principality's residents.

The sovereignty and independence of Liechtenstein was established in 1806, developing from a special relationship between French Emperor Napoleon I and Prince John I of Liechtenstein, an Austrian general. First, Liechtenstein was a member state in Napoleon's Confederation of the Rhine and later was in the German Confederation. Liechtenstein escaped Europe's nineteenth century wars of German unification, because the country was tucked between Imperial Austria and neutral Switzerland. In 1842, Prince Aloysius II became the first Prince of Liechtenstein to actually visit his country. During the long reign of Prince John II (1858-1929), Liechtenstein was given a Constitution (1862, revised in 1921), disbanded its army (1868), and ended the principality's long standing customs union with Austria in favor of a customs treaty with Switzerland (1923). Prince Francis I (reigned 1929-1938) was the first Prince of Liechtenstein to regularly visit the country. In 1938, the same year Germany annexed Austria, Prince Francis Joseph II (reigned 1938-1989) became the first reigning prince to permanently reside in Liechtenstein.

After World War II, Liechtenstein joined the United Nations, the Council of Europe, and the European Economic Area to guarantee its continued political and economic independence. Liechtenstein is a constitutional monarchy with a Prince, Hans Adam II, as Head of State since 1989. Prince Hans Adams represents the country under international law and appoints members of the government, the nation's judges, and civil servants. The *Lantag* or Parliament, a legislature of 25 delegates elected by the people of Liechtenstein, has authority for the budget, supervises the government's administrative activities, establishes investigating commissions, and recommends legislation.

EDUCATIONAL SYSTEM—OVERVIEW

Liechtenstein's current educational system is based on a series of reforms launched in the middle of the 1980s and implemented in the 1990s, and is under regular review. The Constitution of Liechtenstein requires the state to supervise the whole system of education and schooling. National education in Liechtenstein offers a system of general and vocational education for pupils, students, trainees, and apprentices, which is unrestricted and free of charge. The educational system is responsible for providing students with access to a vocational education based on their abilities and interests. Studies of foreign languages are promoted to prepare students for the demands of a professional career of international interconnections. Pupils and students are motivated to be participants in a life-long learning process that will benefit both them and the nation. Through close collaboration with Liechtenstein's neighboring countries, Switzerland and Austria, options in all fields of education are available.

Liechtenstein's educational system is comparable to the educational systems found in other German-speaking countries. Kindergarten is voluntary and lasts for two years. In practice, 99 percent of all children attend kindergarten. Compulsory school attendance begins at age seven, continues for nine school years, and includes primary and secondary education levels. A voluntary tenth year is available for students to prepare for career opportunities and select professional choices. The Liechtenstein school year begins in mid-August and continues for 40 weeks. In addition to the public school statistics listed below, Liechtenstein has two private preprimary schools, two private primary schools, and one private secondary school. In the year 2000, Liechtenstein had 34 preprimary schools enrolling 334 male and 328 female students with a teaching staff of 59, fourteen primary schools employing 231 teachers for 281 male and 254 female students, and nine secondary schools enrolling 917 males and 931 females with a teaching faculty of 267.

Because of its small size, Liechtenstein is not able to offer a fully developed higher educational system

within its own borders. Liechtenstein has two public universities. The *Fachhochschule Liechtenstein* (FHL) enrolls 330 students, 110 from Liechtenstein, in comprehensive programs of graduate and post-graduate vocational education in the fields of building management, international management, logistics, environmental technology, and economic engineering. Liechtenstein's vocational education system utilizes the apprenticeship as the practical method of instruction developed in partnership with the business community. Liechtenstein's second institution of higher learning, the *Internationale Akademie fur Philosohie* (IAP), offers a course of study in philosophy and enrolls 60 foreign students. The majority of Liechtenstein students graduating with Liechtenstein's university-entrance certificate study abroad in either Switzerland at Fribourg, St. Gall, or Berne universities or Austria in the fields of medicine, law, and economics. In Germany, individual study programs are granted to Liechtenstein students seeking higher education on a case by case basis by the German federal or state governments. A few students attend university in Great Britain and France and in the United States for postgraduate work. Adult education is assigned to non-profit-making institutions within Liechtenstein.

The government of Liechtenstein and the Department of Education supervise the whole educational system, provide the financial support for the population's education within the country and abroad, and determines the curricula and the accreditation of all educational institutions within the nation's borders. The *Schulamt* (Schools Office) oversees the education system at preprimary, primary, and secondary levels. The *Schulamt* reviews and recommends qualifications for teacher employment, teacher salaries, the level of state investment in the educational system, the inspection procedures for public and private schools, and curricula. The authority of the *Schulamt* extends to higher education and grants, pedagogy, media, and teaching materials. Oversight for vocational education is given to the Council of Vocational Education (*Berufsbildungsrat*), an advisory committee, and the National Authority of Vocational Education (*Amt fur Berufsbildung*) to administer and organize the system.

SUMMARY

Since 1995, Liechtenstein has participated in the European Union's Leonardo DaVinci Action Program on vocational education. This initiative promotes the integration of Liechtenstein's vocational education system into Europe's educational system. The government of Liechtenstein advocates that its businesses and employees be prepared to cope with the rapid pace of technological and economic change. The Principality of Liechtenstein is committed to an active and continuous review of its educational programs to meet the needs of its people and the nation.

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—William A. Paquette

LITHUANIA

BASIC DATA

Official Country Name:	Republic of Lithuania
Region:	Europe
Population:	3,620,756
Language(s):	Lithuanian, Polish, Russian
Literacy Rate:	98%
Compulsory Schooling:	9 years
Public Expenditure on Education:	5.4%
Foreign Students in National Universities:	370
Libraries:	1,478
Educational Enrollment:	Primary: 225,701 Secondary: 378,754 Higher: 83,645
Educational Enrollment Rate:	Primary: 98% Secondary: 86% Higher: 31%
Teachers:	Primary: 14,095 Secondary: 36,932 Higher: 13,136
Student-Teacher Ratio:	Primary: 16:1 Secondary: 10:1
Female Enrollment Rate:	Primary: 96% Secondary: 88% Higher: 38%

HISTORY & BACKGROUND

Located on the Baltic Sea, Lithuania is bordered by Latvia to the north and Belorussia to the east and south. Poland is situated to the southwest of the country. The territory of Lithuania encompasses 65,200 square kilometers, 99 kilometers of which is located on the coastline. It is divided into 44 regions and 52 districts, with 92 cities and 22 urban-type settlements. The capital city is Vilnius.

The climate of Lithuania is considered to be transitional in nature, fluctuating between maritime and continental. It is a wet country, with moderate winters and summers. Lithuania makes up a lowland area comprised of many scattered lakes and very fertile soil. The lowest point of elevation is located at the Baltic Sea (0 kilometers), the highest point at Juozapines/Kalnas (292 kilometers).

According to statistics from July 2000, Lithuania's estimated population stands at 3,620,756, some 67 percent of which is between the ages of 15 to 64; 1.17 million are female and 1.26 million are male. The population growth rate is decreasing at .29 percent. The ratio of men to women is 0.88:1 respectively, with an average of 1.34 children born per woman.

The country is predominantly Lithuanian, with the natives making up nearly 81 percent of the country's population. Other represented nationalities include Russian (8.7 percent), Polish (7 percent), Belorussian (1.6 percent), and other (2.1 percent). The official language of the country is Lithuanian; however, because of the makeup in population, the Polish and Russian languages do hold a presence. Lithuania is astoundingly literate, with 98 percent of the population (15 and over) possessing the ability to read and write (CIA 2000).

In terms of the country's history, archeological evidence shows that the Baltic region, home to Lithuania, has been inhabited since the late Stone Age. By 1600 B.C., the area was linked by well-developed trade routes, predominantly used for the export of amber. Lithuania emerged as a state in the thirteenth century, shortly after the union of the main lands. In 1240, Mindaugas was named the Grand Duke of Lithuania, and by the end of the fourteenth century Lithuania emerged as one of the most powerful states in Europe. The successful defeat of their enemies resulted in an era of domination and territorial expansion.

German crusaders invaded the pagan state for almost two whole centuries. Despite the German effort, the country remained unconquered. As an example of their quest for independence, the Lithuanians built castles that are continually admired today for their defensive construction. In 1410, Lithuania, with the help of neighboring Poland, battled the Teutonic Knights in defense of their liberty. In addition, Lithuania was also able to withstand attacks by the Mongols-Tatars from the West and assist other European nations with their fight against the Golden Horde (CIA 2000).

In 1569, the Union of Lublin sealed the Poland-Lithuania Union into a commonwealth (Rzecspospolita); later in the seventeenth century, Lithuania became one of its three provinces. Following the partitioning of the Commonwealth in 1795, Lithuania was incorporated into Russia and spent more than 100 years battling tsarist rule. It was not until February 16, 1918 that Lithuania proclaimed its independence and moved to restore its statehood. Through establishment of diplomatic relations, the country was soon recognized by Europe and some of the largest states in the world. It remained independent for only 22 years, before it was once again occupied by the Soviet Union. Lithuania fought bravely for its independence against the Soviet occupiers, despite being drastically outnumbered. Their desire for independence was not subdued even after 50 years of occupation. With the dissolution of the Soviet Union on March 11, 1990, Lithuania proclaimed its statehood once again. The old clock of the Cathedral tower strikes, counting the hours of freedom in order to remind the Lithuanians of their struggle. The sounds are transmitted by radio to the nation every morning.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The supreme legislative authority now resides with the Parliament (Seimas), as a result of the Republic of Lithuania reclaiming its statehood on March 11, 1990. It no longer recognizes itself as the Lithuanian Soviet Socialist Republic. Political life was unstable for more than a year following Lithuania's independence because of the delineation of powers within the parliament.

The Parliament contains 141 seats, 71 of which are directly elected by popular vote, 70 of which are elected by proportional representation; each member serves a four-year term. The Supreme Court judges, as well as the Court of Appeals judges are appointed by the Parliament. Laws can be adopted by either referendum or a vote in the Council of Ministers. The prime minister, deputy prime minister, and cabinet are all accountable to this council. For administrative purposes, Lithuania is divided into 10 districts.

In this parliamentary democracy, there is a chief of state, President Valdas Adamkus (since February 26, 1998). The executive branch is comprised of a premier, Andrius Kubilius (since November 12, 1999) and a council of ministers that is appointed by the president on the nomination of the premier. The premier of Lithuania is appointed by the president contingent upon the approval

of the Parliament. The most recent election (1997) resulted in Valdas Adamkus receiving 50.4 percent of the vote, narrowly defeating Arturas Paulauskas and consequently becoming Lithuania's current president.

Lithuania houses a wide range of political parties some of which include the Christian Democratic Party (LKDP), the Democratic Labor Party of Lithuania (LDDP), the Democratic Party (DP) and the Homeland Union/Conservative Party (TS) (CIA 2000).

Russia's military continues to be a dominant force in Lithuania. Thus, the government's most pressing foreign policy issue remains the quest to diminish Russia's presence in the country. The antiaircraft network that extends from Estonia to Lithuania is the only base of strategic importance to the Russians. However, an estimated 23,000 officers and soldiers, as well as Russia's only paratroop training base remain near Kaunas, Lithuania. In addition, Russia's only access to their military region of Kaliningrad is via the 188 mile (303 kilometers) border they share with Lithuania.

Lithuania's recent political history begins with the approval of a constitution by 53 percent of eligible voters in a national referendum on October 25, 1992. As a result of this election, the majority of parliamentary seats were handed to the Democratic Labor Party (LDDP), headed by leader Algirdas Brazauskas. Brazauskas won the presidential election of February 1993 over a non-LDDP coalition led by the independent candidate, Stasys Lozoraitis.

Since that time, Lithuania's government has worked diligently to become more congruent with Western requirements. A populist referendum in favor of the indexation of peoples' savings was defeated in August 1994 by the successful lobbying of the LDDP government. Democratic Labor Party candidates were defeated, however, by the opposition in the nationwide elections of March 1995. The significant issues leading to the defeat were noted as the lack of effort in promoting prosperity and combating corruption and organized crime.

Lack of supervision and regulation over the banking sector of Lithuania were the primary causes of the bubbling financial crisis in December 1995. This consequently led to the resignation of Adolfas Slezevicius as Prime Minister and LDDP Chairman in February 1996. The replacement, Mindaugas Stankevicius, spearheaded the comprehensive banking sector bailout plan. However, these measures were not enough to convince voters in the 1996 rounds of parliamentary elections. The Conservative Party gained 70 of the 141 seats, with another 16 seats going to its coalition partner, the Christian Democrats. This coalition established a new government in early December 1996 and won a sizeable majority in the nationwide elections held in March 1997. The President, Valdas Adamkus, elected by popular vote, was sworn in on February 25, 1998. The president is elected for a five-year period, with a maximum of two consecutive terms. The next elections will be held in 2003 (U.S. Department of State 1998).

EDUCATIONAL SYSTEM—OVERVIEW

The people of Lithuania are highly educated. Nearly the entire population between the ages of 15 to 39 has completed basic schooling. A major overhaul of Lithuanian education practices followed the country's restoration of independence in 1991. The system of primary-secondary-higher education was developed between the two world wars with the Soviets further expanding this to adult education. The Soviets highly politicized philosophy of education was evaluated and replaced. Independent Lithuania no longer adheres to the ''Soviet school'' philosophy. It now focuses on an ideology based on Lithuanian history and culture. However, the system still utilizes some Soviet organizational methods (U.S. Department of State 1998).

Education between the ages of 7 and 16 is compulsory and free of charge at all levels, as a result of the 1992 Constitution. The three levels of Lithuanian education include: comprehensive (from 7 to 16 years of age), vocational and schools of further education (from 16 to 18), and higher education. Furthering this delineation, there are three types of comprehensive schools: primary (grades 1 to 4), principal (grades 5 to 9), and secondary (grades 10 to 12). There are over 2,000 schools across these levels. Preschool is also available should parents wish to enroll their children.

Schools are located in all cities, towns, and villages. The more remote schools generally begin with first grade and end with fifth or ninth grade. Students are likely to attend a public institution for primary and secondary school, where they are commonly enrolled in art and music courses in addition to their academic schedule. Following secondary education (grade 12), the majority of students go on to vocational schools; the next largest percentage of students attend college-like institutions. The remaining students continue at polytechnical institutions.

Following Lithuania's independence from the Soviet Union, more than 67 percent of Lithuanian students now attend religious classes in general schools. In addition to the religious courses, students also study history, mathematics, science, ethics, Lithuanian, and Lithuanian literature. Foreign language study includes English, German, Russian, French, and Latin for accelerated classes. Foreign language study begins in the fifth grade, with English as the primary language of study.

Teachers now offer a wider variety of subjects and de-emphasize the teaching of Russian history and the Russian language. Teachers are beginning to attend summer workshops, where they can learn new teaching practices (Kudirka 1991).

The academic year runs for 10 months from September through June. There is a summer break from July 1 to September 1. Classes are primarily taught in Lithuanian, although in closed communities of ethnic minorities, the state does provide support for education in the native language. Parents are permitted to choose the school of general education according to its language of instruction (EuroEducation Net 1996) (NAFSA 1991).

Ethnic minorities that do not live in an established closed community are provided with optional classes, as well as Sunday school should they like to improve upon their native language skill. Lithuanian language and literature are taught in all non-Lithuanian educational institutions.

Lithuania has established goals for its educational system. They are as follows:

1. To develop mental and physical abilities; to lay firm the foundations of morality and a healthy way of life; and to develop intellect while providing conditions for the further development of individuality
2. To offer children both general and professional education corresponding to the current level of science and culture
3. To provide the opportunity for the residents of Lithuania to continue their education
4. To clarify personal rights and to instill a sense of civic duty to the family, nation, society, and the State of Lithuania, as well as the need to participate in the cultural, social, economic, and political life of the Republic (NAFSA 1991).

PREPRIMARY & PRIMARY EDUCATION

According to the Law on Education for the Republic of Lithuania, children under the age of seven are permitted to enroll in nursery school and kindergarten upon the request of the parent or guardian, whereas orphans and neglected children are enrolled in childcare institutions. Lithuania encourages education in the home for children under the age of seven and provides benefits to those who comply through methodological, diagnostic, and consultation assistance.

Additionally, general secondary education is acquired in three stages over a period of twelve years. The three stages of schooling are divided into separate administrative units: primary, principal, and secondary schooling. The secondary school of general education establishes the duration of study for these schools (NAFSA 1991).

The primary school works to create a concrete and integrated view of the world for the child. During the primary school years, students become acclimated to their surroundings and learn basic reading, writing, and arithmetic skills. The basics of a foreign language are taught and artistic expression is encouraged. The children's main methods of learning are through example, experience, activity, and direct contact. One teacher generally teaches all the basic subjects, while cooperating closely with the students' families.

The system changes for grades 5 through 8, where different instructors teach different subjects. Students gain a deeper understanding of the native language and literature, mathematics, and natural science, while the learning of a second foreign language commences. Social studies are introduced into the curriculum, with compulsory and elective subjects making up the remaining of the set of courses. Students begin to specialize at the seventh to eighth grade level.

SECONDARY EDUCATION

Secondary schools comprise grades 10 to 12. There is an increased emphasis on promoting abstract thinking. Previously taught material is reviewed in order to ensure that the students meet the necessary standard. Students have the ability to choose from a wider variety of courses, and either the basic or advanced level of each course. Upon completion of the tenth grade, students receive a certificate that lists the completed subjects, and the level of the courses taken.

Teaching becomes more specialized in the eleventh and twelfth grades. Pupil's interests are taken into consideration and courses in liberal arts, natural science, technology, economics, and commerce are offered. Emphasis is also placed on independent study.

A secondary school leaving diploma is granted following the completion of five to seven examinations. These compulsory exams include the native language and literature, mathematics, a foreign language, and one of the chosen electives. Students are able to choose basic or advanced levels at the time of the examination. The leaving diploma signifies the completion of comprehensive schooling (Barrett 1995/96).

General education may also be acquired at the appropriate vocational schools. There are vocational schools (i.e., part-time or evening schools) for adults who wish to complete their general education. Technical education is also available through vocational institutions. This vocational training is coordinated with general education regulations and upon completion, may be furthered at advanced training and retraining facilities. The vocational institutions can develop technical and agricultural skills,

as well as the skills needed in the commercial and trade sectors. Persons over the age of 14 are permitted to attend these institutions to complete their comprehensive schooling, while learning a vocation.

School is conducted in hospitals for children who are in need of care. These children, in addition to those schooled in the home, are educated in accordance with the procedures established by the Ministry of Culture and Education. Special schools of general education are established for children with antisocial behavioral traits (NAFSA 1991).

HIGHER EDUCATION

Lithuania provides higher education through its state-run, private universities and nonuniversity establishments. The completion of secondary education is a prerequisite for enrollment in one of these institutions of higher learning. Lithuania is home to six independent universities; three are general universities, and the other three are specialized. Additionally, there are 29 research institutions conducting fundamental research on university campuses. Applied research is predominantly conducted in nonuniversity institutions. The Supreme Council of the Republic of Lithuania established the Law on Science and Studies in February of 1991. This law set the tone for the reformation of the higher education system. It moved to define the guidelines for a transition towards a more western approach to higher education (EuroEducation Net 1996).

There are various stages of higher education studies administered through several organizational facilities. Higher vocational and technical studies schools train skilled workers (technical, agricultural, commercial, and trade) at several levels of proficiency. Courses taken at the *Aukstesnioji moykla* (postsecondary vocational schools) last two years.

There are different levels of university study. Level one is referred to as the *Bakalauras* stage, with a bachelor's degree program that lasts up to four years. This includes general theory, specialty theory, and practical subject modules, which can lead to a professional qualification. The second stage is referred to as the *Magistras.* This master's program entails a more in-depth theory and special subject module, as well as interdisciplinary courses. These studies can last up to three years with a submission of a thesis required. The third stage, *Daktaras,* is a doctoral program that is generally completed in five years, the first three being reserved for coursework. The final stage, *Habilituotas Daktaras,* is considered the highest of academic research qualifications and is awarded to holders of doctoral degrees by institutes of science and research (EuroEducation Net 1996).

Lithuania's leading institute of higher learning is Vilnius University. Other Lithuanian universities include Vytautas Magnus in Kaunas and the new university in Klaipeda. These establishments were founded based on the American model by Lithuanians in the United States. Lithuanian universities differ from their Soviet counterparts in that they are completely self-governing and are guaranteed their independence by law (U.S. Department of State 1998).

Higher education has maintained a significant role in Lithuania's history. The scientists, intelligencia, writers, and authors have always been considered the jewel of Lithuania. The first school of higher education was established in Lithuania in 1539 with help from reformist Abraomas Kulvietis and the approval of Queen Bona. However, religious differences between the Catholics and the Protestants resulted in King Sigismund the Elder closing the doors of the school in 1542.

A Jesuit college was established in the capital city of Vilnius in 1570. The success of this university led to the creation of the University of Vilnius, Alma Mater Vilnensis, in 1579. The history of the University of Vilnius coincides with the history of Lithuania. Until the closing of the university in 1832, the institution was one of the most authoritative institutions of higher learning throughout eastern and central Europe. It was the only source of science education for not only Lithuania but its northern neighbors as well. Lithuania's education and science were concentrated in Kaunas between the two world wars. Many institutions of higher learning were established there; whereas in Polish-occupied Vilnius, the old university was revived and named after King Stephan Bathroy.

Lithuania maintains 15 establishments of higher learning: 6 universities, 7 academies, and 2 institutes. The number of enrolled students reached a record high in 1980, with 17,000 students, although as of 1996 that number decreased to 10,000 students. The prestige of a university degree began to decline when Lithuania declared its independence in 1991. However, in 1996 that idea was reversed and Lithuania witnessed three applicants for each university spot. Despite the difficulties one can face upon acceptance to an institute of higher learning, approximately 40 percent of all secondary graduates continue on to university.

Lithuania joined UNESCO (convention on the recognition of studies, diplomas, and degrees concerning higher education in countries belonging to the European region) in 1994. University studies now cover over 200 specialties. Approximately 7 percent of the state budget is dedicated to education, which enables 75 percent of university education to be subsidized by the government. Lithuania also has educational support through the Lithuanian Open Society founded by American philanthropist, George Soros in 1990. Several scientific research centers

now work on the basis of private initiative or Western foundations (*Education in Lithuania* 2000).

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The educational administration of Lithuania is organized in accordance with Article 26 of the Republic of Lithuania's Law on Education.

> Educational institutions of the Republic of Lithuania shall function according to plans and programs approved by the Ministry of Culture and Education or in coordination with the order established by the Ministry. The contents and methods of teaching must correspond to the given tasks of educational institutions, as well as to the needs of society. At educational institutions, it shall be prohibited to propagandize hostility (racial, ethnic, religious, or social) or superiority, which runs counter to the universally recognized principles of international law and humanism.
>
> Schools of general education of ethnic minorities may be supplemented by the elements of ethnic culture.
>
> At secondary schools of general education, languages other than Lithuanian shall be taught depending on the preference of the parents and the capacity of the school.
>
> Militaristic subjects shall not be taught at a school of general education.

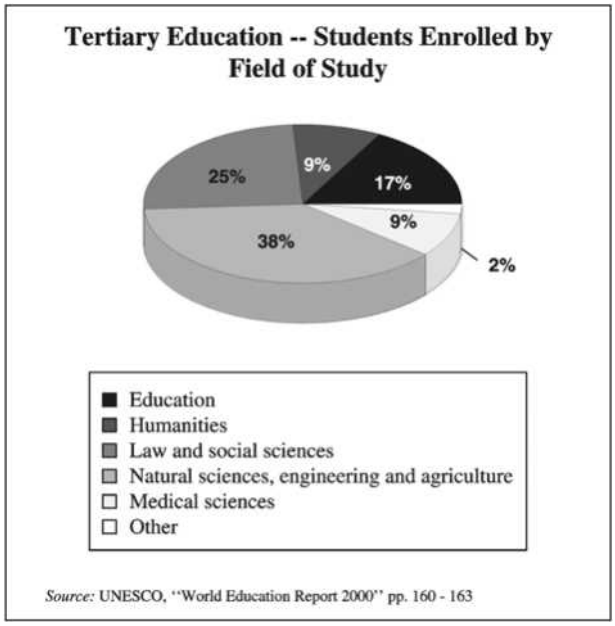
Article 28 of the Law on Education details the regulations of the activities of educational institutions:

> In their activities, State educational institutions shall guide their activities in accordance with the regulations of the institution as approved by their local government. These regulations shall contradict neither the other laws of the Republic of Lithuania nor the general regulations of the activities of educational institutions.
>
> The regulations of private educational institutions shall be coordinated in accordance with the order established by the Ministry of Culture and Education and shall be registered with local governments.

Public schools of general education, vocational schools, and colleges of the Republic of Lithuania are free of cost. Institutions of education that are maintained or assisted by the state, in addition to public preschool institutions (with the exception of childcare institutions) are partly funded by the Lithuanian government. The payment for private educational facilities is arranged by individual agreements, with the state providing stipends for those students in need of financial aide.

There are three primary sources of educational funds in Lithuania. They are as follows:

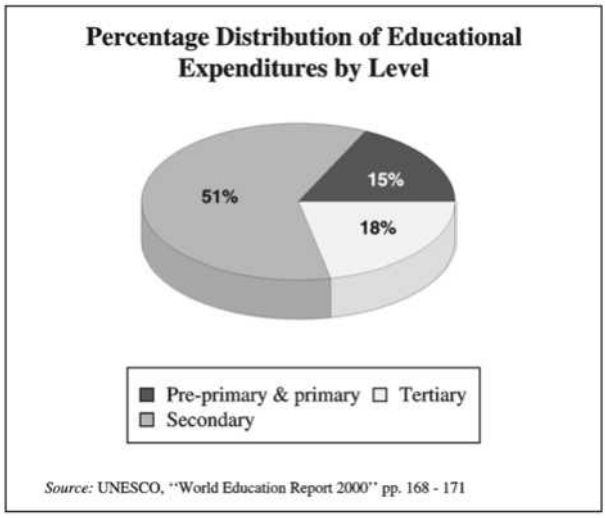
1. Voluntary payments of persons, organizations, and enterprises
2. Income from the activities of the fund
3. Funds and materials donated by foreign state organizations and citizens, as well as by international institutions (NAFSA 1991).



Lithuania continues to maintain some aspects of the Soviet system, with the separation of research and teaching functions in education. Research is primarily conducted at the 17 institutes of the Academy of Sciences. Activity remains weak in the humanities and social sciences but excels in other areas, with the most notable research conducted in the study of Baltic linguistics. Studies in probability theory at Vilnius University are internationally known with other notable advances made in semiconductor physics and chemistry, biochemistry, and genetics. Lithuania is most notably recognized throughout the world because of its contributions to the area of biotechnology (U.S. Department of State 1998).

NONFORMAL EDUCATION

Distance learning and adult education serve as Lithuania's most prominent forms of nonformal education. Lithuania's distance higher education consists of programs that are conducted by way of transmitting specially prepared learning materials for the student through the postal service. The Ministry of Education also has licensed 90 institutions to offer nonformal studies. There are nearly 700 institutions listed in the Register of the Ministry of Economy for adults. Sixty-three state-owned, 288 joint-stock companies, 271 individual companies, and 46 foreign investment companies comprise these institutions. Additionally, the universities have set up special departments to help nontraditional students with training and retraining in the fields of pedagogy, psychology, and special education (EuroEducation Net 1996).



TEACHING PROFESSION

Preprimary and other basic level instructors are trained for three to four years at various pedagogical colleges and universities, including Vilnius Pedagogical University, Klaipeda University, and Siauliai Pedagogical Institute. Secondary school instructors are trained at many of the institutes mentioned, in addition to Vilnius University and Vytautas Magnus University (in Kaunas). Four-year programs are available and admission to such a program is based on a bachelor's degree and at least one year of teaching experience. However, a master's degree guarantees an instructor a position at the secondary level. (EuroEducation Net 1996).

A doctorate is required for anyone wanting to achieve full professor status at an institute of higher learning. A master's is required to begin a career as a lecturer. There are four distinctions of staff in the universities of Lithuania. The lowest teaching position is that of the *Asistentas* (Assistant). A master's degree is required and research activity is preferred to obtain this position. The second type of instructor is known as the *Vyresnysis Asistentas* (Senior Assistant). This senior position of teaching is held without a doctorate and can be occupied for two terms. There is no opportunity to teach master's students in this position and research activity is required. A *docent* (Associated Professor) should hold a *Docentas* (doctorate) or educational award. The highest level of teaching position is known as the *Professorius* (Professor). A person holding this position must obtain the highest scientific degree or highest educational award available. A number of publications are required, in addition to a leading position in a branch of investigation performed at the department of study (*Profile of the Lithuanian Higher Education System* 2000).

The Law on Education has established a six-part set of rights for its educators. According to Article 23, teachers have the right to:

1. Freely choose the manner of organization of teaching activities
2. Improve their qualification and receive a corresponding salary in accordance with the established order
3. Suitable working conditions
4. Yearly prolonged vacations (48 working days)
5. Take part in the self-government of state educational institutions provided that they are not employees of the administration of that institution
6. Join social organizations

In addition to the set of rights a teacher possesses, the educator is also bound by a set of duties. Teachers must:

1. Develop the students' norms of morality and guarantee safe and sound development of their personal abilities
2. Aim to make development programs comprehensive for the pupils
3. Adhere to the principles of pedagogical ethics
4. Participate in activities outside of school in order to further develop the cultural and personal interests of the pupils
5. Improve their qualifications
6. Cooperate with the parents and guardians in settling questions of a child's education (NAFSA 1991)

SUMMARY

As Lithuania regained its independence in 1990, it became the front-runner among post-Soviet states to reform its education system. Vaiva Vebra, the Deputy Minister of Education, stated in December 1999 that much effort had been devoted to transforming the educational system because of the country's belief in the Jeffersonian maxim, ''Education is the anvil upon which democracy is forged.'' She also stated that the key component to successful reform is the introduction of critical thinking into the system. Preparing students for ''independent decision making as adults in a civil society and market based economy'' has become the new goal for the educational system. There are newly written textbooks or textbooks translated from Western sources, as well as ''breakthrough schools'' that are encouraged to ''pull away from the mainstream.''

Economic difficulties have hindered Lithuania's progress. The government was forced to cut educational

spending by 17 percent in 1999, but Vebra maintains that the teachers' commitment to education will enable the momentum of educational reform to persevere, despite the system's lack of funds (''Lithuania in the Vanguard of Education Reform'' 1999).

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—Mara Iutcovich and Mark Iutcovich

LUXEMBOURG

BASIC DATA

Official Country Name:	Grand Duchy of Luxembourg
Region:	Europe
Population:	437,389
Language(s):	Luxembourgian, German, French, English
Literacy Rate:	100%
Academic Year:	September-July
Libraries:	5
Educational Enrollment:	Primary: 28,437 Secondary: 28,796
Educational Enrollment Rate:	Primary: 99% Secondary: 88% Higher: 10%
Teachers:	Primary: 1,844 Secondary: 2,836
Student-Teacher Ratio:	Primary: 15:1 Secondary: 8:1
Female Enrollment Rate:	Secondary: 90% Higher: 7%

HISTORY & BACKGROUND

The Grand Duchy of Luxembourg, bordered by France, Germany, and Belgium in Western Europe, became an independent country in 1890. Although a relatively new nation, Luxembourg has a very ancient history that can be traced back to the time of Julius Caesar when the Romans in 54 and 51 B.C.E defeated the Treveri people, the original inhabitants of modern Luxembourg. The country's history was influenced by the competing needs of the Roman Catholic Church and the ruling dynasties of the Holy Roman Empire and Imperial Germany with those of royal and republican France for the population's souls and land.

Christianity was introduced into Luxembourg in the seventh century B.C.E., when the Roman Catholic Church founded a group of Benedictine monasteries between 633 and 721. The feudal County of Luxembourg was awarded in 963, to Siegfried, a relative of Wigerik, a Palace Count serving Charles the Simple, a member of the Carolingian Dynasty that governed France. For two centuries the descendants of Wigerik and Siegfried of the House of Ardennes, governed the region that would become modern Luxembourg in fealty to Saxon and Salian Holy Roman Emperors. The first dynasty Luxembourg counts became extinct in 1136. The title and lands were awarded to Henry IV of Namur, who founded Luxembourg's second dynasty. With the arrival of political sta-

bility Luxembourg became home to the Benedictine, Cistercian, Dominican, Franciscan, and the Penitents monastic orders and the Knights Templar and the Teutonic Knights.

In the fourteenth century, the Counts of Luxembourg increased the dynasty's international prestige by advantageous political marriages and battlefield heroics as allies of France's kings in territorial and religious wars in Europe and Africa. The feudal alliances paid off with the election of Henry of Luxembourg as Holy Roman Emperor in 1308. Although reigning only five years before succumbing to a fever, Henry represented the highest ideals of feudal Europe's chivalric code. For the next four generations, Henry's male descendants ruled as Kings of Bohemia. Two great-grandsons, Wenceslas and Sigismund, were elected Holy Roman Emperors. Henry's bloodline entered the royal houses of France and Burgundy when his granddaughter Bonne married King John the Good of France. In the sixteenth century the County of Luxembourg was incorporated into the Burgundy inheritance awarded Charles V, King of Spain, Holy Roman Emperor, and Duke of Luxembourg, as the Spanish Netherlands.

During the Middle Ages education in Luxembourg was under the clerical control of the Benedictine Order at Munster Abbey, founded in 1083. Educational authority was temporarily transferred to the suburb of Grund during the Counterreformation period, but was restored to the Roman Catholic Church in the seventeenth century when a Jesuit College was built in Luxembourg in 1603. The Capuchin Fathers came to Luxembourg in 1621 and offered education to garrisoned soldiers. In 1627, the Congregation of Notre Dame from Lorraine founded a chapter in Luxembourg and assumed responsibility for the education of girls. The Sisters of Notre Dame continue to staff and administer Luxembourg's private girls schools.

From the seventeenth to the nineteenth centuries, Luxembourg was fought over in dynastic wars by either the French Bourbon or Bonaparte dynasties with the Austrian Habsburgs. French King Louis XIV won Luxembourg on the battlefield and governed it until 1713, when the Treaty of Utrecht awarded Luxembourg to the Habsburgs as part of the Austrian Netherlands. During the reign of Napoleon Bonaparte, Luxembourg was once again incorporated into France. The Congress of Vienna in 1815 ceded the Duchy of Luxembourg in personal union to the King of the Netherlands, the head of the House of Nassau-Orange. The United Netherlands of Catholics and Calvinists barely lasted fifteen years before Catholic Flemish-speaking and Walloon (French-speaking) citizens in the southern part of the country rebelled against the Calvinist Dutch in the north, gaining independence in 1830 as the new country of Belgium. By treaty in 1830, Luxembourg was split into a Walloon section that merged with modern Belgium, while the predominately German-speaking section remained a sovereign grand duchy in personal union with the King of the Netherlands, but a member state within German economic and political organizations.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Luxembourg became an independent grand duchy in 1890 when the male line of the royal house of Nassau-Orange came to an end with the death Dutch King William III, leaving only his daughter, Wilhelmina, to succeed him. In accordance with Article Three of the Luxembourg Constitution, the Crown was hereditary in the Nassau Family in the male line and excluded female descent. The Crown of the Grand Duchy of Luxembourg passed to the senior branch of the Nassau family, Adolphe of Nassau-Weilbourg, who became Grand Duke Adolphe I of Luxembourg. Ironically, the male line of the Weilbourg branch of the Nassau family ended in 1912, with the death of Grand Duke William IV. Anticipating this political crisis, the Constitution of Luxembourg was changed in 1907, to permit one of William IV's six daughters to succeed him.

The Grand Duchy of Luxembourg is a constitutional monarchy with executive authority placed in the hands of the Grand Duke Henri since 2000, ensuring the laws of the nation are carried into effect and order maintained. Legislative power is shared between the Grand Duke and an elected Chamber of Deputies. All legislation must be signed by the Grand Duke to become law. Judicial authority is invested in the courts of law. The Constitution of Luxembourg guarantees the rights of citizens. Among these public rights as stated in Article Twenty-Three of the Constitution is the right that education be compulsory and provided free of charge by the state. The Constitution further stipulates that the state must organize free vocational training courses, secondary educational establishments, and the necessary courses in higher education. The law requires the state to finance education and share supervisory authority with the communes (municipalities). The Government is responsible for regulating all educational matters and creating a fund to educate the exceptionally gifted. Each Luxembourger is free to pursue studies in the Grand Duchy or abroad and to attend universities of choice subject to the provisions of the law relating to admission to employment and career choice.

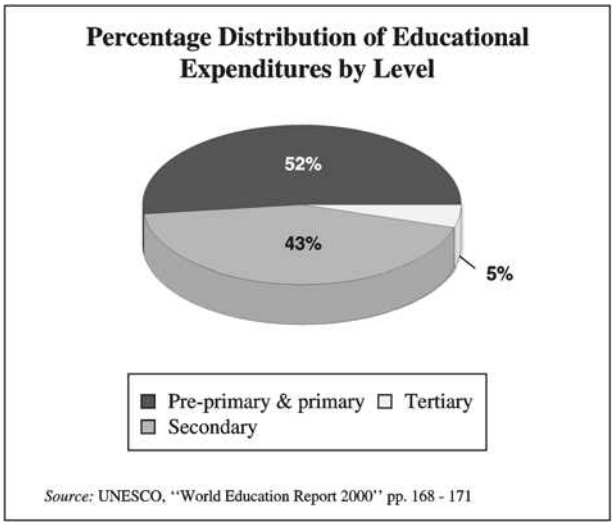
EDUCATIONAL SYSTEM—OVERVIEW

The Luxembourg State organizes and controls the educational system. Compulsory education covers a total

of eleven years, two years of preprimary education, six years of primary education, and three years of secondary education. Public education in Luxembourg is free. The costs are paid by the public budget making education one of the largest expenditures in the state budget. Municipalities pay for textbooks and equipment at the primary level. By the Act of 14 July 1986, school children are now paid an allowance. School transport is free. Financial assistance and scholarships are granted to students in higher education based on parental income and academic success.

Private schools are usually Catholic. There are few private schools at the primary and post-primary education levels. They are strictly regulated by the Ministry of Education, which must approve a private school's charter, curricula, graduation certificates, teaching methods, the professional qualifications of the private school's director and staff, and the overall educational environment. Private schools are free to select their director and staff and to determine their fee structure.

Luxembourg is a multilingual nation with three official languages: French, German, and Letzeburgesch (Luxemburgish). The cabinet level Ministry of Education makes the important decisions regarding education in the Grand Duchy. The curricula for the different types of schools are decided by the Ministry, as are the budgets for education and educational institutions, and the management and the survey of all secondary schools. Financial responsibility for preprimary and primary education is divided between the municipal governments and the national government. Vocational education, private education, school inspections, textbook selection, and curricula are the exclusive domain of the Ministry of Education. The *Service de Coordination de la Recherche et de l'Innovation Pédagogiques et Technologiques* (SCRIPT), a department within the Ministry of Education, has jurisdiction over research and innovation in the various teaching fields, including the integration of information and communication technologies in teaching and analysis and evaluation of the entire educational system in Luxembourg. The *Centre de Psychologie et d'Orientation Scolaires* (CPOS) has the obligation to provide students and parents with information about the school system in Luxembourg, career and professional options, and psycho-pedagogic guidance. This department informs students about higher education choices within Luxembourg and abroad, guides graduates into the work place, provides financial assistance, and works with public and private institutions as students make the transition from school to the work place. Public research is regulated by the Act of March 9, 1987, which organizes and encourages technological development and the transfer of technology between public and private sectors through one of three public centers, *Centre de Recherché Publics (CRP): Centre Universitaire de Luxembourg* for literature, history, natural sciences, mathematics, and physics, the CRP *''Henri Tudor,'' Institut Supérieur de Technologie* for automation in industrial production, and the *CRP Santé (Health), Laboratoire National de Santé* for health research. The *Recherché and Développement Department* within the Ministry of Education coordinates the activities of the CRPs and offers financial assistance to people undertaking research. Additional departments within the Ministry of Education include Administrative Organization and Staff, Preschool Education and Primary Education, Secondary Education, Technical Secondary Education, Vocational Training, Higher Education, Adult Training, Special Education, Statistics, Publications, Budget, School Buildings, School Sports, the Department of European and International Affairs, the Eurydice Information Unit, and Scientific research.



Educational responsibility for preschool and primary school education rests with the municipalities and is confined to the financial and administrative management of the schools. Local political authority for education is delegated to the *Commission Scolaire,* which includes the mayor or his delegate, a church representative, and three to five members from the community chosen by the town council.

PREPRIMARY & PRIMARY EDUCATION

Preprimary education is compulsory at the age of four by the Grand Ducal Regulation of September 2, 1992. The Ministry of Education, which provides two-thirds of the financial expenses, controls preprimary schools. Administration and maintenance of preprimary institutions is the responsibility of the municipality. No more than one percent of preprimary schools are private and those that are, are usually attached to a private prima-

ry school. Two years of preprimary school is compulsory, but no formal teaching is given to the children. Preprimary schooling fosters physical, intellectual, and social development of the children and prepares the children for entrance into a primary school. For the academic years 1998-1999, there were 10,349 students enrolled in Luxembourg's public preprimary schools. Of these, 62.5 percent were native Luxembourg citizens. The rest were Portuguese (20.2 percent), Yugoslavian (3.8 percent), Italian (3 percent), French (2.9 percent), Belgian (2 percent), and German (1 percent), with the remaining 4.6 percent distributed among a variety of nationalities. There were 654 students enrolled in private preprimary institutions in 1998-1999.

Primary schooling is mandated by the law of August 10, 1912, and covers a period of six years. Fees are charged only by private primary schools. Primary curricula are determined by the Ministry of Education and standardized throughout the country. Students are taught reading, writing, arithmetic, artistic and physical activities, local environment, development of social behavior, and computer sciences. All three national languages are used for instructional purposes. Letzeburgesch is usually the language of the home and is the one first used in primary school. German becomes the second teaching language for all subjects in the primary school with French introduced during the second primary year. All three languages are in common use in primary school instruction. Students are given thirty lessons per week. Promotion is teacher judged based on grades, homework, and oral participation. Special classes are offered for students with unique learning needs and for children of immigrants. The public school student population at the primary grade levels for the years 1998-1999, totaled 29,533 pupils of whom 65 percent were Luxembourgers, 18.6 percent Portuguese, 3.2 percent Yugoslavian, 3.2 percent Italian, 2.5 percent French, 1.7 percent Belgian, 1.2 percent German, and 4.7 percent from among other nationalities. The number of Luxembourg students enrolled in private Catholic and private non-Catholic schools was 2,096.

SECONDARY EDUCATION

Students are required to attend secondary school for at least three years after completing six years of primary education. This covers the years when a student is twelve to fifteen years of age. There are two secondary education tracks available for vocational education and a separate track for university entrance. The *régime préparatoire* is designed to provide a broader qualification for young people interested in a technical secondary education who are academically weak, but could become eligible for further training at a technical secondary school or vocational training center. The second track is *Technical Secondary Education* offered at fifteen schools called *lycée techniques,* in specialized programs of study that include hotel catering and management and agriculture. The first stage (*cycle inférieur*) lasts three years and completes the mandatory state requirement of three years of secondary education. The curriculum includes languages, mathematics, natural sciences, human sciences, artistic, and musical and physical education. Qualified graduates of the technical secondary education can pursue additional postsecondary education at intermediate and upper stages in either a vocational section offering an apprenticeship, technician's training, or a technical section.

At the apprenticeship vocational section students study one program from among agriculture, arts and crafts, commerce, tourism and hotel catering, industry, and domestic sciences. Training at this level is a partnership between the school and a business with the student workweek divided between an on-the-job apprenticeship while simultaneously learning theoretical principles in the classroom. This program of study can last from two to four years with graduates earning a *Certificat d'Initiation Technique et Professionnelle* (CITP). The Technician Training Program is designed to educate students for highly skilled jobs in industry and it may also last from two to four years. Graduates receive a *diplome de technicien* (technical degree at the end of the secondary education program), which grants either a professional career or entrance into higher education. Programs of study include administration and commerce, agriculture, electronics, mechanics, art and crafts, chemistry, building science, hotel catering and tourism, and computer science. The Technical Section lasts four years and graduates earn a technical secondary completion diploma. This course of study centers on theoretical and general subjects. Graduates can either enter a university or are qualified for entry into the job market in the fields of administration, commerce and business management, ancillary medical and social studies, or general technology. Enrolled students in Secondary Technical Schools are more than double the number of students in college preparatory programs. For the academic years 1998-1999, 20,763 students were enrolled at 21 Secondary Technical Schools ethnically distributed among Luxembourgers (63.3 percent), Portuguese (22.8 percent), Italians (4.1 percent), French (1.5 percent), Belgians (0.8 percent), Germans (0.8 percent), Yugoslavians (0.4 percent), and the remaining 4.4 percent distributed among other nationalities. Three Catholic private schools and four non-Catholic private schools enrolled 2,742 students in 1998-1999.

General Secondary Education was reorganized in 1968 by *lycées* (general secondary schools) and is for students planning to attend a university. The lower stage covers three years of education and completes the state requirement for secondary education. There is an upper

stage divided into two, two-year segments. The first year is called the *classe d'orientation,* which allows students to adjust to secondary education environment. At the end of the first year students must select from either the classical education program that mandates Latin as a third language or the modern education program with English as the third language. The basic program is the same and a year later students in the classical program must also learn English. At the upper stage students must again select from two programs of study, literary or scientific. Mathematical difficulty is the primary distinction between the two programs. Specialization comes in the final two years and includes two optional courses of study in either languages and human sciences, human and social sciences, fine arts and crafts, music for the literary program and mathematics and physics, natural sciences and mathematics, or economics and mathematics for the scientific orientation. Graduates earn the *diplome de fin d'études secondaires* (high school diploma) and are qualified for university entrance provided they pass the final examination. Students enrolled in nine General Secondary Schools and three schools exclusively for the lower stages of General Secondary Education with college-based curricula totaled 9,471 students of whom 87.4 percent were Luxembourgers, 4.5 percent Portuguese, 1.7 percent Italian, 1.2 percent Belgian, 1.2 percent German, 1.1 percent French, 0.4 percent Yugoslavian, and the remaining 2.6 percent were distributed among other nationalities. The number of students enrolled in two private Catholic General Secondary Schools earning a degree leading to a university education was 2,948.

HIGHER EDUCATION

A recent act for higher education reform has three main objectives, to qualify educational institutions within Luxembourg to teach higher education, designate greater autonomy to the *Centre Universitaire* and the *Institut Supérieur de Technologie* for administrative and financial management and in pedagogy, and the right of the *Centre Universitaire* to organize final university degrees in cooperation with foreign universities. The reforms do not create a complete university within Luxembourg but work for closer integration with university systems in other countries.

Higher education options in Luxembourg include the (1) *Cours Universitaires* offered at the *Centre Universitaire* for the first year of university study, (2) the *Institut Universitaire International* which organizes seminars at postgraduate levels, (3) an accelerated two-year course of study called the *cycle court d'études supérieur engestion,* (4) a four-year course for industrial engineers, (5) the training of preprimary and primary school teachers, (6) the training for graduated educators for secondary levels, and (7) higher technical training courses at *lycées techniques* (technical secondary schools).

Enrollment at the *Centre Universitaire de Luxembourg* is a one-year program of study in law and economics, arts and humanities, or the sciences. Successful graduates are awarded a certificate of graduation, which qualifies them for admission to a second year of studies at universities in Austria, Belgium, Great Britain, Germany, or France. Third-year students of law must go to a Belgian university. The *Institut Universitaire International* offers post-graduate degrees and diplomas in law, political economy, or political science. The *Cycle Court d'études Supérieures en Gestion* enrolls graduates from the *Centre Universitaire* who plan to enter private firms in banking, insurance, and industry. The curriculum specializes in computer science applied to economics and business management and administration. The *Institut Supérieur de Technologie* offers programs of study in mechanics, electrical engineering, civil engineering, and computer science. The *Institut Supérieur d'études et de Recherches Pédagogiques* is a teacher's college for primary and elementary school teachers. The three-year program of study is centered on practical study and theory. The *Institut d'études Educatives et Sociales* trains educators for higher education, vocational training, and the instruction of handicapped students. It is a three-year program of study. The *Higher Technicien Training* offers programs of study in secretarial studies, accounting and business management, marketing and international commerce, and creating motion pictures.

NONFORMAL EDUCATION

Adult education in Luxembourg is primarily vocational and is supervised by the Ministry of Education for adult workers who desire to increase knowledge or to learn the new technology in their field of specialty. Vocational education allows both unemployed and employed residents the opportunity to earn a diploma in secondary education. Most courses are taught in the evening. Specialized adult education courses focus on technology, economics, the fine arts, and handicrafts.

SUMMARY

Education is Luxembourg's number one priority. The largest expenditure in the national budget is for education. Luxembourg's emphasis on education directs students to a variety of careers with more students graduating from Secondary Technical Schools than from General Secondary Schools. Students seeking higher education are subsidized by the national government, which regulates most aspects of education including curricula, teacher qualifications, salaries, school budgets, and textbook selection. The Ministry of Education strictly governs private education, except for the selection of headmaster and teachers and the types of fees charged. Luxembourg is a small country. The country's future de-

pends on a well-educated population to survive. Luxembourg's population, regardless of nationality, is educationally thriving in a technology and information driven era.

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—William A. Paquette

MACAU

BASIC DATA

Official Country Name:	Macau
Region:	East & South Asia
Population:	445,594
Language(s):	Portuguese, Chinese (Cantonese)
Literacy Rate:	90%

Many of Macau's earliest schools were put in place by the Portuguese government, which gained control of the East Asian territory from China in 1557. When Hong Kong was established in 1842, Macau's port became less valuable to traders, and as its economic benefit to Portugal declined, the territory was left to its own devices. Control of Macau reverted from Portugal back to China in 1999 based on a 1987 agreement between both governments.

As a result, the educational system began a series of revisions in 1991. Along with increasing teacher training, improving the existing infrastructure, and building new schools, the country also worked on expanding tertiary education and consolidating the fragmented public education system that had developed there up until the early 1990s.

Because no centralized educational system had ever been put in place, which was partly due to the minimal resources committed to Macau by its colonial leaders, churches, social service groups, businesses, and individuals had started opening schools of their own. The result was a highly decentralized system of education predominated by private schools. Depending on who ran the schools, either English, Portuguese, or Chinese was the language of instruction.

Rather than attempt to dismantle these schools in an effort to create a centralized public education system, the Chinese government decided to offer funding to private institutions willing to provide free education to students. Preprimary and primary students attending participating private institutions were able to do so for free starting in 1995. By 1998, free education was offered at 80 percent of private schools. That year, roughly 87 percent of all schools in Macau used Chinese as the language of instruction (13 percent of these schools taught the Portuguese language as part of the standard curriculum), over 8 percent of the schools used English as the language of instruction, and approximately 4 percent used Portuguese.

Education levels in Macau remain fairly low with roughly 25 percent of the population holding a secondary certificate and under 5 percent attending college. The academic year in Macau runs from September to June. Students enter primary school at the age of six. After the successful completion of six years of study, students who choose to attend secondary school have two options. Some students enter a five-year secondary program that grants them entrance to the Polytechnic Institute, founded in 1991 in conjunction with the University of Macau to offer training in technology, social work, hospitality management, commerce, and tourism. Other students follow a six-year program that allows graduates who pass an entrance examination to enroll at the University of Macau, which offers bachelor's and master's degrees in various majors. When the university was formally established in 1991, it replaced the University of East Asia, which had been founded a decade earlier by the Macau government to offer classes to overflow Hong Kong students. Other institutions of higher education include the Inter-University Institute of Macau, run by the Portuguese Catholic University and the Macau diocese, and the International Open University of Asia (Macau), which offers distance education.

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—AnnaMarie L. Sheldon

MACEDONIA

BASIC DATA

Official Country Name:	The Former Yugoslav Republic of Macedonia
Region:	Europe
Population:	2,041,467
Language(s):	Macedonian, Albanian, Turkish, Serbo-Croatian
Literacy Rate:	NA
Academic Year:	September-June
Number of Primary Schools:	1,086
Compulsory Schooling:	8 years
Public Expenditure on Education:	5.1%
Foreign Students in National Universities:	313
Libraries:	122
Educational Enrollment:	Primary: 260,917 Secondary: 83,746 Higher: 30,754
Educational Enrollment Rate:	Primary: 99% Secondary: 63% Higher: 20%
Teachers:	Primary: 13,594 Secondary: 5,136 Higher: 2,462
Student-Teacher Ratio:	Primary: 19:1 Secondary: 17:1
Female Enrollment Rate:	Primary: 98% Secondary: 62% Higher: 22%

HISTORY & BACKGROUND

The contemporary country of the Former Yugoslav Republic of Macedonia (FYROM), referred to here as Macedonia, is a small, democratic nation nestled on the Balkan peninsula with Albania to the west, Bulgaria to the east, Greece to the south, and Yugoslavia (Kosovo and Serbia) to the north. In terms of land mass, with 25,333 square kilometers (9,781 square miles), Macedonia is roughly the size of the American state of Vermont. Macedonia, which is a multi-party democracy, became a republic in 1991 when it broke off from the federation of states that had comprised Yugoslavia after World War II.

Macedonia (*Makedonija* in the slavic Macedonian language), has a population of 2,041,467 people, with a population growth rate of 0.04 percent. The country's rural population is about 38 percent. Macedonia is comprised of 66.6 percent ethnic Macedonians, 22.7 percent ethnic Albanians, 4.0 percent ethnic Turks, 2.2 percent Romanys, 2.1 percent Serbs, and 2.4 percent other minorities such as Vlachs and Bosnians. However, any census taken to date remains disputed by all parties.

The percentage of Gross National Product (GNP) that is spent on education is approximately 5.1 percent. The literacy rate in Macedonia is somewhat different for males and females, with 94 percent of males and 84 percent of females aged 10 and older with the ability to read and write.

Geographic Macedonia, to be distinguished from today's nation of Macedonia (FYROM), is the entire Balkan region stretching northwest to northeast from the *Sâr* mountains to the *Osogoveska* mountains to the *Rila* mountains, over to the eastern *Pirin* and *Rhodope* mountains. Across to the southwest, geographic Macedonia is cupped by the Pindus mountains, and to the south is Mount Olympus, Greece, and the Aegean Sea. There is, however, little agreement as to the precise borders of geographic Macedonia.

Macedonia has a complicated history in part because it has long been the crossroads of Eastern Europe. Ancient invaders traversed Asia Minor and Europe, first bringing the Vlachs (descendants of the Romanic Thracians) to mix with Greeks and smaller indigenous tribes. The Albanians inside Macedonia's current western border could be the descendants of the early Illyrians and possibly also the Thracians. In Classical times, Macedonia was permeated by Greek influences, although total

control of Macedonia by Greece was inhibited by the harsh geographic and climatic differences between the two regions. The Turks ruled Macedonia for 500 years during the Ottoman Empire. Later, rule over Macedonia changed hands among the varied states of Serbia, Bulgaria, and Greece. When the Ottoman Empire fell in the early twentieth century, Macedonia came under Serbian rule.

After World War I, geographic Macedonia was divided among Greece, Serbia, and Bulgaria. Macedonians in what had become Greek territory (Aegean Macedonia) were penalized for speaking Macedonian and many were expelled. During World War II, Yugoslavia disintegrated into civil war. Bulgaria regained portions of *Vardar* Macedonia, eastern Aegean Macedonia, and a small part of western Aegean Macedonia. Following WWII, Josip Broz Tito gained power in Yugoslavia and incorporated the remaining Macedonian territory into Yugoslavia. Thus, by the end of WWII, several separate republics had been incorporated into Yugoslavia; Macedonia was the southernmost of these republics.

The Yugoslav government began developing a system of quality, formal education that was similar to systems found in western Europe, but it also had some aspects similar to systems in the Soviet bloc countries, such as required courses in Marxism and National Defense. By the end of the twentieth century, conflict in Kosovo and Albanian terrorist activity heightened tensions between Macedonians and Albanians inside Macedonia.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The constitutional provisions relating to education are found in Macedonia's Constitution of 1994. The Constitution includes systemic laws on primary, secondary, and higher education. The provisions of the Constitution and the law have been implemented through separate bylaws and other ministerial acts executing the laws. For example, for primary school, one such act is the document defining the content and organization of primary education, adopted by the Pedagogical Council of the Republic of Macedonia. The decision of what to teach at schools is shared between lower level governmental agencies and supervisory groups in which teachers from schools and universities participate.

Article 48, clause 4 of the Constitution of the Republic of Macedonia regulates the education of ethnic minorities. Members of Macedonia's various ethnic nationalities have the right to instruction in their language throughout primary and secondary education, as determined by law. In schools where education is carried out in the language of a nationality, the Macedonian language is also studied.

Macedonian is the language of education in 803 primary schools with 182,465 pupils; Albanian is in 281 primary schools with 71,490 pupils; Turkish is in 54 schools with 5,491 pupils; and Serbian is in 14 schools with 751 pupils. Recent legislation provides for the Vlach and Romany languages to be taught in schools as well.

Macedonian language instruction is also delivered in 89 secondary schools with 67,202 pupils, whereas Albanian instruction is in 18 schools with 7,218 pupils, while Turkish instruction occurs in 4 schools with 383 pupils. Recent legislation also allows for Serbian secondary schools but, due to low numbers of pupils, no such schools were opened as of 2000.

Main laws governing higher education include the Law on Vocational Education, enacted January 16, 1985, which regulates universities, colleges, and academies; and the Law on the University of March 1, 1994, which deals only with universities. The administrative structure of higher education is overseen by the Ministry of Education and Physical Culture (MEPC).

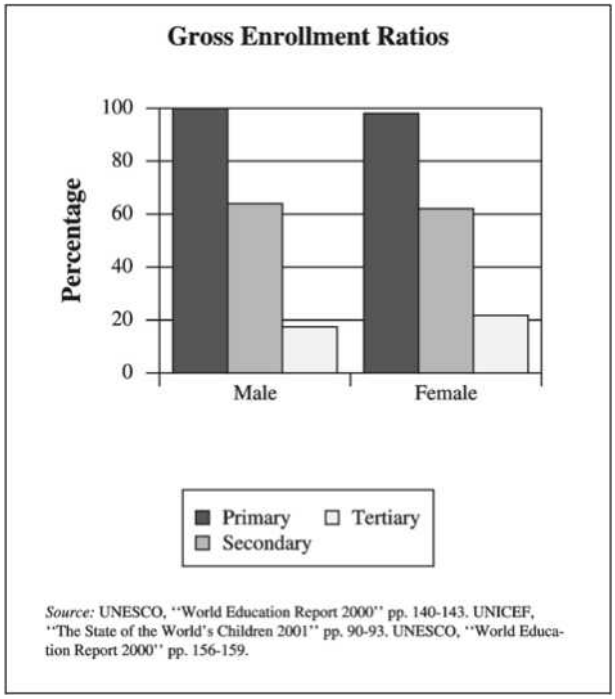
EDUCATIONAL SYSTEM—OVERVIEW

Macedonia's current educational system was developed during the years in which Macedonia was a member state of Yugoslavia; it is a hybrid of systems common to most of western Europe. Textbooks and other aspects of instruction that reflect the years of Soviet influence are being phased out. Education is compulsory through eighth grade. In 1994 there were 1,067 elementary schools in Macedonia, with a total of 7,175 classes. Of those, 718 were ethnic Macedonian schools, attended by 188,051 ethnic Macedonian pupils. The 279 ethnic Albanian schools taught 72,121 ethnic Albanian pupils, and the remaining 55 elementary schools were attended by 5,342 ethnic Turkish children. The teachers for these schools were composed of 8,990 ethnic Macedonians, 3,571 ethnic Albanians, and 288 ethnic Turks.

The grading system in secondary school is on a five-point scale, with 5 as ''excellent.'' In higher education, the grading system generally used for marking is on a scale of 5 through 10, with 6 as the minimum passing mark and 5 as the lowest mark on the scale.

About 70 percent of Macedonia's population completes secondary or higher (tertiary) education. In 1994 there were 97 high schools in Macedonia, with a total of 2,296 classes. Of these, 90 were ethnic Macedonian, with 2,218 classes; 5 were ethnic Albanian, with 72 classes; and two were ethnic Turkish, with 6 classes. There were 67,975 Macedonian, 2,535 Albanian, and 186 Turkish high school students. Of the high school teachers, 4,060 were ethnic Macedonians, 148 were ethnic Albanians, and 19 were ethnic Turks.

In the Republic of Macedonia, there are two major universities: the Sts. Cyril and Methodius University in



Source: UNESCO, "World Education Report 2000" pp. 140-143. UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

Skopje and the St. Clement of Ohrid University in Bitola. Also, after years of protests by ethnic Albanians and much political and legal wrangling, a third university in Tetovo opened in 2001 for ethnic Albanian students and Albanian language instruction. While it remains a political flashpoint for ethnic conflict, it is now an accredited institution serving several thousand students. The Pedagogical Faculty trains teachers in the minority languages at all of Macedonia's universities. The two major universities employ 1,192 lecturers and 1,207 assistants. Sts. Cyril and Methodius University in Skopje, which was founded in 1949, and other institutes of higher learning provide schooling for students seeking degrees of bachelor of arts and higher.

Some private schools exist at the primary and secondary levels. The University of Tetovo is the only private institution of higher education in the Republic of Macedonia, and its ability to garner state funding remains to be seen, for reasons of political strife. The new Law on Higher Education provides the possibility to establish other private and public higher education institutions and prescribes the conditions for establishing, performing, and ending their activity.

PREPRIMARY & PRIMARY EDUCATION

Preschool starts at age three and lasts until age five when children typically enter into kindergarten. Compulsory education in Macedonia begins at age 7 and ends at age 16. The structure of the primary school system is twofold. Children ages 7 to 11 attend lower primary school, *osnovno uciliŝte.* Next, they enter the basic second stage and attend the upper primary school from ages 11 to 15. Instruction from primary school onward covers the customary foundational subjects, including mathematics, literature, native language, some foreign language instruction (usually English), history, and science.

SECONDARY EDUCATION

Secondary school education is provided by high schools, technical and other vocational schools, and art secondary schools. Education at a *Gimnazija* lasts four years, from ages 15 to 19. In the second half of the fourth year, pupils are supposed to write a project (*maturska tema*), defend it, and pass a written examination in their mother tongue on literature. The final examination is the *Matura* and, after completing and passing all of the items above, students will receive their diploma.

The technical schools (*tehnicki uciliŝte*) and other vocational schools (*uciliŝte za zanimanja*) train technicians for different professions—medical, financial and others. Students who attend technical schools usually attend from ages 15 to 18, whereas students who attend vocational or art schools (*umetnicko uciliŝte*) attend from ages 15 to 19. In some schools, there are programs of shorter duration (from several months to three years of training) for different occupations and crafts. Entry to higher education is on the basis of the Secondary School Diploma, the *Matura,* plus an entrance examination.

HIGHER EDUCATION

Higher education study lasts from two to six years. Courses for vocational training on a college level (*viŝhe obrazovanie*) are provided and last for two years, whereas courses offered at schools ranging between four and six years are in the domain of higher education (*visoko obrazovanie*.

There are two major universities in the Republic of Macedonia: Sts. Cyril and Methodius University in Skopje and the St. Clement of Ohrid University in Bitola. The Sts. Cyril and Methodius University consists of 23 schools, whereas the St. Clement of Ohrid University has 4 constituent schools and 2 colleges of further education. The third, and newest institution of higher learning, the controversial University of Tetovo, will educate students in two general branches—teacher education and public administration.

Three institutions in the Republic of Macedonia are devoted to scientific work: the Macedonian Academy of Sciences and Arts, the Sts. Cyril and Methodius University in Skopje, and St. Clement of Ohrid University in Bitola. The Macedonian Academy of Sciences and Arts, established in 1967, is the highest scholarly institution in

the country. The scientific work of the Academy is done in its two departments: the Genetic Engineering and Biotechnology Research Center and the Energy and Computer Studies Research Center. The institutes of the university are engaged in various scholarly and research activities in the fields of the humanities, sciences, medicine, technical engineering, and agriculture. There are, in addition, 14 independent scientific and research institutions employing 207 specialists and researchers.

Higher education is provided by colleges and pedagogical academies offering two-year courses, whereas university faculties (*univerzitet*) and institutes offer four to six-year courses in a range of disciplines. Upon successful completion of higher education courses at faculties/institutes, students are awarded a diploma with professional titles (e.g., engineer, lawyer, or teacher at the lower (college) level; graduate engineer, graduate lawyer, or graduate teacher at the higher (faculty/institute) level). The exact duration of studies leading to higher level diplomas depends on the type of faculty. The financing mechanisms of higher education are under revision.

The Ministry of Education and Physical Culture (MEPC) is responsible for formal recognition of studies completed and credentials awarded in foreign countries. At MEPC questions relating to the recognition of foreign credentials and studies in higher education are addressed.

A university represents the ultimate autonomous higher education, scientific and artistic institution. It is composed of schools, art schools, colleges of further education, and scientific institutes. A school represents a higher education institution conducting higher education activities, scientific research, and highly skilled labor in one or several related branches of study or expertise. Schools and art schools also engage in higher education activities in the shape of primary degree courses lasting between 4 to 6 years and postgraduate courses up to the doctorate level, as well as in scientific research and artistic work.

A college of further education represents a higher education institution conducting higher education in specific branches of study and highly skilled activity in one or several branches of expertise. Colleges of further education are engaged in providing primary degree courses lasting between two and four years, with study courses leading to higher/graduate diplomas and applied studies.

In addition to the elements of its admission policy, each university relies on provisions contained within the Directed Education Act. There are standards and criteria related to the admission of students, in coordination with its constituent schools. This also applies to preparing and publicizing the Advertised Announcement on the Admission of Students (AAAS) and other acts regulating this issue. The number of new students is determined by the MEPC through its own act, based on proposals submitted by schools and the university. Since the late 1990s, the number of students has been divided into two categories: students financed by the state and students who pay part of their tuition fee. The scope of both categories is limited with regards to every constituent school or department. These limits are also publicized within the AAAS.

The basic requirements for the admission of candidates to the schools of the university are results obtained at the entrance examination and academic achievements (covering secondary education). The ratio between these two factors amounts to 70 percent (entrance examination results) against 30 percent (marks obtained during secondary education).

As far as academic achievement throughout secondary education is concerned (carrying a maximum of 30 points), they represent the arithmetic mean of grade results obtained during all four years of education. Due to the specific natures of study courses offered by a higher education institution, it is possible to establish a separate evaluation procedure in case of relevant subjects. In order to increase quality standards related to studying, the minimum threshold of 60 obtained points has been introduced to ensure admission to higher education institutions.

Foreign students are not required to complete the entrance examination in order to be admitted to universities (except in case of the School of Architecture, the Colleges of Education, the School of Physical Culture, and the Art Schools). There are no quotas restricting their admission, and their application must be submitted during the sessions outlined within the Advertised Announcement on the Admission of Students into the first year of studies.

There are mechanisms in the higher education system to monitor and evaluate the knowledge of students through internal assessment conducted by a teacher or an examination commission. This assessment of students is based on their overall performance throughout the year and on results achieved at the examinations. Students achieving higher results in their studies are enabled to complete their education in a shorter period of time than the scheduled duration of a full-time study course and to obtain higher education for another professional profile through parallel studies.

The entrance examination consists of two components, one of them being a subject-based examination corresponding to the selected course of studies. Depending on the latter, the candidate may be given the right to choose out of two or more subjects while the other represents an examination of general education contents, in-

cluding questions related to Macedonian language, literature, history, the social system, and music. These components are compulsory for each school and are based on the same program.

Postgraduate study courses are organized as specialist studies in the field of medicine, which may last up to 4 years, and as Master's degree study programs, which last 2 years. The duration of postgraduate study courses varies from one year of studies leading to a higher/graduate diploma to two years for a Master's degree.

A doctorate degree is granted upon successful defense of a scientific work. After a Master's degree has been obtained, the law on higher education sets forth the introduction of Doctorate studies, in addition to primary degree courses and postgraduate programs, as a way to obtain a Doctoral degree. The right to admission, (i.e., the registering of a Doctoral dissertation), may be granted to an individual in possession of a Master's degree or a higher/graduate diploma in medicine, provided the Doctoral candidate has publicly defended a thesis at the Master's level.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The educational system and its administration of Macedonia is centralized. The funds to conduct the basic activity in primary, secondary, and higher education are provided through the budget of the Republic of Macedonia. Each higher education institution individually determines the required amount of funds in conformity with its annual program and then submits this to the Ministry of Education and Physical Culture for approval. Higher education institutions then receive one-twelfth of their allocation each month from the Ministry of Education and Physical Culture in order to implement their activity. These institutions then disburse these funds independently, based upon their internal by-laws.

NONFORMAL EDUCATION

There is a well-developed system of education for adults where they may complete their education and acquire special skills. Various institutions also organize a large number of courses, ranging from information science and computer science to the study of foreign languages. Special educational courses have also been organized in the fields of management and business. The Workers University (*Rabutniski Univerzitet*) offers a wide variety of courses for additional education. It does not award degrees but offers special courses leading to various certifications or qualifications.

New modes of distance learning are continually being developed. Some examples of the kinds of distance learning available through the Internet include: UTOS, which is a web-based distance education system for learning, testing, and assessment in Macedonian; MATEIS—Mathematical Electronic Interactive System, which is an education system for learning mathematics and informatics; and International Education and Resource Network, which enables students and teachers worldwide to conduct collaborative projects in Macedonian and English.

TEACHING PROFESSION

Training of primary or basic school teachers occurs at Pedagogical Academies and at *Više Skole.* Primary teachers (Grades one through four) and subject teachers (Grades five through eight) have different training. Preservice training lasts two years. Subject teachers may follow a four-year course at a pedagogical academy or at a university.

Training of secondary school teachers lasts four years. Secondary school teachers are university graduates; courses last four years. Both elementary and secondary school teachers are obliged to attend in-service seminars.

Within the higher education system, there is an evaluation of the teaching and associate staff by means of conducting a re-election procedure over a certain period of time. The election and re-election of teaching, teaching-research, and associate staff is conducted by means of an open competition, in compliance with existing legal solutions. Full-time professors are re-elected each sixth year until they reach the age of 60. Associate professors, assistant professors, and professors at colleges of further education are re-elected each fifth year, while senior lecturers, lecturers, and associates are subjected to re-election every third year.

The election and re-election of candidates into teaching, teaching-research, and associate posts is conducted by the Teaching Council of each college of further education (the Academic Council of each faculty) based upon the assessments of the Review Commission (*Recenziona komisija*), as well as upon their own conclusions on the overall social, expert, scientific, and pedagogical achievements of the candidates. The Review Commission is established by the teaching and academic councils, and members of this Commission may be from among the teachers and research workers employed at the organization where the re-election is being conducted, as well as from among other teachers and research workers. Members of the Review Commission may not hold an academic post lower than the post for which a candidate is being selected.

SUMMARY

Macedonia's current education system was organized during the years it was a part of the Yugoslav federation. Today, Macedonia's (FYROM's) education system is slowly being transformed and improved to satisfy the needs of its developing economic and democratic political systems. Macedonia's educational system includes educating ethnic minorities in their own languages from primary schools to universities. The system includes primary schools, which are attended for a total of 8 years; secondary schools, which are attended for 3 or 4 years; and further education and university, attended for 3 or 4 years (with the exception of medical studies).

Macedonia, like other countries, especially in the Balkans, is struggling to adapt and manage its educational institutions to promote democracy and inter-ethnic harmony. Among areas that need to be addressed include the ways textbooks discuss issues ranging from the preservation of the environment to minority issues and national identity. While it has a long way to go towards making extensive reforms, the infusion of NGOs and projects supported by organizations such as UNESCO and Soros are supporting Macedonia in its mission to improve its educational system while fostering access and diversity among schools.

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—Ellen W. Gorsevski

MADAGASCAR

BASIC DATA

Official Country Name:	Republic of Madagascar
Region:	Africa
Population:	15,506,472
Language(s):	French, Malagasy
Literacy Rate:	80%
Number of Primary Schools:	13,325
Compulsory Schooling:	6 years
Public Expenditure on Education:	1.9%
Foreign Students in National Universities:	678
Educational Enrollment:	Primary: 1,638,187 Secondary: 302,035 Higher: 26,715
Educational Enrollment Rate:	Primary: 92% Secondary: 16% Higher: 2%
Teachers:	Primary: 44,145 Secondary: 16,795
Student-Teacher Ratio:	Primary: 37:1 Secondary: 18:1
Female Enrollment Rate:	Primary: 91% Secondary: 16% Higher: 2%

HISTORY & BACKGROUND

Scientific evidence suggests that Madagascar originated from a severe earthquake that separated it from Africa about 200 million years ago. This separation from continental mainland caused the island to drift 250 miles northeast and settled for about 35-45 million years. The distance between Madagascar and the East African coastline is 1,000 miles. It is separated by Mozambique Channel, which is part of the Indian Ocean. The island is 228,880 square miles; it has a mountainous central plateau, coastal plain and a moderate or tropical climate. The original inhabitants of Madagascar are Austronesianas and Arabs. The human settlements were made about 2,000 years ago. Austronesians from Southeastern Asia

were the first to arrive. Theoretically, ethnographic evidence shows that their materials culture of looms, smelting knowledge, canoes, architecture, food crops, and agricultural were known. Bantu-Kiswali speaking peoples of Eastern Africa, who may have brought the Austronecians with them, are linguistically and culturally proficient Kiswahili users.

Around A.D. 900, trade flourished between Eastern African peoples and the inhabitants of Madagascar. This may have influenced the evolution of the earliest site at Mahilaka on the West Coast. The fact that this site consisted of stone buildings and mosques characterize it with early mixed cultural integration between Africans, Arabs and Austranesians. The inhabitants of Madagascar had a low level of technology, which they used for the construction of simple arts and crafts, buildings, fishing, agriculture, and trade. They largely lived on nature's bounty. This made it possible for each of the three tribal races to avoid segregation by encouraging cooperation in order to combine efforts and obtain the available resources for their survival. As a result, an incredible synthesis of tradition, religion, language and genetics developed to create Madagascar's cultural uniformity and linguistic homogeneity for centuries. The main language which all the 18 tribal communities use is Malagasy.

The Asiatic and Austronesian element of the population is predominantly found in the central highland, which they inhabited since the thirteenth century A.D. Out of 14 million people, the Merino number about 3 million and the Betsilio 1.5 million. Both groups are rice growers who use irrigation for farming. The rest of the population consists of the African coastal peoples who rely on fishing and trade. Numerically, the Betsioni-Sakalava (1.5 million), the Tsimihety (1 million) and the Sakavala (1 million) are the largest groups. Before Madagascar became a French colony, the Merino had established and empire that existed for over 200 years, from the sixteenth to nineteenth centuries. The Merina state had large fortresses that were the central institutions governing smaller forts and states on the island.

In Madagascar, 50 percent of the people are adherents of traditional African religion. These religions are naturalistic because their followers emphasize the spiritual linkage between the living and the dead. Followers believe the dead join their ancestors in a variety of ranks of divinity. The ancestors are intensely concerned with the well being or bad luck of their living descendants. Within the Merina and Betsileo communities, the reburial of the *famadihana* (turning over the dead) is a highly celebrated ritual. In this ritual of reburial, the remains of the dead are exhumed and wrapped up in new silk attire. They are festively and ceremoniously reburied to display awe and honor and to perpetuate the dead's appeasement. The appeased will not develop retaliatory, ghostly, and punitive ramifications on the living.

Forty percent of Madagascar's citizens are Christians who are evenly divided into Catholics and Protestants. In spite of their Christian beliefs, most Christians incorporate the cult of the dead with their religious practices and beliefs. They celebrate their dead in church before they hold traditional burial ceremonies. Occasionally, they invite religious ministers to witness the ritual of *famadihana*.

Historically, an intense rivalry has existed between the largely coastal, under privileged Catholics (Cotiers) and the predominantly Protestant Merina who dominate the bureaucracy, corporate sector, and the professions. While authority seems to be highly centralized, attempts are underway to decentralize both authority and resources for the six provinces of Madagascar. Historical and cultural realities are regarded as important educational experience upon which modern scientific learning on the island is rooted.

Constitutional & Legal Foundations

On their exploratory sea voyage to India, Portuguese explorers first visited Madagascar in 1500. English, French, and other European maritime nations also began to explore. Though this did not materialize in immediate European settlement on the Island, it was through this contact that firearms were introduced and used by the Merina to create their centralized empire. The power base of the empire was in the central Plateau within the island. For instance in 1794, King Andrianampoinimerina used this power to unite all the tribes in Madagascar. The king gave land to every subject, banned ''slash and burn'' forestry, and as it was mentioned earlier, introduced irrigation and rice production in the central plateau. Slash and burn was the traditional and destructive way of cutting forests, bushes and thickets and burning them to give way for cultivation of cereals. The method destroyed humus-making bacteria and exposed the soil to erosion and extermination of certain species of fauna and flora. However, in itself, this was agricultural education.

After the death of the King Andrianampoinimerina, his son, King Andrian-Ramada inherited the throne. Among his major accomplishments, he constructed a prowestern foreign policy agenda that enabled the island to establish diplomatic relations with major European powers. King Andrian-Ramada invited Protestant and Roman Catholic missionaries from England and France. The missionaries, particularly the Protestants, built schools, churches and started their evangelistic work on the island. They taught the king's children about literacy, arithmetic,

hygiene and the gospel of Jesus Christ. Ramada was an early beneficiary of missionary education.

Later, with the effort of more dynamic missionaries biblically centered Christian education was introduced into Madagascar in 1820. Ramada was one of the students in the Antana Narivo School. King Andrian-Ramada died in 1828. When his wife, Queen Ranavalona, inherited the throne, she expelled all the missionaries and executed a large number of opposition elements. Though she earned the title of ''wicked queen,'' she was an effective empress. During her reign, Imerina missionaries built schools that brought literacy to 15,000 people. Queen Ranavalona died in 1860 and several weak dynastic rulers came after her. This weakness invited the French to attack Madagascar in 1883. The French fought for three years. Eventually Madagascar lost the war and became a French protectorate. In other words, the French domestically and diplomatically ruled Madagascar, although it was legally and officially not a colony. In 1895, the French massively invaded the island, conquered it and made it their full-fledged colony. The Merina monarchy was abolished and French rather than Malagasy became the official language of the island. With this conquest at hand, a new era of western imperialism had begun. The third, French Republic (1870-1914) witnessed France's new attitude in the acquisition of new colonial spheres of influence in Asia and Africa. Like the Americans and the British, the French wanted to use their republican and enlightenment ideas of progress and scientific learning in order to pacify and uplift the colonized peoples. This conception was viewed as France's universal mission commonly called *mission civilisatrice*. To colonize and govern Africa effectively, the colonized did not only become subjects with more duties than rights, but the violent exploitative and suppressive manner in which colonization was introduced appeared to defeat *mission civilisatrice*.

Based on France's colonial mission, the *mission civilisatrice*, the functionalist role of the French empire was to introduce education, modern science, architecture, medicine, technology and other elements of civilization in the colonies. Between 1895 and 1914, republican ideological and imperial ideas influenced French colonial decision making in West Africa and in Madagascar. This happened in two distinctive ways. First, on the basis of the 1789 universal and revolutionary ideas of ''equality, liberty and fraternity,'' all people within the empire and outside it had the right to basic freedoms. In the light of the freedoms, Africans and the Malagasy in particular, needed to be free from all forms of oppression of which domestic and long-distance slavery, feudalism, ignorance and disease were classic. This kind of emancipatory declaration was issued during the early stages of colonization in order to prepare the subjects for an idealistic vision of democratic life. Second, the French imperial system continued to spread its republican ideological liberalism in order to improve public opinion. What they said and promised was to civilize and uplift the dispossessed races of humankind. What they practiced was conquest, enslavement, greed, national pride, and oppression in the name of civilizing the ''other.'' They behaved this way in order to perpetuate colonial hegemony. Hegemony was strengthened by emphasizing difference as opposed to similarities between and among ethnic groups, races, sexes, classes, and gender for the purpose of rationalizing the principle of divide, conquer and rule.

The dual public education systems provided indigenous schools that offered vocational, practical, and non-professional education for the Malagasy, and elite schools modeled on those in France for the children of French citizens. Prior to World War II, the Malagasy were not intended to train for leadership and responsibility. However, after World War II educational reforms helped to prepare nationals for leadership and responsibility. After conquering, dividing, and starting to govern, colonial rulers felt that one of their special obligations was to liberate Africans from aspects indigenous domination and prepare them for a higher level of civilization. Since the *mission civilisatrice* could not be decreed or imposed, maintaining peace and security would enable the rulers to patiently and strategically improve the moral and material advancement of Africans. Improvement of African standards of living required sizable investments in communications; medicine and hygiene; elementary, secondary, and professional education; and agriculture. The ultimate goal was that civilized Africans would understand the essence of liberty, and create laws that would protect the rights and freedoms of the individual. Between 1895 and 1914, the third republic attempted to end feudal vestiges in West Algeria and Madagascar. The institution of hereditary chiefs and religious clericalism were viewed as aristocratic and antiquarian elements of pre-modernism which French republican liberation opposed with hostility. They opposed these institutions because they viewed them to be elements of tyranny from which African people needed to be liberated.

Historians, political scientists, and sociologists call French colonial rule direct rule. It was direct because the French directly imposed their metropolitan constitutional, theoretical, and philosophical ideas of governance on traditional, pre-scientific, and undemocratic African people, their organizations, culture, and institutions. Africans viewed it with suspicion and disdain because this form of contact with the West was more barbaric and disruptive than they anticipated. Unlike the more successful English system of indirect rule through which traditional chiefs were used as instruments of policy formulation and implementation in Africa, French direct rule was in es-

sence more inhumane than the traditional system they were replacing. Lack of enough colonial administrators made it difficult for the rulers to raise taxes, enforce slave labor, and administer the legal code. Though these institutions and organizations were built, they lacked resources to elevate their physical, economic, and social standards. As a result, during the First and Second World Wars, France's poor rapport with its colonies could not enable it to effectively recruit Africans for its own defense. The French claimed that they were being viewed wrongly because what they were doing was universally consistent with the spirit of *mission civilisatrice,* i.e., abolish feudalism, ignorance, poverty, disease, and uplift mass philosophical and constitutional life. As of 2001, these problems are more highly pronounced in Africa than when the French came and left.

The French *mission civilisatrice* claimed to attack problems such as feudalism, ignorance, poverty, and disease. However, the same French administrative system employed extraordinary and excessive elements of punishment, free and forced slave labor. Additionally, they made Africans subjects with duties rather than citizens who had rights. This has been viewed as a racist strategy used to deal with people who were different in the name of ''equality, liberty, and fraternity'' of all people.

The French empire denied women of the right to vote and reduced their role to that of reproduction and domesticity. The criteria for French citizenship included identifying their place of birth, residence, proof of devotion to France, occupation or profession in French colonial administration, knowledge of French language, good financial standing, high moral standards, having no criminal record, having never been bankrupt, certificate of middle school education and proof of payment of taxes by those who owned properly. In brief, most Africans who qualified for French citizenship were elite people who obeyed the law and owned property. Most subjects never qualified for French citizenship.

French colonial imperialism was more repressive and hypocritical rather than consistent with the principles of its republican ideology and the *mission civilisatrice*. For instance, French colonial officials used coercion to make Africans provide free labor and justified the behavior as an unpalatable but short-term expedient for the inculcation of the work ethic. Subjects were subjected to *prestations* (work taxes) that were similar to the feudal *corvé* in France. The 1912 decree legalized the prestations. This kind of forced free labor was oppressive colonial exploitation which parallels the feudal system (corvée) experienced by the French under the *ancien régime*.

Officially, the French ruled Madagascar for 64 years. Within this period, they abolished slavery and slave trade, sizably contributed to reasonable growth in education and health, and controlled epidemics. The French language was made official. To counteract the earlier influence of British Protestantism, Roman Catholic cultural and religious institutions were given preeminence in the country. These institutions included schools, churches, hospitals, and clinics. Economically, Madagascar's economy was developed and integrated with that of France. The colony became an exporter of raw materials such as rice, cloves, and minerals. Madagascar became an independent nation in 1960.

EDUCATIONAL SYSTEM—OVERVIEW

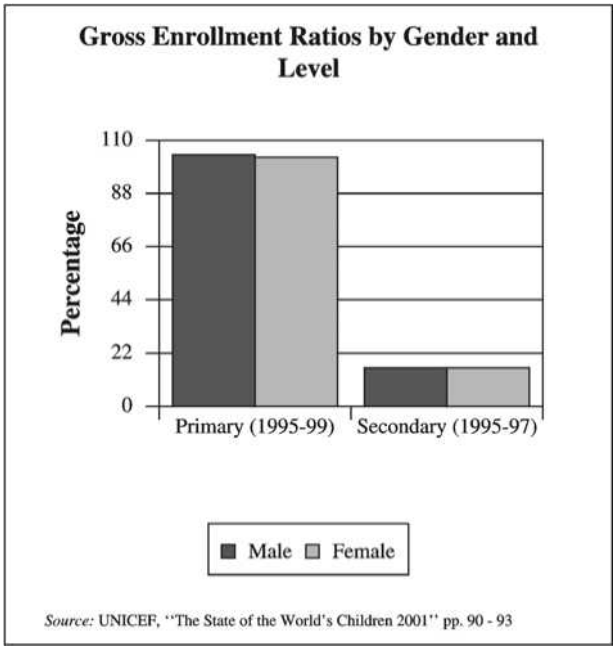
The foundation of modern Malagasy education is rooted in nineteenth century Protestant and Catholic colonial experience discussed earlier in the article. The modern education system of Madagascar is divided into elementary, secondary, adult and higher education levels. Because of the French policy of assimilation, educational institutions adopted French curricula, structures, standards and philosophical operational outlook. It is instructive to observe how each level has evolved and functions since independence.

PREPRIMARY & PRIMARY EDUCATION

Unlike the schooling systems of other countries in the world, elementary education takes 12 years in Madagascar. The Malagasy have adopted the same system but did not adapt it creatively and economically. Between 1960 and 1972, the social democratic party of Madagascar (PSD) government's policy of education emphasized expansion of the educational enterprise. It was thought that an expanded education which produced a large educated population could not only replace the expatriates, but such locally and culturally enriched educated people were essential for economic and political development of the nation.

In 1958 the Merina had a conspicuous advantage over other ethnic groups. The number of elementary school students in the Antananarivo region where the Merina are dominant was 110,500. There were 30,000 in either Toliary or Mahajanga provinces. Throughout the island, literacy was 65 percent among the Merina, 22 percent among the Betsimisaraka on the east coast, 22 percent among the Sakalava on the west coast, and 5 percent among the Antantroy in the south. The percentages of literacy in the less dominant geopolitical groups on the island were negligible. In the same regions, the percentages of those who were fluent in French were 25 percent, 6 percent, 5 percent, and about 2 percent, respectively. These percentages showed elements of extreme inequality in educational opportunity. To address this problem, the PDS government provided resources that enabled the

country to raise its public primary school enrollment from 321,000 in 1958, to 942,000 in 1970. Since then education policy of expansion has remained the same. Children whose age is between 6 and 14 receive compulsory education. Those aged 6 to 11 are the ones who study compulsory primary education requirements. In 1994, 83 percent attended school, the literacy rate was 53 percent, and enrollment at public primary schools was 13,000. The number of private primary schools is not clear. Primary school takes 12 years to complete because of the repetition policy. Though girls' access to educational opportunity is equal to that of boys, more emphasis is placed on males to succeed. This is indicative of the patriarchal and cultural preferences of the indigenous society.



SECONDARY EDUCATION

The curriculum, structures, academic standards, and other values of the secondary school enterprise are modeled on the French high school education system. At independence, the colonial education system was inherited by the nation, which has taken significant strides to adapt the originally adopted academic menu. In 1972, there were 100,000 students in more than 300 secondary schools. In 1998 there were about 500,000 students in 2,000 secondary schools.

Secondary education takes seven years to complete. There are two levels of secondary school education system. The first level is the junior secondary level, which takes four years to complete. The students at this level are 12 to 15 years old. Those who do senior secondary level for three years are between 16 and 18 years old. At the end of their junior level, the students get their certificate. Alternatively, the senior level graduates receive the *baccalauréat* which is a high school diploma. Junior level graduates who go for vocational training receive professional certificate called *college professionelle,* while senior level secondary graduates who are admitted to the technical college (*college technique*) receive a technical diploma called *baccalauréat technique.*

The junior secondary school curriculum consists of mathematics, natural science, Malagasy language, civics and religion, some French and English, history, geography and arts, and physical education. The course offerings, in terms academic load per week, vary from subject to subject in terms of their hierarchy in Madagascar's socioeconomic and political-psychological dynamics. The same cultural dynamic influences the structure and delivery mode of the senior secondary curriculum. The curriculum includes advanced mathematics, natural science, introduction to technology, French, malagache, history, geography, civics, religion, and physical education.

In both the primary and secondary schools, the ratio of students to teachers varies from city to city and from province to province. In addition, this ratio is also further influenced by economic and cultural ingredients within specific cities, counties, districts, and locations. In other words, parental and cultural attitudes toward school in the various administrative and politically established local units reinforce or discourage school attendance and thereby contributing to specific ratios in full-time equivalent measures. For instance parental and cultural attitudes regarding the education of males as opposed to that of females tend to perpetuate patriarchal elements of sexist traditionalism that favor female domesticity and reproduction rather than empowerment and social mobility.

HIGHER EDUCATION

Because Madagascar was a French colony, its postcolonial intellectual elite possessed academic credentials from a variety of French schools as well as the leading universities of Paris, Toulon, Marseilles, Montpellier, Pointers, and La Reunion. Similarly, after independence, these universities became the models for the six Malagasy universities at Antananarivo, Antsiranana, Fianaarantsoa, Toamasina, Toliara, and Mahajanga. These postsecondary institutions evolved from the Institute for Advanced Studies, which was founded in 1955. The Institute was conceived to be the original University of Madagascar in Antananarivo in 1961. There were five other provincial universities whose academic hearts were located at Antananarivo. Officially those five extensions became fully fledged academic institutions, complete with professional faculties, in 1988.

Philosophically, the University of Madagascar's reason for existence is rooted in the dynamic and synergistic

fusion of the European, Continental (African), and Malagasy cultural and scientific heritage. The University's goals for rationalizing the heritage include but are not limited to:

1. Maintaining adherence and loyalty to global academic standards.
2. Ensuring the unification of the African continent.
3. Using research, teaching, and scientific knowledge to dispel misconceptions about Africa, its culture, people, and heritage.
4. Using a variety of resources for training people to develop skills that are essential for meeting the development needs of the nation.
5. Training well-rounded human beings for nation building.
6. Progressively evolving an excellent higher education system that can become a model for evaluation.
7. Using science and technology for the advancement of human learning and solution of complex social, economic, and cultural difficulties.

With the exception of number seven above, the philosophical goals were developed by the 1962 ''Tananarive Conference on Higher Education in Africa.'' The conference was organized by the government of the Republic of Malagasy, representatives from other African countries, and the United Nations Economic Commission of Africa (UNECA). The resolutions of Tananarive Conference were based on the 1961 planning recommendations of the UNESCO initiated Addis-Ababa Conference of African heads of state and ministers. The purpose of the 1962 Tananarive Conference was threefold: first, the conference was charged with the responsibility of identifying solutions to problems of choice and adaptation of the higher education curriculum. Second, the conference needed to identify probable solutions to the problems endemic in the administration, organization, structure, and financing of the higher education enterprise and to study the impact of those solutions on the educational-related ministries of economic planning, education, labor, and agriculture. Third, the conference needed to identify the most efficient ways of providing data to the specialized agencies concerned with international cooperation, development, and assistance of African institutions of higher learning. Eventually, the conference succeeded in constructing a scientific and cultural planning model of higher education that was loaded with Euro-American and African higher education concepts. The education model was adapted by all African ministries of education, including that of Madagascar.

At present, the university system of Madagascar has several faculties of which law, economics, sciences, letters, and human sciences are dominant. The university system has many schools that specialize in public administration, management, medicine, social welfare, public works, and agronomy. Schools are further subdivided into departments. For instance, at the University of Fianarantsoa, there are more than 20 departments, including architecture and urbanism, building public works, electronic engineering, geology, hydraulics, meteorology, mines, materials, metallurgic sciences, telecommunications, optical physics, applied physics, energetics, industrial relations, and international relations. The university has 200 faculty members, of whom 120 are permanent while the rest are irregulars who work in technical ministries and professional industries.

French is the language used in all universities. Students take eight to ten years to complete the first degree. The baccalaureate is required for admission to the university. In African countries, it takes five years rather than the eight to ten years it takes in Madagascar. In 1994, there were 40,000 students enrolled in the country's university system. It is believed that at the time, the actual institutional capacity was 26,000 rather than the 40,000. This was considered overcrowding, for which the system has been severely criticized. Of those who are admitted, only 10 percent matriculate. In other words, turnover, failures, and repetitions are increasingly and economically massive and unwarranted. They are unwarranted because they reflect faulty investment and poor economic planning, which negatively impacts the poor nation as a whole. Though reform measures are being implemented, they have not been substantially effective.

The university system offers diplomas, certificates, and degrees of all kinds. Though most students complete the first degree, a few study the graduate and doctoral programs that are necessary for elite professional careers in the nation's institutions and organizations.

NONFORMAL EDUCATION

In southern Africa, nonformal education is adult education (Toweet 1978) and lifelong learning that is essential for the promotion of personal, group, community, and national self-reliance. Throughout the last few hundred years, and more importantly, during the last 40 years, rationalization of nonformal education was carried out in a marginal and loosely organized way by individual racial group communities. These communities used adult education concepts, methods, and strategies to solve their social, economic and political problems. Although nonformal education is not growth-oriented, selective, and competitive, it is humanistic education (Brown 1978) because it is local, instrumental, and expressive in nature (Sagini 2000).

Forty years ago, Madagascar became a multicultural and democratic republic. The government established a

new constitution and a variety of ministries, including the ministry of education, which integrated all forms of education throughout the nation. In addition, all forms of development including agriculture, mines, housing and the urban sector, health, and education were integrated with the entire national economic planning strategy. Under the colonial regime, nonformal education was marginalized, racially organized, and largely inconsequential. However, nonformal education, like preschool, elementary, secondary, and higher education, is currently a component of the national education policy that is managed and administered by the coordinating machinery under the Ministry of Education. Within South Africa and perhaps elsewhere in the African continent, nonformal education is education for adults who are nontraditional learners and students who are interested in self-actualization, regardless of when they achieve it. Adult education philosophy has evolved from cultural and nationalistic beliefs concerning ''human dignity, equality and respect'' (Mbekile 1978). It is an education policy that is used for the elimination of ''poverty, disease and ignorance.'' One of the main goals of nonformal education is to enhance equality by working to eliminate the effects of educational social stratification, lessen the exploitation of the uneducated masses by the elite, and distribute educational services and resources more equitably. Methodologically, approaches to nonformal education are a product of a government's nationalistic goals as a development strategy that focuses on the nation's geographic features, climatic conditions, occupational demography, and cultural and regional differences. These nonformal education measures are directed towards both the urban and rural sectors of society. Notwithstanding the fact that the success of nonformal education will depend on public commitment and psychological and practical participation, the most important challenges to effective nonformal education are a lack of massive financial investment, a lack of enough qualified personnel to implement it, and the view that it is not essential and therefore inconsequential. Madagascar has yet to succeed in implementing a long-distance learning strategy. Though attempts are being made to strengthen it, lack of resources made it difficult to implement.

TEACHING PROFESSION

Teacher education is postsecondary professional education that senior level high school graduates train for and matriculate in. There are seven teacher training colleges in Madagascar that train teachers for primary schools. Secondary school teachers have degrees from the island's six provincial universities. Several other colleges that train people in agriculture, business and industry, and a variety of vocational activities are scattered all over the island.

Graduate students who prepare to be teachers in secondary schools attend training colleges to complete master of arts degrees. Their curriculum places an emphasis on reflection, observation, self-evaluation, experiential learning, and skill improvement.

SUMMARY

Madagascar's modern education system is deeply rooted in its imperial past. Its scientific foundation originated in the French educational and colonial administrative philosophy. Its elitist character not only serves as a source of society's social stratification—it also prepares the legislative, professional, and corporate elite for the leadership of society's organizations and institutions. Other graduates of the education system work in the rural and vocational sectors. Most elementary school graduates work in the rural sector, while high school graduates enter technical and vocational institutions. A few who are more ambitious, competitive, and fluent in French graduate from colleges and universities and take up careers in teaching, law, business, medicine, and other professions.

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—Meshack M. Sagini

MALAWI

BASIC DATA

Official Country Name:	Republic of Malawi
Region:	Africa
Population:	10,385,849
Language(s):	English, Chichewa
Literacy Rate:	58%
Number of Primary Schools:	3,706
Compulsory Schooling:	8 years
Public Expenditure on Education:	5.4%
Libraries:	7
Educational Enrollment:	Primary: 2,887,107 Secondary: 141,911 Higher: 5,561
Educational Enrollment Rate:	Primary: 134% Secondary: 8% Higher: 1%
Teachers:	Primary: 49,138 Secondary: 3,172 Higher: 531
Student-Teacher Ratio:	Primary: 59:1 Secondary: 22:1
Female Enrollment Rate:	Primary: 127% Secondary: 12% Higher: 0.4%

HISTORY & BACKGROUND

Malawi is a landlocked nation that shares its borders with Tanzania, Mozambique, and Zambia. About the size of the U.S. state of Pennsylvania or 118,484 square miles in area, Malawi straddles Africa's third largest inland lake, Lake Malawi. Large plateaus, about 4,100 feet high, and mountains, roughly 8,200 feet in height, dominate much of the landscape.

In 2001, Malawi's population was 10,386,000 people. This population has doubled since 1977 when it was 5,547,460. Most of these individuals lived in the south and central regions, which foster more economic activity and jobs, since these regions are blessed with fertile land and adequate rain. The dominant Chewa tribe lives in central Malawi and the next largest tribe, the Nyanja, lives in the fertile south of Malawi, where commercial farming is big business. An estimated 3,500,000 Malawians make up the active workforce. The annual population growth rate has slowed to 1.61 percent due to a combination of AIDS, malaria, and premature death due to malnutrition. A high incidence of disease is attributable to diets low in nutrition, insufficient medical care, and low levels of sanitation, except in large cities. Many Malawi citizens rely on traditional herbs and healers for cures to ailments. Life expectancy at birth is only 37 years. The infant mortality rate is 122 per 1,000, and there is 1 doctor for every 47,634 Malawians.

Malawi's population is overwhelmingly rural, as 86 percent of Malawians live in rural areas. In rural areas, rights and duties are defined by tradition. Conformity and cohesion are emphasized, and honor grows with age. Money and a cash economy are however changing rural communities. Population pressure on land also forces change, and long periods of absence by men who work in distant cities are making rural cultures change as women, children, and the elderly cope with their absence. Despite these changes, family, kinship, territory, and tribe are the glue that bind rural society together. About 14 percent of Malawians live in cities. Lilongwe replaced Zomba as the nation's capital in 1974 and has a population of 395,000 people. Blantyre, Livingstonia, Mzuzu, and Chiromo are also important urban centers.

Approximately 90 percent of Malawians belong to the Chewa ethnic group. The remaining 10 percent belong to the Nyanja, Lomwe, Yao, Nguni, Tumbuka, Sena, Tonga, Ngonde, and other ethnic groups. Europeans, Asians, and other racial groups compose less than 1 percent of the population but exercise considerable economic influence. More than 50 percent of Malawians speak Chinyanja, which former president Banda renamed Chichewa when he made it the national language. Many Malawi Africans speak Chichewa at home, and more than 80 percent understand it. Both Chichewa and English are

considered national languages. An estimated 55 percent of the population is Protestant, 20 percent Roman Catholic, 15 percent follow Islam, and the remaining 5 percent practice indigenous religions.

The per capita income is $940 dollars per year. Malawi's economy is growing at 4.2 percent per year, which is down from 6.0 percent in 2000. Inflation is at 4.05 percent, but this is down from 83.3 percent in 1998. Malawi's natural resources include limestone, uranium, coal, and bauxite. Its major agricultural products are tobacco, tea, sugarcane, cotton, potatoes, cassava, sorghum, pulses, livestock, and tea. The industrial sector processes tobacco into cigarettes, sugar refineries, sawmills, cement factories, and consumer goods. It has 17,600 miles of roads, which helps it take its produce to market for sale, 498 miles of railroads, 44 airports, and 55,000 cars and trucks. Individuals 18 and over are eligible to vote. The government is a multi-party democracy, and the major political parties are the United Democratic Front, the Malawi Congress Party, the Alliance for Democracy, and others. The adult literacy rate is 58 percent, and education is compulsory between the ages of 6 and 14. Malawi has 1 Internet service provider and 37,400 telephones.

Historical & Political Background: The name ''Malawi'' is derived from the word ''Maravi,'' who were a Bantu speaking people who migrated to Lake Malawi in the fourteenth century and developed a large confederation. Oral tradition states that these people were the ancestors of today's Chewa and Nyanja people who constitute Malawi's majority today. Portuguese explorers and adventurers were the first Europeans to visit this area but they never colonized it. The Portuguese confined their colonizing activities to coastal regions of Mozambique and traded with Africans from Malawi. The Scottish explorer and missionary zealot, Dr. David Livingstone arrived in Malawi in 1859 while searching for the source of the Nile River. He did not find the origin of the Nile in Malawi but he did find fertile ground for converts to Christianity. Many Christian missionaries followed him to ''conquer Malawi for Christ,'' as they said. Ngoni tribes from South Africa had migrated to Malawi and were devastating Malawi during Livingstone's first visit. They engaged in chronic warfare as they attempted to dominate local Malawi Africans. In this environment the slave trade flourished. Fighting was constant, local African tribes were ravaged and subjugated, and Livingstone asked the British to intervene to put an end to slavery. Great Britain established a protectorate and called the area Nyasaland in 1891. They outlawed slavery and ended the chronic fighting by establishing a Pax Britannia. The region's tropical climate, the absence of mineral wealth, and limited economic opportunities for Europeans meant that very few whites settled in Malawi. Its record of development thus differed remarkably from those of Zambia, Zimbabwe, and South Africa, which had mineral wealth, fertile land, and few diseases that debilitated Europeans. Those areas by contrast attracted large white settler populations, huge investments, and rapid modernization.

The first sign that colonial rule was in trouble in Malawi occurred in 1915. The reverend John Chilembwe and his followers rose up against European settlers, but they were quickly suppressed by European military technology. Civil unrest did not die rather it went underground. It emerged again in 1944 in the guise of the Nyasaland African Congress. This was Malawi's first nationalist movement. Agitation for independence culminated in independence in 1964, under the leadership of *Ngwazi* (''Great Lion and provider''), Dr. Hastings Banda. The former Federation of British Rhodesia and Nyasaland dissolved. By July 6, 1966, the sovereign democratic Republic of Malawi emerged. Despite loud objections from other African leaders, Banda opened diplomatic and trade relations with the apartheid regime then ruling South Africa in 1967. Many Africans considered Banda a sellout. Some even went as far as to call him a traitor. Banda also Africanized the civil service and jobs in private industry but at such a slow pace that it infuriated many Africans and pleased the European and Asian communities who benefited from the slow pace of change. By 1971, Banda became the first African head of state to visit apartheid South Africa and recognize their legitimacy. However, Malawi later joined the Southern African Development Co-ordinating Conference (SADCC) which sought to reduce the dependence of countries throughout southern Africa on South Africa. By 1971, after declaring himself ''president for life,'' and it had become clear that he was a ruthless dictator. He frequently purged his cabinet and ruled through the Malawi Congress Party (MCP), which he controlled with an iron fist. His secret police were universally feared, and his Malawi Young Pioneers eliminated potential rivals. In 1976, he recognized the communist-backed Angolan government in preference to the South African-backed conservative forces of Jonas Savimbi. Malawi never recognized South Africa's Bantustans or Homelands as independent states, despite Malawi's cordial relations with the apartheid regime.

The suppression of opposition created a sense of stability. Until 1979, Malawi's economy grew annually at 6 percent or better, but this wealth went to a small elite who blindly supported Banda. Most of the wealth came from large agricultural estates, which were controlled by white settlers in the past but were currently owned by elite Africans or the state. Industries that process agricultural products thrived in Malawi. However, 85 percent of Malawians farmed 5 acres of land or less. Rural over-

crowding led to soil erosion and depletion. Land shortage, soil depletion, low prices paid to farmers for their produce, and a lack of agricultural inputs, such as loans, fertilizers, and insecticides, led to widespread unrest by 1992. Migration to South Africa, mostly by the Tumbuka tribes who were forced to leave their northern land to make money due to farming problems, helped Malawi overcome high unemployment and limited wage employment internally. The country became dependent, however, on remitted wage income that financed imports and contributed cash to rural households with few sources of income.

Forced into exile, most opponents of the government lived abroad until 1992 when Roman Catholic bishops openly criticized the government for human rights abuses and encouraged 60 exiles in Zambia's capital to stage a protest. Detention without trial, torture, and assassination suppressed internal dissent. Union unrest, rioting, and agitation by Chakufwa Chihana for multi-party elections led to reform. The United Nations monitored a referendum on the introduction of multi-party rule on June 14, 1993, which UN representatives monitored. The 63.5 percent of the people of Malawi voted to end one-party rule, despite massive efforts to intimidate them by the MCP.

Opposition to Banda's dictatorial rule led to the first official multi-party election on May 17, 1994. Bakili Muluzi was elected president, ending Banda's 30-year dictatorial rule of Malawi. In 1997, Banda and key associates were put on trial for political murders, but were acquitted. Banda died in 1997 and was given an official state funeral with full military honors. Bakili Muluzi's United Democratic Front (UDF) party has ruled Malawi from 1994 to the present. President Muluzi and his vice-president, Justin Malewezi, aimed to alleviate poverty and ensure food security, as well as to combat corruption and mismanagement of resources. Three prisons, notorious for human rights abuses, were closed. Political prisoners were granted amnesty and all death sentences were commuted to life imprisonment. The unequal distribution of land and labor migration remain major challenges for Malawi, as does violence in Mozambique, which spills over into Malawi periodically. As Mozambique repairs its war-damaged communications, industries, roads, railroads, bridges, ports, and airports, Malawi's export economy improves. Many of the 600,000 Mozambican refugees who have lived in Malawi for decades are returning to Mozambique. This too helps Malawi's economy to perform better. Mozambique has reopened its ports of Beira and Nacala, which facilitates Malawi's export strategy. Malawi pays small farmers better prices for their crops as an incentive to increase production. Unfortunately this policy has failed to halt or reverse the decline in rural standards of living due to land shortages and declining production exacerbated by overcrowding.

Educational Background: Traditional African cultures emphasized careful observation, imitation, and memorization of lessons passed down from one generation to the next through a system of age-graded education and socialization. Western-styled schools were established in Malawi by Christian missionaries. While traditional culture competed for the attention of African youth, Islam has never penetrated Malawi and thus did not compete with Christianity. This made westernizing Malawi's African population much easier. At first missionary schools focused on basic reading, writing, and counting. The aim was to help Africans learn to read the Bible in order to reinforce Christian beliefs and values. The British government was happy to allow missionaries to dominate education because it was cost effective. In a poor colony that was not producing much income for Britain, costs were major concerns. Malawi's British colonial administrators merely supervised Christian missionary schools from 1920 onward. Not long after African Christians became westernized, a few opened their own schools from 1930 onward. In both cases money for the salaries of teachers and administrators were generated from school fees and voluntary donations given locally and from abroad. Government financing for schools began in 1963, when Malawi's outgoing colonial government financed 22 primary schools.

The Anglican church of England set up schools on the eastern shore of Lake Malawi (then known as Lake Nyasa) in 1880. Many primary schools were established, along with training institutes for nurses, hospital attendants, and midwives. Roman Catholics created missions from 1889 on, when the White Fathers first established missions. The Catholic Church discovered that schools attracted many new converts. Thus, Catholics built many schools in Malawi and won many converts in turn. By 1970, Catholics ran more than 1,000 schools, 6 teacher training colleges, several hospitals, and 2 leprosy clinics.

The American based Phelps-Stokes Fund conducted a survey of education in Malawi in 1924. The outcome was recommendations for educational reform. These included greater efforts to educate females, the expansion of primary education, and improved teacher training. The pattern of education was 4-3-3, meaning that primary school students attended school for four years. If they succeeded, they attended advanced primary school for three more years. Upon successful completion of both of these levels they advanced to junior high for three additional years. The age ranges were from 5 years to 20, since many entered school late due to farm duties. In addition, although most students finished the entire sequence in 10 years, some students took much longer

given home responsibilities, scarcity of funds to pay school fees, and other constraints.

By 1927, Malawi had 2,788 schools, which were staffed by 4,481 teachers, many of whom were poorly trained or even unqualified. That same year Malawi established its first Board of Education, district school committees, and later in 1930 Advisory committees were established to control educational expenditure. In 1938, educational ordinances were revised to enable the governor to decide the composition of the Advisory Committee, and influence the creation of new schools. The government was concerned about local African groups opening schools with no idea of how to pay for ongoing maintenance, teachers' salaries, or other recurrent budget matters. Instruction was in the vernacular, as was Bible instruction, because this allowed western ideas to penetrate African society faster than was possible using English, which was foreign to many and difficult to understand. In this manner elementary arithmetic, reading, and writing spread among the African population.

After World War II, the Colonial government of Malawi determined that control over education and new rules for teaching service were important goals. By 1949, the British Colonial Office decided to reward Africans for loyal military service during World War II by offering two additional years of post primary education. This program was designed to prepare Africans for work in the Civil Service. After 1950, the system followed a 5-3-4-2 pattern. In other words Africans attended primary school, followed by senior primary school, then a four year secondary or high school that culminated in the Cambridge Higher School Certificate, and for a few advancement to a two year Advanced or ''A'' level specialized course that is comparable to Junior College. In 1963, this pattern changed to 7-5 pattern.

Following the break up of the Central African Federation in 1963, the Malawi Colonial government decided to assume responsibility for schools. Overnight most schools were transformed into public schools backed by the government. They inherited 2 secondary schools and 26 primary schools. The minister of education assumed responsibility for all schools in Malawi and inspected them through district committees of not more than 12 individuals who were controlled by the district commissioner. Church run schools continued, but played a far less important role in education. Two church-run secondary schools existed at Blantyre and Zomba. Europeans were permitted to maintain exclusively European schools, with the agreement that they would fully integrate in the future. Some saw the shifting of the burden of education onto the government just prior to independence as support for white minority regimes in Zimbabwe, Mozambique, and South Africa. The more money that free Africans were forced to spend on education and agriculture, the less that was available for arms or military training for freedom movements. Despite major investments in education, not more than 35 percent of Malawi's children attended primary school prior to independence.

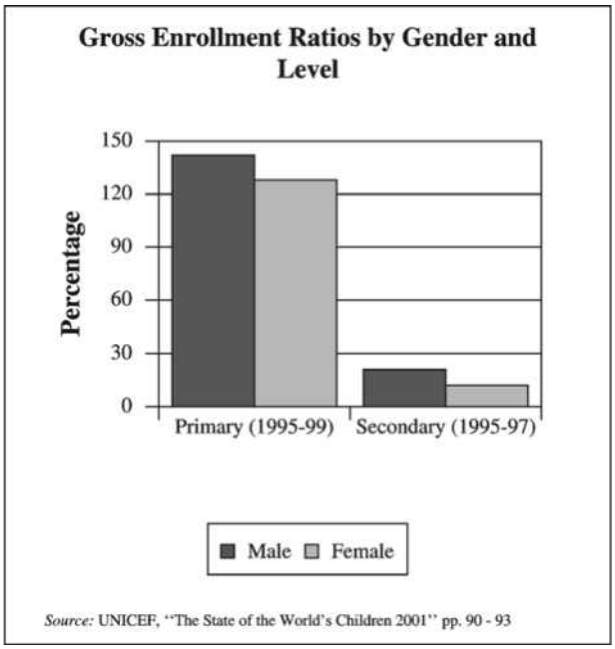
CONSTITUTIONAL & LEGAL FOUNDATIONS

The 1966 Malawi Constitution does not specifically mention education. The Malawi Congress Party, however, was committed to ''see that all children who go to Primary School finish their primary education without let or hindrance.'' In other words, in Malawi, education is a privilege granted to students, but it is not a constitutionally guaranteed right. Rulers feel free to withdraw or withhold it if students oppose them or cause trouble.

EDUCATIONAL SYSTEM—OVERVIEW

The Ministry of Education has oversight responsibility and sets academic standards for all schools in Malawi. This includes primary, secondary, technical schools, teacher training institutes, agricultural colleges, correspondence colleges, business schools, polytechnic institutes, and the university. The university and Polytechnic Institute are in fact autonomous, but tradition now dictates that they come under the authority of the Ministry of Education. Adult education programs operated by ministries like the Defense, Agriculture, and the Interior are autonomous.

When Banda ruled education was a privilege given to a select few. Large numbers of Malawians were denied basic education. Today, primary education is universal and compulsory. Students enter school at age six and remain for eight years. Secondary education begins when students reach 14 years of age. It lasts for four years and is divided into two sets of two-year courses. By 1995, the total enrollment in primary and secondary schools was roughly 100 percent of school aged youth (males 106 percent and females 94 percent). Secondary enrollments still lag with 21 percent of males and 12 percent of females attending for an overall enrollment of 17 percent. Efforts are underway to expand educational opportunities. Free primary education was introduced in 1994. This led to a dramatic increase in primary school attendance, but it also caused overcrowding in many schools and a decline in the quality of education. Malawi recognizes these problems and is making efforts to fix them. For instance, in 1996, the International Development Association granted Malawi $22 million to train 20,000 new teachers to handle all the new students who are crowding into the schools. The African Development Bank also earmarked money for new school construction for primary and secondary schools in Malawi in 1997.



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

In 1995, Malawi had 3,706 primary schools, which were staffed by 49,138 primary school teachers. There were 2,887,107 primary school pupils of whom 1,528,564 were males and 1,358,543 were females. Opportunities are limited to attend secondary schools because throughout the Banda era an elitist attitude prevailed, i.e., only the rich, the best, and the brightest were encouraged to attend secondary school. All other students were pushed into vocational training or forced to farm the land. Although there are few secondary schools, they are of very high quality. The exact number of secondary schools is not available but there were 2,948 secondary school teachers in 1995, teaching 139,386 students. Of these students, 90,003 were male and 49,383 were female. There were 145 teachers who staffed teacher-training institutes, and they taught 1,471 potential new teachers, of whom 996 were males and 475 were females. Vocational schools were staffed by 79 teachers, who taught 1,054 vocational students. No breakdown by sex was available for vocational students. Malawi had 6 universities in 1995, which were staffed by 329 professors. They taught 3,872 students of whom 2,917 were male and 955 were female (UNESCO: Statistical Yearbook 1995). Other institutions of higher learning were staffed by 202 teachers and had 1,689 students studying administration and other subjects. Of these 959 were male and 730 were female. As of 1997 Malawi spent 2,111 kwacha on education or 20.4 percent of the budget. In 2001 the adult illiteracy rate was 58 percent (males 28 percent and females 58 percent), despite compulsory education between the ages of 6 and 14.

Academic years begin in September and end in June. There are 3 primary school teacher-training colleges, each of which enrolls roughly 500 students. Missions also operate other teacher training institutes with about 600 students. Primary school teachers are trained at the lower secondary level in teacher-training colleges where courses last two years. Selection for entry is by interview. Primary education begins at age six and consists of two cycles, i.e., Standard 1-5 and Standard 6-8. Many students are above the average age, and 16 percent repeat a grade. The dropout rate is high but declining. Chichewa is the language of instruction in most primary schools up to Standard 4. From Standard 5 on, English is the language of instruction. The central government pays teachers salaries, provides grants, and collects any authorized school fees to cover operating expenses.

Secondary school teachers are trained at the postsecondary level at Chancellor College, which offers a three year course that leads to a diploma in education, as well as a five year course culminating in a bachelor's degree in education. Technical teachers are trained jointly at the Polytechnic and Chancellor's College. Four-year secondary school courses are divided into two components. The first leads to a Junior Certificate (JC), and the second leads to a Malawi Certificate of Education (MCE), which is required for admission to the university. Completion of both levels is equivalent to finishing the ''O'' or Ordinary Level in the British system of education of high school in the American system.

Entry into the nursing, primary teacher training, vocational training, or agricultural training programs demand as a minimum requirement that students have earned the Junior Certificate (JC). Each of these courses requires a minimum of two additional years of training. This excludes nursing, which demands three to four more years of schooling. All educational requirements are geared toward meeting the manpower needs of Malawi, which are determined by the Ministry of Education.

Both the colonial British legacy and the legacy of former president Banda left Malawi with a large adult population that was illiterate. While attacking the problem, officials in Malawi recognize that this continues to be a stumbling block along the road to development and modernization. In 1980, there were 1,802,000 illiterates in Malawi. Of these, 559,000 or 36.3 percent were males and 1,243,000, or 72.7 percent were females. The total rate of illiteracy in 1980 was 55.5 percent. By 1990, the number of illiterates reached 2,369,000. The total illiteracy rate had fallen however to 48.1 percent because the population had grown rapidly. Of these 735,000 were males or 31.2 percent, and 1,634,000 or 63.7 percent were females. In 2000, the total rate of illiteracy in Malawi had fallen to 39.7 percent, but there were 2,296,000

illiterates of whom 718,000 or 25.5 percent were males and 1,577,000 or 53.3 percent were females. While the absolute number of illiterates has risen over time, the relative percentage of illiterates in Malawi's population has fallen. An encouraging trend is the decline in the percentage of women who are illiterate over time. Because women socialize children, this change should boost literacy rates in the future generations of Malawians.

PREPRIMARY & PRIMARY EDUCATION

Malawi makes no provision for preprimary education. Primary schools can be found in many villages and hamlets throughout Malawi. In 1970, there were approximately 2,000 primary schools that accommodated about 35 percent of primary school aged youth. About 12 percent of all primary school students attended private, predominantly church run schools. This percentage declined as the government took over the ever-growing number of schools. There are two main types of primary schools, namely assisted and unassisted schools. Assisted primary schools receive financial assistance from the central government. Some assisted schools are owned by missionaries, while others are owned by local education authorities. Unassisted schools can apply for financial aid if they meet Ministry of Education requirements for assistance.

In 1968, an estimated 88 percent of primary schools were run by religious missions who charged a fee for attendance. Some 5 percent of these students had scholarships. Primary schools were coeducational, and girls and boys attended classes together. In 1970 girls were 37 percent of all primary school students. Chichewa was the language of instruction, and English was also taught, along with geography, history, hygiene, arithmetic, and Bible studies. Some schools also introduced science and agriculture courses for Standards 6, 7, and 8. The Malawi Broadcasting Corporation (MBC) aired radio programs that reinforced regular school programs. Each school had one or two radios, but the use of radio broadcasts was voluntary. Local languages, such as Chitumbuka, were used for prayers, singing, and non-course work in the north. Promotion was based upon passing a general examination. At the end of Standard 4, all students had to pass exams in Chichewa, English, and arithmetic with a minimum score of 50 percent to advance to Standard 5.

To qualify to enter secondary school students had to pass an externally graded (graded outside of Malawi) examination and earn a primary school leaving certificate. In 1972, a total of 30,495 students took this examination and 21,232 or 69.6 percent of students passed. There were, however, only 3,500 seats in Malawi's secondary schools that year, which severely limited the number of students who could pursue a secondary school diploma. Dropout rates were of necessity very high.

Former President Banda introduced new syllabi for primary and secondary schools in 1972, which aimed to free the classroom from dependence on rote memorization. Active learning encouraged students to engage their material and solve problems creatively. In science classes emphasis was placed upon understanding and being able to use concepts rather than memorization. New math was also introduced for the same reasons. Parents complained that the new methods did not adequately prepare their children. They pointed out that their sons and daughters did not know English well enough to fill out simple job applications in English or to write letters or resumes. Banda reviewed these complaints and expressed contempt for the ''new'' methods. He considered them failures. Malawi's schools went back to the old methods of teaching, and students were forced to memorize multiplication tables and charts of elements for chemistry. They worked on preset science experiments and used conventional English readers. Long answer essay examinations were used to test students, and multiple choice examinations were dropped.

As agriculture was the mainspring of Malawi's economy, farmer training was therefore given priority in all vocational training, adult education, and supplemental education programs. Education gradually went from an elitist orientation, which benefited the few who went on to secondary school, to one that slowly began to address the needs of the many who would live, work, and die on farms. Agriculture as a subject was introduced into primary school syllabi in the 1970s. Teacher training was simultaneously expanded to insure that pupils were instructed by qualified teachers. In 1970 this was a problem since less than 20 percent of all primary school teachers had achieved the Junior Certificate (JC) level of education themselves.

Total enrollment of primary school-aged youth has shown impressive gains. In 1970 only 35 percent of youth enrolled in primary schools. By 1980 this number had increased to 60 percent (males 72 percent and females 49 percent). It jumped higher in 1990 to 68 percent (males 74 percent and females 62 percent) and in 1995 to 89 percent. In 2001, all primary school aged children were enrolled in school, since President Muluzi made it free and compulsory after 1994. Pressures of modernization dictate that every Malawian have at least a basic education if the economy is to be competitive in a global setting.

Net primary enrollments have risen from 43 percent in 1980, to 50 percent in 1990, and to 100 percent in 2001. Primary school enrollment of males has also risen from 48 percent in 1980, to 52 percent in 1990, and to 134 percent in 2001. The same is true for females whose enrollment jumped from 38 percent in 1980, to 48 percent in 1990, and to 94 percent in 2001. In 1980, Malawi had

12,540 primary school teachers. This number rose to 22,942 in 1990 and to 49,138 in 1995. The percentage of female teachers rose from 31 percent in 1990 to 39 percent in 1995. Moreover, the pupil to teacher ratio fell from 65 pupils per teacher in 1980, to 61 pupils per teacher in 1990, and to 59 pupils per teacher in 1995 (UNESCO 2000). Malawi has yet to reach its target of 50 pupils per teacher. New teacher training colleges, such as the facility at Mzuzu, are designed to insure that teachers have proper qualifications and that the quality of education does not decline as opportunities expand for students. The government hopes in the future to train enough teachers that missionary teacher training institutes can be phased out. Since only 15 percent of primary school pupils go on to secondary school, the curriculums of most primary schools now emphasize crafts and vocational and technical skills to prepare students for life and employment after leaving primary school.

Ministry of Education officials have adopted a 5-3-4 system of education. Model primary schools are built in each district to demonstrate to villagers how to construct schools based upon a standard approved design that are durable and affordable. They are also shown how to equip each school to meet curriculum requirements for sciences, mathematics, literature, and social studies. It is hoped that this will prevent costly mistakes that are difficult to maintain.

SECONDARY EDUCATION

As the cornerstone of economic development and entry into the modern sector of the economy, secondary education is very important in Malawi. Secondary education developed late in Malawi, as little effort or expense was devoted to it throughout the colonial era. The year before independence there were only 3,000 secondary school openings in the entire nation, and only 4 of the 17 secondary schools offered a full program leading to a secondary school certificate. These schools were concentrated in a few key locations.

Secondary school normally last four years. Agriculture is a compulsory subject for all students. Wood working, metal work, and technical drawing are encouraged for boys, and home economics is encouraged for girls. An elite Latin grammar secondary school named after former president Banda is called Kamuzu Academy. It is located in the Kasungu District and takes only those students who were the very highest achievers in Standard 8 from all 24 of Malawi's districts. This school prepares students to attend Harvard, Yale, Oxford, Cambridge, Edinburgh, and the world's other best universities. Teachers are all carefully selected and have Latin as part of their background. During their first three years, every student must take Latin, English, and mathematics. They can choose to take other subjects including classics, history, geography, biology, chemistry, physics, economics, and modern languages, especially French. Kamuzu Academy students take the CHSC examination upon completion of Form IV and the Cambridge Senior School Certificate examinations upon completion of ''A'' levels or Form VI. Students at regular secondary schools take a similar course of studies, but without the Latin and extreme academic rigor. Regular secondary schools emphasize agriculture, wood working, metal working, and home economics more because they do not assume that 100 percent of their graduates will go on to universities. The idea is to give those who do not continue to an university some practical skills. In 1980, there were 66 secondary schools in Malawi. One of the biggest criticisms of secondary schools in Malawi is that they are too university-oriented. Few students continue on to college. Most instead immediately enter the workforce and need a different orientation. Secondary schools do not produce as many graduates as the labor market demands. This is especially true for females.

Most old secondary schools were boarding schools. Initially there were only a few secondary boarding schools, so students came from afar and needed to live at the school. Student completion rates at this time were 90 percent. Completion rates are currently by contrast 30 percent. Females are especially vulnerable to high dropout rates if they attend day schools. Girls in boarding schools have a 90 percent completion rate, but those attending day schools have a 25 percent completion rate and only 10 percent pass the MCE examination.

Malawi has five types of secondary school. There are aided boarding schools, aided day schools, government boarding-secondary schools, government day secondary schools, and private secondary schools. Most secondary teachers are qualified and hold either degrees or diplomas. Unqualified teachers are restricted to teaching civics, physical education, or the Chichewa language. There are shortages of teachers for English, mathematics, and the sciences.

Following independence the Banda government tried to equalize secondary school opportunities by building a government secondary school in each of Malawi's 21 administrative districts. These were day schools and far less expensive to run than the colonial styled boarding schools. This program brought the number of openings for secondary students up to 8,000 in 1967. In 1972, the number of places had expanded to 12,800 offered by more than 58 secondary schools. By 1980 some 5 percent of the secondary school-aged population attended secondary school (7 percent of the eligible males and 3 percent of the eligible females). This number increased to 8 percent of the population by 1990, representing 11 percent of eligible males, and 5 percent of eligible females.

As of 1995, approximately 17 percent of the secondary school-aged population attended secondary school. Some 21 percent of eligible males and 12 percent of eligible females were enrolled in secondary schools. When pupil progression is examined, it is observed that of the students who began primary school only 10 percent reached secondary school by 1992. Although gross enrollment figures for 1980 and 1990 were 5 and 17 percent respectively, the net enrollment ratios were 39 and 73 percent respectively for the same years.

In 1980, there were 953 secondary school teachers. This number increased to 3,172 by 1995. In 1996, the pupil to teacher ratio was 16:1. Females made up 13 percent of all secondary school students by 1996, and 83 percent of girls were out of secondary school by 1996. Roughly 15.1 percent of secondary school students were forced to repeat a grade. There were 327,000 secondary school aged students out of school in 1980 but this number dropped to 250,000 by 1997, indicating that progress is being achieved in enrolling more students in secondary schools.

Classes are designated Form I-Form IV for the Ordinary or ''O'' level certificate, and Form V-VI for the Advanced or ''A'' level series of courses. Students desiring to enter a university in Malawi must successfully complete both their ''O'' level and ''A'' level courses. Many ''A'' level students take prequalification courses so that they can pass the London General Certificate of Education, which enables them to attend foreign universities. In general, after completing Form II, students take the Junior Certificate Exam if they wish to continue to Forms II and higher. In 1972, some 3,786 students took this test, and 2,807 or 74.1 percent passed it. Students finishing Form IV must take and pass the Malawi Certificate of Education to be admitted to Forms V-VI and local universities. In 1973, some 2,485 students took this exam, and 1,360 passed it with high enough marks to be awarded the full certificate and go on to Form V. Passing this exam does not admit students to the university. Students who successfully complete Form VI are awarded a higher school certificate which enables them to enter the university.

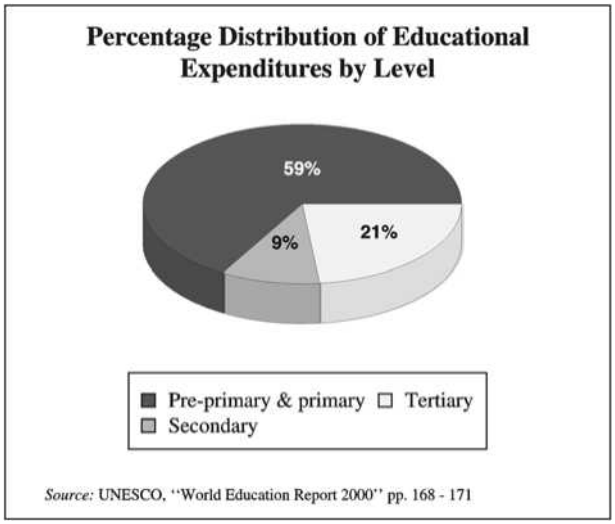
Technical education begins in primary school and continues through secondary school and university. Primary school students learn the rudiments of crafts, technology, and agriculture. More than 50 percent of all secondary schools offer technical education courses. Technical secondary schools and the polytechnic offer the most intense technical training. Government technical schools offer apprenticeship type training through a cooperation between the Ministry of Education and the Ministry of Labor and in cooperation with local industry. Popular technical courses include plumbing, brickwork, carpentry and joinery, automobile mechanics, general fitting, diesel fitting, sheet-metal work, and electrical work. The minimum entry requirement for such courses is the Junior Certificate. Trainees spend one year in a government technical school taking courses in residence. At the end of the year, they take an examination. Those who pass earn a Grade 3 National Trade Certificate. Successful trainees are then apprenticed to an employer in an indentured relationship for three years. Throughout this three year period, trainees spend nine months understudying a master of the trade they seek to master and three months of each year taking courses at a technical school. Depending on the level of excellence a trainee reaches, they take either a Grade 2 Trade Test or a Grade 1 Trade Test. Throughout their apprenticeship trainees are paid a wage at a rate fixed by the government. Employers are refunded in full by the government for all expenses.

Assisted technical schools are owned by missionary organizations and managed by a board of governors who get annual government grants for their schools. Although similar to government schools, trainees are not eligible for apprenticeships. These schools offer two-year residential courses up to the Grade 2 Trade Test level. Students learn brickwork, carpentry and joinery, and automobile mechanics.

Technician courses require a high pass on the Malawi Certificate of Education. Such students follow normal apprenticeship patterns, then take courses full time for one year at a polytechnic, which is then followed by three years of ''industrial attachment.'' Trainees spend six months of each year in industry and six months at the polytechnic, where they can take the ''City and Guild'' examination, which is then graded in London.

Engineering diplomas can be earned by taking a three year university course at a polytechnic. Academic courses are taken, as well as technical subjects. The engineering program began in 1977 and is a six-year program aimed at producing high level professional engineers.

Malawi also operates Youth Training Centers, under the authority of the Malawi Congress Party. Such centers provide training in building and metal works as a reward to youth who are party loyalists. After finishing such courses, youth go into business for themselves in rural communities. Graduates know how to build a complete house and manufacture things like furniture, doors, windows, and cupboards. Their metalwork training prepares them to maintain and repair farm implements, hand tools, bicycles, oxcarts, and other items common in rural areas. Training at these centers lasts from one to two years. Although these centers do not have apprenticeship programs, they do offer pre-apprenticeship programs that allow successful graduates to transfer to government sponsored schools which offer apprenticeship programs.



HIGHER EDUCATION

All higher education in Malawi is ultimately controlled by the University of Malawi, which was founded in 1964. The university is located in Zomba, Malawi's former capital, which is now a university town. The vice chancellor and registrar run the university. The president is the chancellor, which is purely a ceremonial office. There are four constituent colleges, each of which has its own registrar. Bunda College specializes in agriculture; Chancellor College offers arts, education, sciences, social sciences, law, and public administration; Kamuzu College offers nursing, community health, mental health, maternal and child health care, and medical surgical nursing courses; and the Polytechnic College offers technical courses. The university also operates a hotel training college and a marine-training school. The university is governed by a council, whose members are appointed by the government. The faculty senate insures that academic matters are governed by professors. The university awards both degrees and diplomas, as well as certificates for short courses. Government grants pay for 91 percent of university costs and miscellaneous income accounts for the remaining 9 percent of the university's income.

Access to higher education is based on passing the Malawi Certificate of Education (MCE). A student must earn at least five credits, including English. This exam may be taken after completing eight years of primary and four years of secondary education. Students wishing to be accepted by the university must achieve excellent scores on these exams.

The first or bachelor's degree is normally earned after four years of concentrated study in residence. It takes five years to complete courses in law, education, agriculture, and commerce and six years to finish the full engineering program. Honors degrees are awarded in some subjects. A professional qualification is awarded as a diploma after three years of study.

A second stage or master's degree requires two years of full time study to complete. A third stage or doctorate degree is awarded after finishing three to five years of study beyond the master's degree, a successful defense of a thesis or dissertation, and at least six months in residence at the university

In 1990, approximately 4,829 students enrolled in universities in Malawi. Of these 26 percent or 1,352 students were females. In 1994, some 5,358 students were enrolled, and 30 percent were females. By 1996, there were 5,561 students enrolled in universities in Malawi, and the percentage of females held constant at 30 percent. As of 2000, only 1 percent of Malawi's population was enrolled in universities. Approximately 72 percent of all college students were pursuing degrees in education, 10.9 percent were taking degrees in the social sciences, 12.2 percent were pursuing science degrees, 3.9 percent were taking degrees in medicine, and 0.4 percent were pursuing degrees in the humanities. Given Malawi's growing need for high-powered labor, Malawi will be dependent on expatriate skilled labor far into the foreseeable future, unless the university system expands.

NONFORMAL EDUCATION

Education that prepares adults for specialized roles in the economy or on the job training is involved in nonformal education, as do general education outreach programs, adult literacy campaigns, and education on health and hygiene. The Ministry of Agriculture and Natural Resources offers courses leading to certificates in forestry, fisheries, veterinary assistants training, agricultural extension agents, crop and livestock agents, and other certificate programs. The Ministry of Transportation and Communications offers certificate training in air traffic control, meteorology, automotive repair, fire and rescue training, post and telecommunications training, airline sales and reservations, and other certificates. The Ministry of Labor offers certificate programs in leadership and a variety of apprenticeship programs in various technical areas. The Ministry of Health prepares health assistants, dental assistants, health inspectors, paramedical personnel, nurses, nurses aides, and rural health assistants. The Ministry of Works trains its own artisans and technicians. The Ministry of Community Development and Social Welfare offers certificate training in leadership, community development, homecraft, health and nutrition, childcare, and literacy trainers. The Ministry of Youth and Culture administers certificate training in metalwork, carpentry, business, agriculture, and clerical work. Adult literacy courses are offered nationwide to combat illiteracy, and the rate of adult illiteracy has declined as a result.

TEACHING PROFESSION

The Ministry of Education develops the curriculums used in Malawi's schools. They also oversee teacher training. Teachers take both pedagogical and academic courses. Supervised practice teaching is expected before gaining control of ones own classroom. Most teachers begin as primary school teachers in a demonstration school adjacent to teacher training facilities. Later, block teaching is tried during which the teacher trainee tries teaching a class on their own for six weeks.

There are three types of lecturers that teach potential teachers. There are graduate teacher educators, who chair most departments, as well as diplomate and non-diplomate assistants. There are two types of primary school teachers. The type 2 teacher holds a Malawi Certificate of Education (four years of high school), plus they have completed a two-year Teachers Certificate. A type 3 teacher holds a Junior Certificate (two years of high school), plus a two-year Teachers Certificate. Type 4 teachers have a primary education plus a Teacher's Certificate. Type 4 teachers are either being upgraded to type 3 teachers or being phased out of teaching. Type 1 is a promotional grade reserved for headmasters of school principals. Due to a shortage of qualified teachers, unqualified ones are often hired and allowed to attempt to pass the Junior Certificate Exam. They are given short in-service training courses to upgrade their knowledge base and skills.

Secondary school teachers are trained at the School of Education. This school awards three types of professional qualifications, which are the Diplomas of Education, Bachelor's of Education, and the University Certificate of Education. Secondary school teachers are in general better educated and better paid than primary school teachers. Prospective teachers enter as either degree or diploma candidates and follow the course of study for a general degree in education. Those taking diplomas continue for a third year of study and take courses in educational pedagogy, methodology, and the subject that they will eventually teach. Those taking a Bachelor's degree continue for a fourth year of study, which concentrates on their subject area, for example European History, as well as education courses. A fifth year of study allows these students to study educational methodology and to practice teaching.

A University Certificate in Education course is shorter and aimed at graduates without teaching qualifications who wish to become teachers none the less. Students take a three week intensive course and then teach classes for a year. Following this experience, they spend one more year in study at the School of Education where they take courses on education and methodology, which is followed by supervised practice teaching.

Technical teachers often train abroad at polytechnic institutes or locally. Most secondary school technical teachers train in England, while primary school vocational teachers train locally. The Ministry of Education offers a continuous stream of courses to upgrade and develop working teachers, especially unqualified teachers. Secondary school teachers take upgrading courses at the University of Malawi where they spend two years with pay while advancing their education. Unqualified teachers can earn a University Certificate of Education, and diploma teachers can transform themselves into graduate teachers by working for the two year Bachelor of Education degree. Short in-service courses are also offered by the Ministry of Education at their headquarters and regional offices. These courses teach teachers how the educational system works and help them to improve their teaching skills as well.

Most professors are expatriates. Malawi citizens who serve as professors constitute 30 percent of the university's faculty. In 1977 the university needed 170 professors, but 51 positions were vacant because they were difficult or impossible to fill due to funding and working conditions. A total of 87 of the 199 working faculty or 87 percent were expatriates. While 27 percent of the professorate were from Malawi and a further 48 percent were pursuing advanced degrees abroad, there is no guarantee that they will return due to the ''brain drain'' and higher salaries and better working conditions abroad. There is a need both to upgrade or develop personnel currently serving as professors and to train many more Malawi natives to fill these posts.

SUMMARY

Despite many problems, Malawi's population is growing fast, and the long years of colonial oppression and oppression by the Banda regime have ended. A population hungry for basic education is finally receiving it since primary education is for the first time free and compulsory. Much work still remains to be done in terms of improving the quality of the primary schools and the education that they deliver to students in Malawi, but progress can be seen each year. Education no longer stresses academic preparation leading to access to secondary school and universities, rather the stress is now on agriculture and practical training since few students go on to high school or university and most begin work immediately after primary school. Secondary and university education have seen dramatic growth but neither educational sector comes close to meeting Malawi's educational needs for a well-trained labor force. This leaves Malawi dependent on foreign well-trained labor to fuel its advancement. Efforts are being made to correct this, but it is a problem that may take several decades to overcome, as the solutions will be expensive and difficult to realize.

Assuming an absence of political violence and turmoil, Malawi's future looks brighter and more hopeful than at any other point in its past.

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—Dallas L. Browne

MALAYSIA

BASIC DATA

Official Country Name:	Malaysia
Region:	Southeast Asia
Population:	21,793,293
Language(s):	Bahasa Melayu, English, Chinese (Cantonese, Mandarin, Hokkien, Hakka, Hainan, Foochow), Tamil, Telugu, Malayalam, Panjabi, Thai, Iban, Kadazan
Literacy Rate:	83.5%
Academic Year:	January-November
Compulsory Schooling:	9 years
Public Expenditure on Education:	4.9%
Libraries:	471
Educational Enrollment:	Primary: 2,840,667 Secondary: 1,889,592 Higher: 210,724
Educational Enrollment Rate:	Primary: 101% Secondary: 64% Higher: 12%
Teachers:	Primary: 148,000 Secondary: 102,139 Higher: 14,960
Student-Teacher Ratio:	Primary: 19:1 Secondary: 19:1
Female Enrollment Rate:	Primary: 101% Secondary: 69%

HISTORY & BACKGROUND

Malaysia is a commendable example of how a country, with definite goals and pointed persistence, can achieve impressive progress in the field of education in a relatively short period. According to one source, its literacy rate of 93 percent at the end of the twentieth century is one of the highest in the world. Malaysia has taken important strides consistently since its independence (*Merdeka*) in 1957 and even more dramatically since

Prime Minister Dr. Mahathir Mohammad held before the people his ''Vision 2020'' for all fields of governmental activity, including education. Its goals are to create a corps of educators fully qualified to develop the country into a ''regional education hub.'' The country's mission is to ''to create knowledge workers who will become a critical national resource with the capacity not only to absorb and master the new and emerging technologies but also to innovate and manage change.'' The goal is to put Malaysian students ''on par with the top students in some of the world's best universities.'' The education scene in Malaysia exudes positive, optimistic synergies.

Consisting of the Malay Peninsula or West Malaysia and the states of Sabah and Sarawak (East Malaysia) in the northwestern coastal area of the island of Borneo, Malaysia covers an area of 127,581 square miles. The two areas are separated by about 400 miles of the South China Sea. West Malaysia covers an area of about 50,806 square miles, or 40 percent of the country. Sabah and Sarawak cover about 60 percent of the total area, though they have only 21 percent of the population. Peninsular Malaya is bounded on the north by Thailand while Sabah and Sarawak are bounded by the South China in the west and by Indonesia's Kalimantan in the east and the south.

Historically, the Malay Peninsula was a sparsely populated area. The land had little possibility of agriculture and its mineral deposits remained largely unexploited. The narrow northern neck of the peninsula was used for trade between the East and the West. The Malay people are of the same racial stock as those of the Indonesian islands but few settled in Malaya, preferring the fertile lands of Jagva. In the process of transmission of Indian culture to Southeast Asia, the people of Malaya absorbed Hinduism and Buddhism. The tradition of a Buddhist monk doubling as a village school teacher began in the early centuries of the Common Era and continues through the centuries.

Unlike neighboring countries Burma (Myanmar), Thailand, and Cambodia, no major kingdoms developed or lasted in the Malay Peninsula for lack of economic resources. Not until the fifteenth century did the first major polity encompassing all of Malaya emerge. In 1402, Parameshwara, a prince from Palembang in Sumatra across the Straits, established his kingdom on the Malay Peninsula at Melaka (*Malacca*). In a bid to attract the East-West trade as well as the regional trade and shipping, he provided excellent facilities for merchants and mariners from India, China, Java, Champa, Pegu (Lower Burma), and Arabia, who needed to spend several months in a year until the monsoons subsided. In the process, he and the dynasty he established created the tradition of a multi-ethnic, multi-religious society thriving in an atmosphere of coexistence and cooperation in separate quarters of the city-state.

Islam was spreading fast in the insular region particularly among the trading and shipping communities. In order to spread the religion and create a thalossocracy embracing the entire peninsula, the Malacca sultans (rulers) entered into matrimonial alliances with the ruling chiefs across Malaya. For a century until the Portuguese conquered Melaka in 1510, it remained the center of commerce in Southeast Asia and of Islam in the peninsula. The population of peninsular Malaysia is more multiracial, multi-religious, and multilingual than that of Sabah and Sarawak. Malays and other indigenous people are called *bhumiputeras* (children of the soil); Chinese and Indians are the two other major communities. Of these, Chinese are about 36 percent in peninsular Malaya and in Sabah and Sarawak. Indians number about 11 percent in peninsular Malaya and in Sabah and Sarawak. These numbers are relevant not only for the country's political balance and racial harmony but also for the formulation of educational policies directed toward national integration.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Federation of Malaysia was born in 1963. Two years later, Singapore seceded to form an independent and sovereign state. Malaysia, thereafter, constituted 11 states of peninsular Malaya—Perak, Kedah, Selangor, Negri Sembilan, Johor, Pahang, Perlis, Kelantan, Terengannu, Melaka and Pulau Pinang and two states on the island of Borneo, namely, Sabah (formerly North Borneo) and Sarawak. Sandwiched between Sabah and Sarawak is the small sultanate of Brunei, whose extreme fortunes are built on oil. Besides the 13 states, there are two federally administered territories, namely, the country's capital of Kuala Lumpur in Selangor State and Labuan.

Malaysia has, since its inception in 1963, been a federal democracy with Kuala Lumpur as the federal capital where the federal legislature and the Supreme Court are housed. Nine states of peninsular Malaya are headed by hereditary rulers, the sultans, who constitute the Conference of Rulers and elect, mostly by rotation, one of themselves, as the Yang Di Pertuan Agong (Supreme Head of State) for 5 years. Melaka and Pulau Pinang on the peninsula and Sabah and Sarawak in East Malaysia are not members of the Conference of Rulers. Each of the 13 units of the federal polity has an elected government on the Westminster pattern with the chief minister and his cabinet belonging to the party with the largest number of elected representatives in the lower house. At the federal level, the prime minister and his cabinet belong to the majority party in the lower house of the parliament.

EDUCATIONAL SYSTEM—OVERVIEW

A decade before the end of the British rule, the educational system in Malaya was reorganized along the lines of the Barnes Report of 1951. Up to that point of time, Malaya's educational system lacked uniformity in curriculum and an articulated rationale for a policy which would be relevant to the political and socio-economic goals of the people. The country's three principal ethnic communities—Malays, Chinese and Indians (mostly Tamils from South India)—ran their own schools, the latter two often importing a syllabus used in the countries of their origin. The Barnes Report recommended a national school system, which would provide primary education for 6 years in Malaya and English, hoping that over a period of time, the attraction to have separate schools in Chinese and Tamil would wane and disappear. The reaction of the Chinese community to the Barnes Report was not totally positive. While the community agreed with the basic recommendation that Malay be treated as the principal language, it felt that there should be some provision to recognize Chinese and Tamil as important components of a new definition of Malaya's national identity.

Partly to pacify the ethnic sensitivities, the colonial government approved a modified formula that would allow bilingualism in Malay schools (Malay and English) and three language ''solution'' in Tamil and Chinese schools (either Tamil-Malay-English or Chinese-Malay-English). It recommended a common curriculum for all schools, hoping that a national school system would evolve. In 1955, two years before Malaya's independence, the Razak Report endorsed the concept of a national education system based on Malay (the national language), being the main medium of instruction. A key paragraph from it was reproduced in Section 3 of the Education Ordinance of 1957:

> A national system of education acceptable to the people of the Federation [of Malaya] as a whole which will satisfy their needs and promote their cultural, social, economic and political development as a nation, having regard to the intention to make Malay the national language of the country while preserving and sustaining the growth of the language and culture of other communities living in the country.

In the national discussion that followed the Razak Report, two alternative models figured: Switzerland with three languages had fostered national unity ''without impairing the autonomy and equality of different languages and cultures.'' On the other hand, the United States had assimilated the divergent immigrant communities by the use of a common dominant language. The Razak Report revealed an intention to follow the American model. At the same time, the last part of the concluding sentence endorsed the need to include the Swiss component of ''sustaining the growth of other languages and cultures'' in order to foster the unity of all people.

The Razak Report recommended two types of secondary schools: those using Malay as the medium of instruction to be called ''national schools'' while those using Chinese, Tamil or English were to be designated ''national-type schools.'' Both being ''national,'' the government should give financial aid to both the types. With the attainment of independence, the new government basically followed the Razak Report. There was no problem at the primary school level since the child's mother tongue would be the medium of instruction. The parents had the option to choose any other language; in practice, such a choice would narrow it down to the use of English as the medium of instruction. There was also a general consensus that at a later stage at the primary level, English and/or Malay could be learned as a ''foreign language.'' The emphasis in these early years was on the need to establish a system that would foster national unity but not at the cost of harmony among the three communities, each of them being keen on preserving its own cultural traditions. Therefore, until the mid-1960s, the government focused on upgrading the content of education rather than on the medium of instruction. Thus, the grant-in-aid to schools were tied to adopting the national curriculum and to offer professional training to teachers to qualify them to teach the advanced syllabus in most subjects particularly, mathematics and sciences. This was because the government felt obliged to link education to the needs of an expanding, modern economy.

In 1967, Malaysia proclaimed Bahasa Melayu the national language for purposes of administration and education. In an effort to promote national integration, it was progressively made the main medium of instruction in schools and institutions of higher learning. At the same time, the people had the option to use their mother tongue and other languages.

In late 2000, the Malaysian government announced that technology education and high-tech industries would have leading roles in the country's economy which would thereafter be predominantly ''knowledge-based'' or ''K-economy.'' It would address the country's ''digital divide by de-emphasizing past practices of promoting businesses run by ethnic Malays.'' For this purpose the government would focus on education ''as a means to deliver the promise of empowering the individual in the twenty-first century.'' In real terms, economy and education would aim at closing the digital divide between the rural and urban centers of population. The emphasis on high-tech economy and education shifted the government focus from the practice of hand-picking individuals and businesses under the indigenous or Bumiputra policy to

introducing information technology at the level of the masses.

The government had emphasized developing a technology infrastructure program called the Multimedia Super Corridor (MSC). By the end of 1999, there were 32 MSC-approved companies, 33 percent of which were software companies and 29 percent dealt with multimedia. Together, the MSC companies helped to augment the manufacturing output of the country by an estimated 20 percent for several years. There was criticism, however, that the MSC helped the upper class industrialists and businessmen leaving the middle and lower classes and rural populations out of the prosperity loop. The anomaly would be rectified through the new policy. The 2001 budget provided for the spread of computer literacy on a mass scale, including computers in all schools, building 167 schools and 4 new universities, and allocating $316 million for training institutes. If the trend continues, Malaysia would join nearby Singapore in its efforts to minimize the digital divide.

PREPRIMARY & PRIMARY EDUCATION

In Malaysia, the preschool education, outside the home, begins at the age of four or five in kindergartens, which are run both by the government as well as nongovernmental agencies and the private sector. The Ministry of Education interferes the least at this level of education. It does provide broad guidelines in terms of a ''curriculum,'' teaching approaches and how to provide a ''secure and stimulating environment'' for preschool children, but it also allows considerable flexibility to the managements and teachers of such schools to make variation in the style and content of teaching. Such variation is specially allowed at the preschool and tertiary education (university education) levels. In 2000, there were 1,076 public kindergartens with 27,883 kindergarten students and 1,699 teachers. Additionally, there were 2,161 private kindergartens.

Education is provided free by the government. It is not compulsory. Yet, 99 percent of all six-year-olds attend the primary school and 92 percent of all students go on to the upper secondary schools. Sensitive to the multiethnic character of its population, Malaysia has set up two categories of schools: national schools and national-type schools. Schools of all levels operate on a semester system for a total of 41 weeks in a year. Because of a shortage of school space, some schools in urban centers operate in two shifts: morning and afternoon.

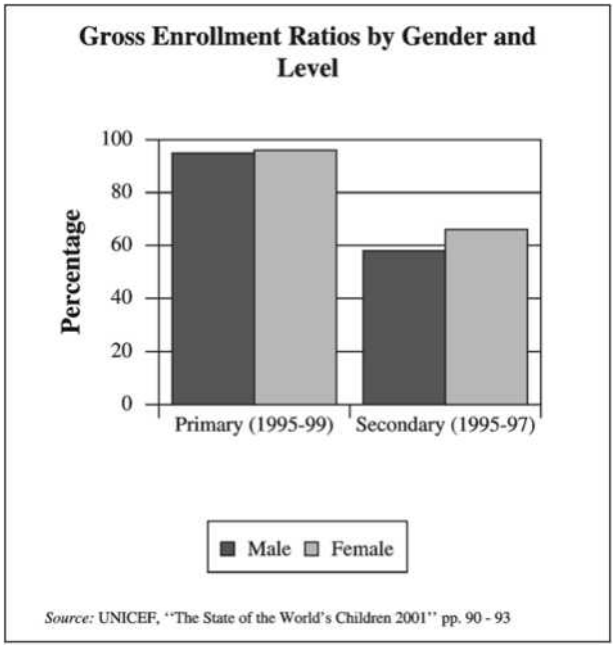
While most of the primary and secondary schools are run by the government, there is a growing number of private schools. They are becoming increasingly popular because they give students a greater degree of mobility. At any stage, they can opt out of the private schools and join the national schools and vice versa. Such private schools use either a Malaysian syllabus or one from an overseas school. Some private schools also offer a 2-year Sixth Form program which prepares the students for entry into local or foreign universities.

The Malaysian system of education comprises four levels: primary, lower secondary, upper secondary, and postsecondary schools. Parents are free to choose the type of school, national (Bahasa Melayu) or ''nationalist-type'' Chinese or Tamil. Students completing six years of primary education are automatically promoted to lower secondary level. Those from the ''national-type'' schools are required to spend a year in transition class in order to acquire sufficient knowledge of Bahasa Melayu to be able to follow the instruction at the lower secondary school level (or Form I as it is called), where the medium of instruction is only in the national language, Bahasa Melayu. At the primary level, the emphasis is on the acquisition of strong writing and reading skills as well as a good foundation of maths and basic sciences. Two assessment examinations at the end of the third and the sixth years enable an evaluation of the student's performance. Those who perform extremely well at the third year examination are often allowed to skip the fourth year and go directly to the fifth year. The government also runs some residential schools providing a stimulating environment for some specially gifted students interested in specializing in sciences. In such schools, there are special facilities for students to cultivate fluency of English so that they are better able to assimilate advanced knowledge in science and technology. In 2000, there were 7,084 primary schools with 2,870,667 students and 150,681 teachers giving a teacher-student ratio of 1:19.

The Ministry of Education's policy is to try to accommodate the particular needs of the visually and hearing impaired as well as of those with learning difficulties, within the mainstream school system. Special facilities may be given to some students for some time, but the goal is to integrate them in regular classes as early as possible. In 2000, there were 283 schools that were equipped with special facilities and qualified teaching staff to help integrate such children within the general school system. However, there were 31 ''special education schools'' for those who need more intensive and personal one-on-one care and attention and who cannot be integrated into the mainstream schools.

SECONDARY EDUCATION

The lower secondary stage consists of three years (seventh to ninth grades or Forms I to III) at the end of which students take the Lower Secondary Assessment Examination (*Sijil Rendah Pelajaran* or PMR). Many of those who fail the PMR end their education and join the



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

labor market. Students who pass the PMR move to more specialized fields of study at the upper secondary school based on choice and aptitude for the arts or sciences ''streams.'' They may join technical or vocational school for two years. Both the categories of students are evaluated at year 5 through the Malaysian Certificate of Education examination (*Sijil Pelajaran Malaysia* or SPM). At the upper secondary level, several schools are set up to provide a technically-biased academic education and pre-employment skills. Some secondary schools offer the Malaysian Higher School Certificate (*Sijil Tinggi Pelajaran* or STPM) program which qualifies students for entry into the national universities, colleges, or teacher-training institutions.

In 2000, some of the students in lower secondary schools joined the upper secondary programs offered by the MARA Institute of Technology and colleges. They offer courses in technology, commerce, business management. MARA's polytechnics offer training courses in commerce and engineering to train technicians and junior executives. In 2000, there were 1,538 lower and upper secondary schools with 1,794,515 students and 96,523 teachers, with a teacher-student ratio of 1:18.6.

Technical education has had a longer tradition than higher education in humanities or social sciences. In 1925, a technical school was opened at Brickfields, Kuala Lumpur, which a half-century later, in 1972, became the University of Technology, Malaysia. After the country's independence in 1957 and formation of the Federation of Malaysia in 1963, the successive five-year plans focused on creating a ''market-sensitive'' education system, which would train enough people to meet the needs of industry and business. Efforts were also made to locate the technical school close to the location of industries so that the students could take advantage of practical training through observation or apprenticeship. Other objectives of vocational education included encouraging those who are not oriented to white collar jobs to take training in short-term and diploma courses and acquire technical skills to enter a vocation.

The technological education would include computer technology to keep the country in the league of developed countries. Another aim was to close the digital gap between the urban and rural populations in Malaysia. The prime Minister, Dr Mahathir's ''Vision 2020'' included technical and vocational education among the priorities for the nation. Consequently, the percentage of those who opted for these categories of education jumped from the 7 percent of those passing the PMR, in 2000.

Two kinds of students tend to take up technical and vocational education. Those who fail the Sijil Rendah Pelajaran or PMR given at the end of Form III or the ninth grade and those who pass the PMR, and move on to upper secondary school and choose technical or vocational school as one of the ''streams'' (some others being arts and sciences) for two years. There has been an increasing trend to include some technical and vocational education as a part of the regular curriculum in the regular secondary schools. An increasing number of students join the MARA Institute of Technology taking diplomas in engineering or business.

HIGHER EDUCATION

At the time of Malaya's independence in 1957, there was no university in the country. There was, however, a university in Singapore established in 1949 called the University of Malaya, which was established as a result of merger of two well-known institutions in Singapore. The only academic institution that offered courses leading to a degree was the King Edward College of Medicine in Singapore, which had been recognized as a full-fledged medical college since 1915. The second institution was the Raffles College, established in Singapore in 1928, which offered courses in English, history, geography, and some other subjects leading to a diploma. In 1959, a campus of the University of Malaya was opened in Malaya's capital, Kuala Lumpur.

Since the birth of the Malaysian Federation in 1963, higher education institutions (HEIs) have expanded phenomenally in number, student enrollment, and the range of specialties they offer. In 2000, there were 11 universities in the public sector, besides 6 private universities and 283 private colleges. The demand for higher education was so high that all six private universities were estab-

lished in just two years in 1996 and 1997 in response to public demand for admission to the HEIs and the inability of the government-funded HEIs to meet the need. In 1996, enrollment in the HEIs was 17,589; in 1997, it jumped to 28,344 students. Even so, in 1997, only one-third of the total of 86,384 applicants could be admitted. Consequently, in 1996, more than 15,000 students went overseas for higher education. The affluent conditions in the country have accounted for an exponential demand for higher education; in 1998, there were about 60,000 Malaysian students studying overseas—a large number in the United States and The Nanyang Chinese University.

The growth of higher education in Malaysia had a Chinese dimension, which affected the Chinese not only in Singapore but also people of Chinese origin in Malaya. Thus, in 1956, those who believed in Chinese education instead of Western established the Nanyang University in Singapore primarily for students from Chinese secondary schools in Malaya and Singapore. The low academic standards, inadequately-trained faculty, and an ''inward-looking concentration on all things Chinese'' at the Nanyang University in its early years were so inadequate that they failed to establish credibility among many of the forward-looking citizens. The governments of Malaya and Singapore refused to recognize the degrees of the Nanyang University as qualifications for entrance to the civil service; the industrial and business sector followed the government practice. Not wanting to allow the Nanyang University to lapse into a reactionary stronghold of Chinese nationalism, the government of Singapore reinstated in 1962, one year before the birth of the Federation of Malaysia, grants-in-aid to the Nanyang University. After Singapore pulled out of the Federation two years later, the fate of the Nanyang University remained no longer the responsibility of the Federation of Malaysia.

Admission to national universities in Malaysia for undergraduate education is determined by examination and selection. The minimum requirement is passing the SPM and STPM certificate examinations. Students must apply through the Universities Central Admissions Unit. Each university, however, has the option of deciding which students to admit. To help students from rural areas who may not have adequate preparation at the primary and secondary levels, some places are reserved in some national universities. There are also special facilities for students in the form of pre-university training programs and special incentives such as government fellowships.

The government shows the high importance it attaches to university education and its immediate relevance to the country's yearning for economic betterment in the days of increasing globalization. Thus, a Ministry of Education statement states:

> In the 21st century, the young person entering the workforce will be judged not so much on the knowledge and skills acquired, but on the capacity for lateral thinking, creativity, and an integrated approach to learning. The university system is expected to bridge the fundamental shift from an information-based society to a knowledge-based one. Malaysia is putting in place the hardware and software to equip students to take advantage of the opportunities offered by an increasingly interconnected world.

In late 2000, the government announced major plans to promote a ''K-economy'' or ''knowledge-based economy'' in which technology education would play a major role. This would aim at reducing the digital divide in the country in which the lower classes and rural population had been left out of by the revolution in Information Technology. The immediate plans, for which the Finance Minister provided $316 million in the 2001 budget included opening 4 new universities besides 167 new schools and funds for putting computers in all schools. If the plans are continued and there are positive prospects for such a development, Malaysian institutions of higher education will have new success not only in the field of computer technology but in its impact in the fields of politics, economics, sociology, social behavior, business management, and many others.

The Ministry of Education's Higher Education Division coordinates policies for university education although the universities are considered autonomous. Most of the work with the universities is done by a 10-member National Accreditation Board for higher education. The Board formulates policies on the quality of courses and the accreditation of certificates, diplomas, and degrees. The Board's goal is to ensure high academic standards on par with the best universities in the world. In order to provide equity and a balanced representation of various disciplines and programs, the membership of the Board is drawn from faculty of the various public universities.

Unlike academics in many non-Communist developing countries who try to keep distance from business and industry, the Malaysian universities and research institutions have been very open about the desirability of building cooperative and cordial bridges with government and industry. The government encourages the research-oriented department of universities and research and development institutions to interact with industry. Such collaboration is promoted through the National Council for Scientific Research and Development. This includes joint research projects with multinationals who are a large part of Malaysia's economic landscape. A separate government organization, the Malaysian Technology Development Corporation, promotes linkages among companies, innovators, entrepreneurs, and financial institutions for industrial exploitation of university research projects.

The ''purpose-built'' construction of high-tech parks close to major universities enable effective interaction between academia and industry and the optimum utilization of resources and capabilities of both. As the Ministry of Education proclaims, ''the emphasis is on matching research and development efforts with market needs within a dynamic and flexible environment. This provides students with a unique learning opportunity where classroom knowledge can be immediately tested in a real-life business environment.''

Malaysia has taken several steps to bring its education in line with the developed world. It claims to have entered into ''strategic alliances'' between Malaysian universities and selected overseas universities known for specific areas of expertise. There is a discernible urge to ''internationalize'' the curriculum particularly in the areas of technology, business management and accounting. For this purpose, a number of public (called ''national'' in Malaysia) and private universities and colleges offering education packages were put together in collaboration with ''the most reputable academic institutions in the world.'' Additionally, several accounting firms have been registered as training organizations for ''chartered accountants'' offering ''articleship'' to aspiring candidates.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education formulates the national educational policy in terms of the goals and objectives set by the Prime Minister, Minister of Education, and the Cabinet. It periodically prepares plans, programs, and projects to fit into the national Five-Year-Plans. Although the country's constitution provides for decentralization of certain powers to the states, the federal Ministry of Education has throughout Malaysia's history played a superior role in laying down policies and guidelines for the state-level education departments, and at times, the district level officials in charge of education.

The Ministry of Education functions as two wings: academic and administrative, headed by the Director-General of Education and the Secretary-General. At the apex of policy planning in the Ministry is the Educational Planning Committee (EPC) of which the Minister of Education is the head. Its sub-committees formulate policies regarding curriculum and preparation of text-books, development, finance, higher education, scholarships, and teacher training for approval by the EPC.

Roughly corresponding to these committees are 12 academic divisions. The Educational and Planning and Research Division is a very important division connected to the EPC. Another is the Curriculum Development Center responsible for disseminating effective teaching methods and strategies as well as new curricula programs and for producing support materials. The Textbook Division, which gets the textbooks written in conformity with the revisions in curriculum and printed in time for the beginning of the classes. Support in the form of audio-visual facilities and other kinds of technology is provided by the Educational Technology Division while a still separate Technical and Vocational Division assists the vocational secondary schools and polytechnics in revising curriculum and supply of the state-of-the art technical facilities. A special division, the Computer Services Division provides not only the physical facilities and their upgrading but also consult services. Another division named the Examination Syndicate is responsible for conducting all national-level examinations. Inspection and supervision of effective instruction and management of school of all levels comes under the Federal Schools Inspectorate. Still another division deals with all questions pertaining to the teaching of Islam.

The Ministry of Education requires all educational institutions, whether they are in the public or private sectors, to observe the rules and regulations regarding the registration of schools. The Schools and Teachers Registration Division ensures the academic qualifications of teachers and that the physical facilities in schools follow certain standards. Teachers and academic administrators needing upgrading receive training at the Aminuddin Baki Institute, which functions directly under the Ministry of Education.

The Ministry's Higher Education Division coordinates policies for university education although the universities are considered autonomous. Most work that pertains to connecting with the universities is done by 10-member National Accreditation Board for public and private institutions of higher education. The Board formulates policies on the quality of courses and the accreditation of certificates, diplomas, and degrees. The Board's goal is to ensure high academic standards in keeping with the best universities in the world. In order to provide equity and a balanced representation of various disciplines and programs, the membership of the Board is drawn from faculty of various public universities.

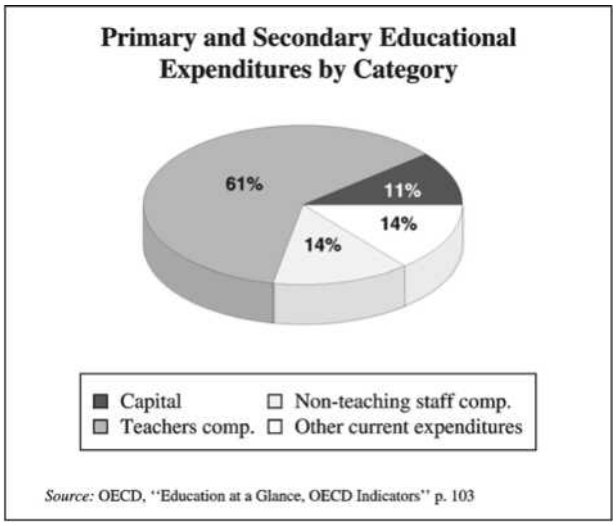
Also working with the Division of Higher Education is the External Affairs Division, which looks after the country's cooperative ties with other institutions of higher education in the region as well as across the world. The Scholarships Division deals with financial assistance to students and teachers within the country as well as for Malaysian students studying abroad Lastly, there is the Computer Services Division, which provides technical expertise in management of information services.

At the state level, the State Education Departments are headed by directors. These departments are responsi-

ble for the implementation of all educational programs, projects, and activities in the state. They also conduct monitoring of curricular programs in schools as well as give professional advice to teachers. In service courses, particularly those pertaining to the training and dissemination of new curricula, have become a major activity at state level. Regular feedback on the implementation of educational programs is relayed to the Ministry through regular meetings and discussions between these departments and the Ministry.

Malaysia has, since its inception, been liberal with funds for its educational establishment, spending on education in 1997, the largest portion of the budget at 22 percent. In that year, the allocation for education was augmented by 30 percent. This is exclusive of expenditure on the well-known MARA Junior Science colleges, which because of their rural bias are not funded by the Ministry of Education but come under the purview of the Ministry of Rural and National Development. The major items of expenditure include 11 years of free schooling at primary, lower secondary and secondary levels. There are plenty of scholarships available to the deserving, both on grounds of academic merit and economic need. The Textbook Division of the Ministry of Education makes textbooks available to the needy on a free loan basis. There are residential schools for secondary-level science students for those coming from the less developed northern Malay states or rural areas. Those who are economically disadvantaged are fully subsidized including boarding facilities.

A major item in the education budget is higher education, which includes ten public universities and a number of research institutions. Tuition is free and there are a large number of fellowships and grants available for the economically disadvantaged. The Ministry of Education's Scholarships Division and External Affairs Division jointly assist placement and funding of students going overseas for advanced studies. Until the mid-1980s, the preferred destination was Great Britain. The deep cuts in allocations to universities, which resulted in virtual abolition of financial assistance to foreign and Commonwealth students during the government of Prime Minister Margaret Thatcher, sharply reduced the number of Malaysian students going to the United Kingdom. Instead, thousands of them, as many as 20,000 annually made their way to U.S. universities where the prospects of some funding at some time during a student's academic career held hope of financial relief. Malaysia's growing prosperity based on trade and industry ties with American counterparts also paved the way for an increasing number of Malaysian students from affluent families to prefer the United States over the United Kingdom for higher education. The unit costs in 2000 were estimated at US$350 at the primary level; US$560 at the secondary level for arts and science; US$1,500 for secondary vocational; US$950 for polytechnics; US$5,000 for teacher training; and US$7,000 for university education.



Since the mid-1990s, the Malaysian government instituted a Total Quality Management (TQM) program in all its ministries and departments, including in the Ministry of Education. A major study in the field of education in Malaysia by Professor Gopal K. Kanji of the Sheffield Hallam University (U.K.) and his associates, Abdul Malek Bin A. Tambi and William Wallace in 1999, evaluated TQM in the Ministry of Education and in higher education institutions (HEIs). A merit of the study was its detailed comparison of TQM in Malaysia and the United States.

The government's policy in education, particularly higher education, is to bring it in line with the country's manpower planning and to provide the country with the right and adequate supply of trained manpower to keep pace with economic growth and the country's publicly declared goal to make Malaysia ''a regional center of excellence in education.'' Accordingly, in 1992, the Public Services Department, which is the highest public administrative agency, introduced guidelines in TQM for all the ministries, departments, and other agencies of the government and appointed appropriate certification bodies to conduct audits of their performance in accordance with TQM and ISO 9000. Institutions (HEIs) implement the guidelines and subject themselves to TQM audit. Under these regulations, the Public Services Department regulates Higher Education.

In keeping with these requirements, the Ministry of Education introduced the TQM by launching a ''customer charter'' on April 1, 1996. The Ministry formed a policy and quality section to monitor the education policy at all levels based on the TQM principles. Within 6 months

of the launching of the customer charter, the National Higher Education Council was established in September, 1996 to monitor standards in the government HEIs and a ''grading system'' was laid down to assess the effectiveness of each academic department and its faculty. In the following year, in July, the government announced the formation of the National Accreditation Commission to assess the quality and standards in private universities on lines similar to those prescribed for public HEIs. The whole process of implementing the TQM and assessment of performance is aimed at improving the ''productivity'' of HEIs with the obvious intention of linking quality assessment and government funding of HEIs, particularly universities in the public sector.

The study of TQM in the field of education in Malaysia and its comparison with European and American experience in TQM was very effective. Gopal K. Kanji and his associates conducted an extensive survey, collecting data from Malaysia and the United States in December 1997 (Malaysia) and February 1998 (United States) to gauge the extent of TQM implementation in Malaysian HEIs, factors involved in the TQM evaluation, and what critical elements in the process affect TQM results. Their objectives included an assessment of the TQM in HEIs in terms of their ''contribution to the organizations' performance and business excellence.''

A preliminary report of the study, published in mid-1999 pointed out that while some HEIs in Malaysia introduced TQM as early as 1992, ''quality control circles'' had been implemented by some as early as 1978. On the other hand, several HEIs planned to get ISO 9000 certification and not implement TQM at all. The study evaluated TQM in the Malaysian Ministry of Education in general and in higher education institutions (HEIs) in particular. A merit of the study was its detailed comparison of TQM in 216 HEIs in Malaysia and 294 in the United States. The ''critical success factors'' considered were the following: leadership; continuous improvement; prevention; measurement of resources; process improvement; internal customer satisfaction; external customer satisfaction; people management and teamwork.

The study's findings include: (1) Most of the Malaysian HEIs, 88.5 percent of them, are small, having less than 5,000 full-time students, compared to 49.1 percent in the United States. (2) The proportion of HEIs adopting TQM in Malaysia is 50.0 percent versus 95.5 percent in the United States; the adoption in either country of TQM does not depend on the age of the institutions. (3) The correlation between leadership and TQM is very high in both the countries. The institutional leadership was responsible for introduction of TQM in 77.4 percent of the institutions in the United States and 75.9 percent in Malaysia. (4) Some of the barriers to TQM are lack of commitment, insufficient knowledge, and fear of failure. (5) There is less high level expertise in TQM in the United States (25.9 percent) than in Malaysia (17.9 percent). On the other hand, there is a greater acceptance of ''quality culture'' in Malaysian HEIs (60 percent) than in their U.S. counterparts (47.2 percent). (6) In order to promote a higher degree of ''quality motivation,'' The Malaysian HEIs reward their employees much more than than in the United States. In Malaysia, such incentives are in the areas of job promotion and vacations; in the United States they are given in the form of psychological and sociological rewards such as recognition and organizational support. The study attributes the variation to ''typical cultural difference between the two countries.''

NONFORMAL EDUCATION

Nonformal education is a combined enterprise of several government ministries, departments, and special agencies. It is provided also as a vocational or technical education for imparting specific skills for unemployed young people who are motivated to enter some vocational trade as a career. This conforms with one of Malaysia's larger objectives, namely, to create a ''market-sensitive'' system of education. Among other things, are to prepare candidates for productive activity to participate actively in commerce, industries, and other economic enterprises and to promote an awareness of the working environment, hence bringing about changes in society. Among the government agencies providing education and training programs are the Ministry of Human Resources; the Ministry of Culture, Youth, Sports and Welfare Services; the Ministry of Agriculture; the Ministry of Land and Regional Development; the Adult Education Division of the Ministry of Rural and National Development; and several government statutory bodies such as the National Unity Board, the Council for the Indigenous People, the National Productivity Center, and the Federal Land Development Authority. Programs include courses in apprenticeship, skill upgrading, instructional and technical skills, leadership, business, agriculture, preschool education, electrical and mechanical engineering-related fields, and commerce.

TEACHING PROFESSION

District/Division education offices have been set up in all but three states with the purpose of forming linkages between schools and State Education Departments. These education offices assist the state departments in the supervision of educational programs in the schools within the district. The State Resource Centers and the district Teachers Centers have been established to improve teachers' accessibility to media services and reference materials with the aim of enhancing teaching. These centers also provide an environment where teachers can

work and interact with one and another and receive assistance and guidance. Activities conducted at these centers include workshops and in service courses for teachers.

SUMMARY

The Ministry of Education formulates the national educational policy in terms of the goals and objectives set by the Prime Minister, Minister of Education, and the Cabinet. It prepares plans, programs, and projects periodically to fit into the national Five-Year-Plans. Although the country's constitution provides for decentralization of certain powers to the states, the federal Ministry of Education has throughout Malaysia's history played a superior role in laying down policies and guidelines for the state-level education departments, and at times, the district level officials in charge of education.

Unlike academia in many non-communist, developing countries keeping ostensibly away from business and industry, the Malaysian universities and research institutions have been very open in building bridges with the industry. Close collaboration among some university departments, research and development institutions, and the private sector have been promoted through the National Council for Scientific Research and development. This includes joint research projects with multinationals, who are a large part of Malaysia's economic development. A separate government organization, The Malaysian Technology Development Corporation is engaged in promoting linkages among companies, innovators, entrepreneurs, and financial institutions for the ''commercialization'' of university research projects. Notable is the ''purpose-built'' construction of high technology parks close to major universities to enable interaction between academia and industry and the optimum utilization of resources and capabilities of both. As the Ministry of Education proclaims, ''the emphasis is on matching research and development efforts with market needs within a dynamic and flexible environment. This provides students with a unique learning opportunity where classroom knowledge can be immediately tested in a real-life business environment.''

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—D. R. SarDesai

MALDIVES

BASIC DATA

Official Country Name:	Republic of Maldives
Region:	East & South Asia
Population:	301,475
Language(s):	Maldivian Dhivehi, English
Literacy Rate:	93.2%

HISTORY & BACKGROUND

The Republic of Maldives, or Dhivehi Jumhuriya, is situated in an archipelago of approximately 1,190 low-lying coral islands in the Indian Ocean about 300 miles southwest of India. The islands cluster into 24 natural atolls, grouped for administrative purposes into 19 atolls. The entire land-mass of the nation covers about 115 square miles, spanning an area of 500 miles north to south, and 80 miles east to west. The 197 inhabited islands afford sandy beaches, lagoons, and lush tropical vegetation, with an abundance of coconut palms and breadfruit trees as well as limited arable land. The climate is hot and humid, averaging 80 degrees Fahrenheit, and most of the sixty inches of annual rainfall comes between May and November. Male, the capital island, is in the central part of the archipelago, approximately 400 miles southwest of Sri Lanka. Maldives is one of the world's most economically disadvantaged and environmentally endangered countries. Its monetary unit is called a *Maldivian Rufiya*. Its economy relies on a fast growing tour-

ism sector, alongside the more traditional activities of fishing and fishing-related industry, boat building and repair, handicrafts including coir products, fish products, lace, and lacquer work. The geographical characteristics of this island nation require the dispersion of educational facilities across inhabited atolls and islands and the use of boats for transportation between them.

The nearly 300,000 people in the Maldives have heterogeneous cultural roots based in their Indian, Sri Lankan, Arab, and African origins. The history of Maldivian settlement dates back to the fourth or fifth century B.C. when Southern Indian and Sri Lankan Buddhists first arrived there. In the twelfth century, with new migration from Malaya, Madagascar, Indonesia and China, Islam came to the Maldives and has been the official state religion since then. Between the sixteenth century and the present day, governance in the Maldives has gone through various Islamic and European phases. The seafaring Portuguese took control of the islands in 1558 till their ouster in 1573. The Dutch held the island Sultanate as a protectorate in the seventeenth century. The British took over this position from the Dutch in the nineteenth century (in 1887) following their takeover of Sri Lanka. In 1932 the first democratic constitution was proclaimed while the Sultanate remained. In 1953 a Republic was proclaimed which later reverted to a Sultanate in 1954. Eventually in 1965 full independence was gained from the British. Thereafter in 1968, a new Republic was inaugurated, the Sultanate was abolished, and the Maldives took membership in the United Nations. Later, in 1982 it became a member of the Commonwealth of Nations. March 29, 1976, the day the last British troops left the Maldives, is celebrated as Maldives Independence Day. In 1988, an internal coup attempt aided by Tamil mercenaries was thwarted with the help of the Indian Armed forces. Today in this multicultural Republic, Dhivehi is the official language although Arabic, Hindi, and English are also spoken. Traditional education provided in Dhivehi and based on the teachings of the Quran as well as modern education provided in English guided by international curricular standards are both offered.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Constitution of the Maldives, instituted in 1968, designates the President as Head of State elected to a five-year term by universal suffrage afforded to citizens aged 21 and above. A unicameral Citizens' Council or *Majlis*, also elected to a five-year term is comprised of 48 members, two of whom are from the capital Male, two from each of the nineteen atolls and eight appointed by the President. The *Majlis* nominates the presidential candidate and is the body to which the President's cabinet is accountable. The President appoints all judges who administer justice according to the tenets of Islamic Law. Women are not allowed under the current constitution to hold the apex political office, but all other political, administrative and other posts are open to them. The Maldivian President Maumoon Abdul Gayoom was elected to his fifth five-year term in 1998 with more than 80 percent of the vote in the national referendum. The government has placed priority on eradicating illiteracy, universalizing primary education, and expanding access to secondary education as well as improving the quality and career-based applicability of education.

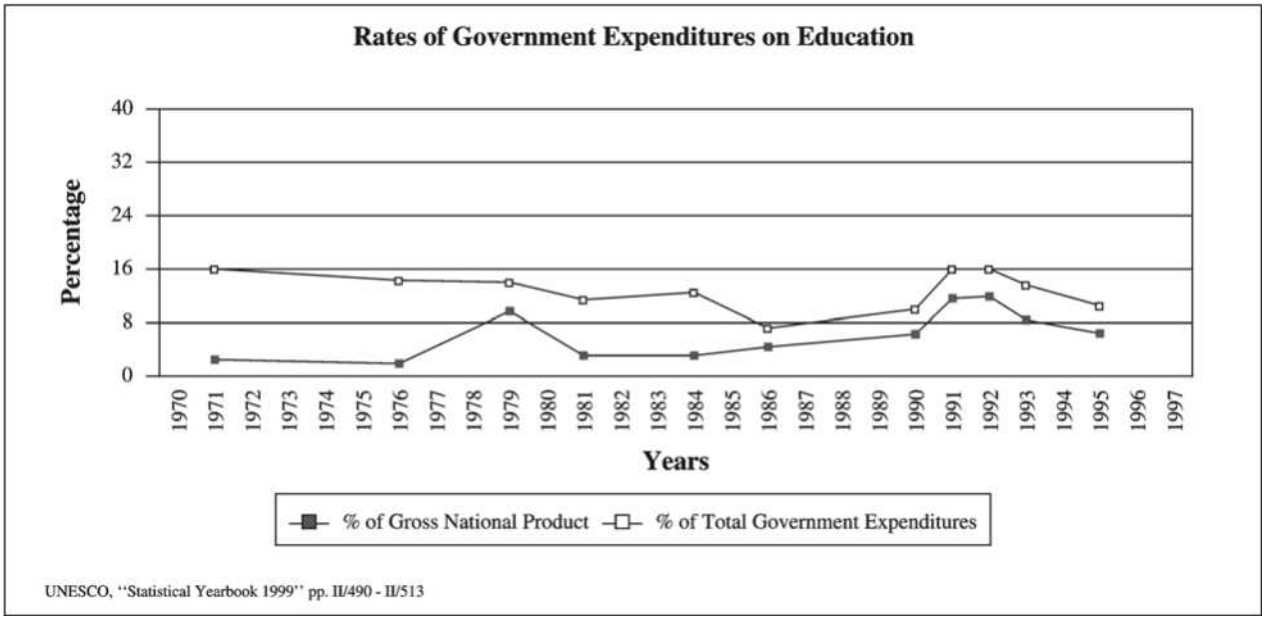
EDUCATIONAL SYSTEM—OVERVIEW

Maldivian society is marked by a high growth rate (2.8 percent) and a declining mortality rate resulting in a youthful population with 46.5 percent of the people being under the age of 15. This creates a heavy dependency ratio of the young on the working, causing particular economic challenges for the nation in the provision of education. Double and in some cases triple shift schooling, maintaining large student-teacher ratios, hiring part-time staff, administering schools in clusters, inviting private sector partnerships and parent/community contributions (where possible) are some of the measures that are being used to deal with the situation.

In Maldives, education has had a long history starting with the traditional, home-based teaching of Dhivehi, the Arabic script, and the Holy Quran in home-based centers known as the *edhuruge* or *kiyavaage*. Since the early part of the twentieth century, government schools for boys and later for girls were created in Male and by mid-century in each inhabited atoll. These schools, called *maktabs* maintained the traditional curriculum along with mathematics. In the 1960s the introduction of English medium schools by the government had the effect of relegating traditional education to a second-class status. Since 1978, the government has pursued a unified education policy by establishing two government schools, Atoll Education Centers and an Atoll School in each atoll and a policy of equitable distribution of facilities and funds to them. These schools are also unified by a common curriculum for grades 1 to 7, in keeping with the national priority of providing universal basic education (defined as grades 1 to 7). The curriculum covers Dhivehi, mathematics, environmental studies, Islam, English, fine arts, physical education, handwriting, and study of the Quran. The school year runs from February through December and the net enrollment ratio in basic education is reported to be 95 percent. Literacy figures are reported to be over 98 percent and gender parity for basic education at 49 percent for females and 51 percent for males.

PREPRIMARY & PRIMARY EDUCATION

Preschool education is provided in a two-year cycle in Male and is gradually becoming available in the other



atolls as well, reaching more than half of all preschool aged children. Primary prevention initiatives such as ''First Steps,'' a UNICEF funded program, was being launched in 2001 to increase public awareness of early childhood development and early intervention and to promote knowledge-based child-rearing practices from the early years. Primary education consists of five years of education from grades 1 to 5 provided at the Atoll Schools and Atoll Education Centers.

SECONDARY EDUCATION

Middle school consists of two years of schooling (grades 6 and 7), and proceeds through three years of lower secondary (grades 8 to 10) and two years of upper secondary education (grades 11 and 12). Access to middle school for children in more remote areas continues to need attention. Lower secondary education, once available only in Male, is being extended through the expansion of existing schools and the creation of two regional secondary schools, one in the north and one in the south. Upper secondary education is limited to the Science Education Center and the Institute of Islamic Studies. At the tenth grade students sit for the O levels Examination (GCE, London) and at the twelfth grade they sit for the A level examination (GCE, London).

HIGHER EDUCATION

In 1998 the first and only college in Maldives was established. It is called the Maldives College of Higher Education (MCHE) and it offers 28 certificate and seven diploma programs. The subject areas covered include teacher education, health sciences, hotel management, Shariah and Law, management and education, vocational training, and technical education, among others. MCHE has entered into collaborations with Indira Gandhi National Open University in India and Open University in Sri Lanka to offer distance learning programs as well.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Government schools cover 51 percent of all available schools in the Maldives whereas increasing efforts at partnership result in the community (40 percent) and the private sector (9 percent) carrying the rest. Education has been a steadily rising cost to the public and is well over 15 percent of the total budgetary expenditure. Limited resources have restricted large-scale investment in educational technologies that would allow the use of the Internet and the development of distance-learning on a large scale. At the same time discussion on curriculum reform at the secondary school level to provide students with computer literacy and the possibility of technologically oriented careers is ongoing.

NONFORMAL EDUCATION

In the nonformal sector the government offers a Condensed Education Program called ''Second Chance'' to those youth and adults who have not had the opportunity to complete primary and secondary education. Short courses in areas such as early childhood care and development and languages are also provided.

TEACHING PROFESSION

The need for competent teachers who can provide relevant education besides the need for trained teachers

in general continues to be acute as evidenced by the fact that in 1999, only 63 percent of primary school teachers were formally trained. Furthermore, trained local teachers are particularly needed to reduce the costs of hiring expatriate teachers and paying for teacher training abroad. In 2001 there were approximately 1,814 female and 1,086 male teachers serving the nation.

SUMMARY

Education is a priority in the Maldives because it is seen as vital to the nation's participation in the international forum in this age of globalization. A key issue in educational planning and development in the Maldives is achieving a balance between the preservation of indigenous knowledge and local roots and scientific, technological knowledge and global perspective.

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—Leena Banerjee

MALI

BASIC DATA

Official Country Name:	Republic of Mali
Region:	Africa
Population:	10,685,948
Language(s):	French, Bambara
Literacy Rate:	31%
Number of Primary Schools:	2,511
Compulsory Schooling:	9 years
Public Expenditure on Education:	2.2%
Educational Enrollment:	Primary: 862,875 Secondary: 188,109 Higher: 13,847
Educational Enrollment Rate:	Primary: 49% Secondary: 13% Higher: 1%
Teachers:	Primary: 10,853
Student-Teacher Ratio:	Primary: 71:1 Secondary: 27:1
Female Enrollment Rate:	Primary: 40% Secondary: 8% Higher: 0.6%

HISTORY & BACKGROUND

Mali became independent from France in 1960. Ruled by dictatorship after that, Mali's first democratic presidential election was held in 1992. In July 2000, the population was estimated at 10,685,948 people. Mali is among the poorest countries in the world; in 1999 GDP per capita was estimated at $820. About 10 percent of the population is nomadic and 80 percent of the labor force works in farming and fishing. Adult illiteracy has been reduced from 86.4 percent (males: 80.4 percent; females: 91.5 percent) in 1980 to 59.7 percent (males: 52.1 percent; females: 66.8 percent) in the year 2000. Illiteracy rates for those aged 15 to 24 were at 74.4 percent (males: 66.2 percent; females: 82.5 percent) in 1980 and 35.7 percent (males: 29.3 percent; females: 42.1 percent) in 2000.

At independence in 1960, the new leaders of the country believed strongly in the importance of education to promote economic development and health, as well as to foster national unity in a country with many ethnic groups.

The French colonial education system that existed prior to independence had not served the needs of the new country well. At independence, 90 percent of the people were illiterate, and 88 percent of the children did not attend school. In all of Mali, there were only 3 veterinarians, 12 professors, 10 doctors, 3 pharmacists, 12 lawyers, and 7 engineers. As in all its colonies, the goal of the education France had provided was to assimilate the people, to transform them into ''French'' women and, more frequently, men; only belatedly were women admitted to the schools. This elite would then spread French civilization and defend France's interests in the colony. The language of instruction was French, which played an important role in the assimilation process. The curriculum placed a heavy emphasis on France, its history, geography, and values; indigenous history, geography, and values played no role in the curriculum.

In 1877, the ''School of Hostages,'' the first public schools in Mali, formerly known as the French Sudan, opened. In these schools the sons of the chiefs were kept hostage so their fathers would not rebel against the French authorities, hence the term ''School of Hostages.'' Later, in 1899, the schools were renamed *Les Ecoles des Fils des Chefs* (The Schools for Sons of Chiefs) because France needed indigenous allies in spreading French civilization and defending French interests in the colony. Other colonial schools followed, among them four-year primary schools and six-year regional schools in larger cities. The *Ecole Primaire Superieure* (High Primary School) was founded in 1931. There were only a few secondary schools in all of West Africa; among them were the Higher Technical School and the School for Veterinarians in Bamako, French Sudan. Before independence, Mali had no institutions of higher education; secondary school graduates went to Dakar, Senegal, or to France. Ironically, in France, students from colonial Africa founded *Le Mouvement des Etudiants de l'Afrique Noire* (The Movement of Black African Students), which contributed to the eventual decolonization of Africa in the 1960s.

There existed, prior to independence, two other forms of education: traditional and Islamic. The goal of traditional education was to prepare young people for adult life. The young learned values from the adults by participating with them in various ceremonies and rituals; they also learned local history, legends, geography, poetry, music, and local medical knowledge.

Mali is 80 percent Muslim, and Islam has had a strong impact on education in the country. Islamic education dates from the fourteenth century when cities like Timbuktu were important centers of learning. In the twenty-first century, the Koran, the traditions of Muhammad, and Islamic canon law still are taught in Mali.

Constitutional & Legal Foundations

At independence, universal primary education became a goal of the government, and the right to education was written into the Constitution. Every child was guaranteed a free education regardless of race, gender, socioeconomic status, or origin. The law also required that the government build schools and provide teachers and teaching materials.

In 1968, a coup d'etat brought a new government to power. This Second Republic, which lasted until 1991, shifted emphasis from universal primary education to secondary and higher education and to improving the quality of the schools. Because the budget for basic education was substantially reduced, enrollment declines followed.

Another coup d'etat in 1991 led to a national debate on education and to the implementation in 1998 of PRODEC, the *Programme Décennal de Développement de l'Education* (The Ten-Year Program for Educational Development). The program focuses on achieving universal primary education with a target of a 75 percent enrollment rate by the year 2008 and on improving the quality of education generally. The main strategy of the program is to provide bilingual education, using the mother tongue in the early grades and introducing French along with the mother tongue in grade two and continuing through grade six. This bilingual education, called *pédagogie convergente,* also includes basic life skills in addition to the three R's. It is now being used in 6 of the 12 indigenous languages spoken in Mali. It has proven more effective than the traditional French only education: grade repetition and dropout rates are lower, and students generally, but especially girls and disadvantaged students, score higher in all subjects, even in mastery of French. These reforms of the 1990s are a return to the reforms of 1962.

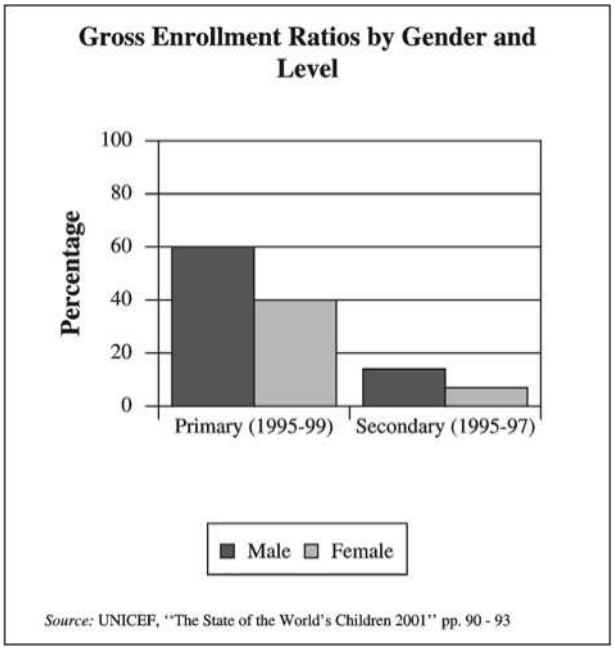
Educational System—Overview

Education is now compulsory for 9 years, from the ages of 7 to 16. The school year lasts from October to June. There are four types of primary schools in Mali. Some public schools offer a traditional French language curriculum while others use the *pédagogie convergente* described above. There are also community and international nongovernmental agency supported schools, some of which use a traditional French language curriculum while others teach in the mother tongue without using the *pédagogie convergente.* Finally a few private schools use the traditional French language curriculum; others provide bilingual Arab/French instruction.

In 1997-1998, only 49 percent of the children aged 7 to 12 attended school; this is among the lowest levels of school attendance in the world. In rural areas, the attendance rate was lower still: only 30 percent of the children attended (and only 25 percent of the girls).

Preprimary & Primary Education

Preprimary education begins at age three. In 1997, only 2 percent of the children aged three to six were enrolled in preprimary education. Primary or fundamental education lasts nine years and is divided into two cycles. Cycle one lasts six years and consists of grades one through six; the second cycle lasts three years and corresponds to grades seven, eight, and nine. There are difficult exams at the end of the sixth and ninth grades. Students who pass the exams at the end of grade six receive the CFEPCF, the *Certificat de Fin d'Etudes du Premier Cycle Fondamental* (Certificate of Completion of Cycle One of Fundamental Education). Those who pass



the exams at the end of grade nine receive the DEF, the *Diplôme des Etudes Fondamentales* (The Diploma of Fundamental Studies). The current plan is to restructure fundamental education by doing away with the present two cycles and creating a single bloc lasting eight years.

SECONDARY EDUCATION

Secondary general education is completed in the *lycées,* and it lasts three years. In the second year, students take the first part of the *baccalauréat* (BAC) exam; they take the second part in the third year. The BAC is required for admission to the university. Failure rates on both parts of the exam are high. There are also secondary schools for commerce, industry, and administration (which are terminal), and a technical *lycée. Lycée* students receive scholarships, which seriously deplete the education budget at the expense of basic education, so these scholarships are to be discontinued.

The reforms of 1962 included revising the curriculum at all levels to emphasize the history and geography of Mali and of Africa at large. The curriculum also emphasized the traditional values of Mali: equality; respect for others, especially for the elderly; and cooperation. French continued to be the language of instruction, but national languages were to be introduced in the schools.

In the 1960s and again in the 1990s, the low enrollment and high dropout rates of girls was of concern because it was felt that literate women would promote education in their families and communities. An old saying was oft repeated: ''Educate a boy, you educate one single person, but when you educate a girl, you educate the whole nation.''

In the 1970s and 1980s, there was also a so-called ruralization program. Because a significant majority of the population is engaged in agriculture, rural education was included in the elementary and secondary school curricula. The goal was to teach students agricultural techniques and forms of work performed in the communities of Mali, essentially to provide an education to prepare students for life as it is lived in Mali. The programs, however, were generally a failure because teachers who were not trained in agriculture were of little help to the students, and there was widespread opposition from parents who wanted their children to receive a traditional school education that they hoped would lead to better jobs. They were going to school to leave agriculture, not to be trained for it.

HIGHER EDUCATION

Founded in 1993, the Université du Mali in Bamako has faculties of medicine, pharmacy, and dentistry; sciences and technology; law and economics; and letters, languages, arts and humanities. It also has institutes of management, agricultural training and applied research, and training and applied research. Finally, it has schools of engineering, teacher training, and administration. The academic year runs from October to July. The *baccalauréat* (secondary school certificate) is required for admission. The language of instruction is French. In 1997-1998, there were 13,847 students enrolled, 20 percent of whom were females, with an academic staff of 509. This enrollment represents 1.0 percent of those aged 19 to 23.

Higher education is free, and students also receive a generous living allowance. These student scholarships, however, represent 60 percent of the higher education budget. Consequently, almost no funds are available for instructional materials and scientific equipment. As a result, science and technology students have no hands-on experience. Finally, because students have no textbooks, teachers dictate their material to students who have no other access to information.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education controls education, but efforts are underway to decentralize the system and provide more local control and parental involvement in the schools.

The school system is notoriously under-financed. In 1995, only 2 percent of GDP was used for education. The government, however, is planning to increase the part of the budget allocated to education to 27 percent by 2008. In addition, although more than 80 percent of the students are enrolled in grades one through six, only about 45 percent of the education budget is spent there. On the other

hand, higher education, which enrolls slightly more than 1 percent of the students, received a whopping 17.7 percent of the education budget.

Mali's schools are widely known to be inefficient. Research has shown that bilingual education is more efficient and effective, especially in teaching girls. The introduction of the *pédagogie convergente* was based on these findings.

NONFORMAL EDUCATION

Adult literacy programs were an important part of the 1962 reforms because the goal was to create an egalitarian society. These literacy programs teach African languages. Many of them are called integrated literacy programs because they teach literacy along with work-related skills. In some communities at least, becoming literate is prestigious, and local citizens believe it will contribute to the development of the community. In one community, students had been meeting for many years; most participants had attended classes for six years before attaining functional literacy. Most of those who achieved literacy continued to attend the class to maintain their skills. Literacy skills are used mostly for business purposes.

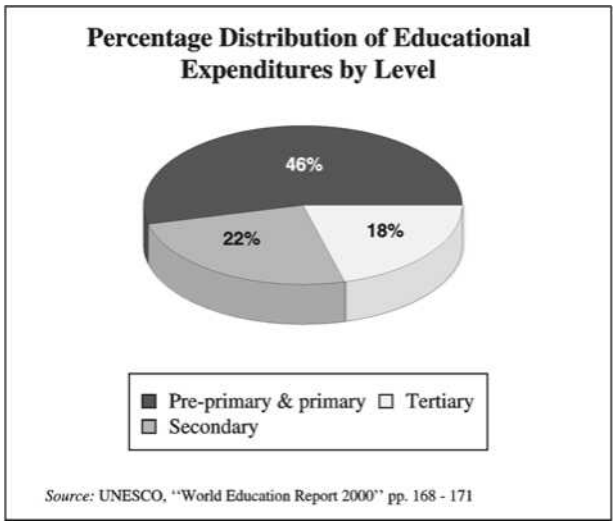
TEACHING PROFESSION

The *baccalauréat* is now required for admission to teacher training institutions. Teachers for grades one through six study general education for one year and take education courses and do student teaching in the second year. If not enough candidates apply to train for teaching in grades one through six, DEF graduates will be admitted for three years of training. Teachers for grades seven, eight, and nine specialize in their first year and learn about teaching in the second year. *Lycée* and other secondary school teaching candidates specialize in their first three years and take classes in education, student teach, and write a thesis in their fourth year.

SUMMARY

The educational system in Mali has a number of serious problems that the country is trying to address with help from the World Bank and other national and international organizations, including:

- As late as 1997-1998, less than 50 percent of the children of primary school age attended school. To alleviate this problem, more schools need to be built, especially in rural communities.
- The system is highly inefficient because of high grade repetition and dropout rates.
- The quality of education is often poor because of the lack of textbooks and other instructional materials, and because of poor initial training and continuing education of teachers.



- Insufficient resources are allocated to education.
- Schools are managed centrally by the government. School administration needs to be decentralized, and parents need to be better informed and more involved in the schools.

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—Gilles Labrie

MALTA

BASIC DATA

Official Country Name:	Republic of Malta
Region:	Europe
Population:	391,670
Language(s):	Maltese, English
Literacy Rate:	88%
Academic Year:	September-July
Compulsory Schooling:	11 years
Foreign Students in National Universities:	62
Libraries:	3
Educational Enrollment:	Primary: 35,273 Secondary: 34,128 Higher: 8,260
Educational Enrollment Rate:	Primary: 107% Secondary: 84% Higher: 29%
Teachers:	Primary: 1,824 Secondary: 3,180 Higher: 709
Student-Teacher Ratio:	Primary: 19:1 Secondary: 11:1
Female Enrollment Rate:	Primary: 107% Secondary: 82% Higher: 32%

HISTORY & BACKGROUND

The Republic of Malta is a small island nation in the Mediterranean Sea, approximately 97 kilometers (60 miles) south of Sicily. It consists of the islands of Malta, Gozo, and Comino and two small uninhabited islands, Cominotto and Filfla. Malta occupies 316 square kilometers (122 square miles). The main island of Malta is 246 square kilometers (95 square miles). In 2000 the population was estimated at 391,670, making the country one of the most densely populated nations in the world. The inhabitants speak Maltese and English, both of which are official languages. The population is 98 percent Roman Catholic. The literacy rate is approximately 88 percent. Principal industries include shipping, construction, and tourism.

Malta's strategic location and natural harbors have made it an important military objective for nations seeking to control the Mediterranean. In 1814 Malta became a British crown colony. During WWII the British used Malta as a base of operations to attack convoys carrying supplies to Axis forces in North Africa. The Germans and Italians subjected the island to relentless bombing. In recognition, King George VI awarded the George Cross ''to the island fortress of Malta—its people and defenders.''

After the war, Malta was granted increasing degrees of independence on local matters but remained a British colony and became a NATO base. In 1964 Malta obtained its independence, becoming a constitutional monarchy with Queen Elizabeth as the head of state, represented by a governor general. In 1974, it became a republic, severing allegiance to Britain. Traditionally allied with Western Europe, Malta proclaimed itself nonaligned after the socialist Labor Party won elections in 1971. The Labor prime minister, Dom Mintoff, distanced Malta from Britain and the West, refusing to allow NATO to renew base leases and actively courting the Soviet Union. Malta broke defense ties with Britain and granted Soviet ships use of refueling facilities built by NATO. Mintoff opposed the Roman Catholic Church, a traditionally powerful institution on the islands. His policies to restrict its role, especially in education, were highly controversial.

In 1987 the Nationalist Party assumed power and reversed many of Mintoff's socialist policies, resuming ties with Britain and other NATO countries. With the collapse of socialism in Eastern Europe, Malta has sought to integrate itself into the European Union.

The educational system in Malta was founded on British models and greatly influenced by the Roman Catholic Church. Since independence the educational system has undergone substantial and often contradictory changes. The philosophy guiding education has reflected the conflicting views of the rival Nationalist and Labor parties.

In the 1970s the Labor Party imposed a socialist vision of education. The British system of testing and tracking students was denounced as hierarchical and discriminatory. Public schools were reorganized and competency testing largely abandoned to promote equality. Desiring to rid Malta of what he called ''elitism,'' Mintoff sought to eliminate private and church education. In 1984 the government closed eight leading Catholic academies, replacing them with four state-operated institutions. Later that year, Mintoff announced that private schools would no longer be allowed to charge tuition and banned the archbishop from visiting public schools. Graduates of state schools were given preference in admission to higher education, and government grants to church schools were eliminated. Mintoff's attack on Catholic schools, which enrolled 25 percent of high school stu-

dents, angered parents, church officials, and political opponents.

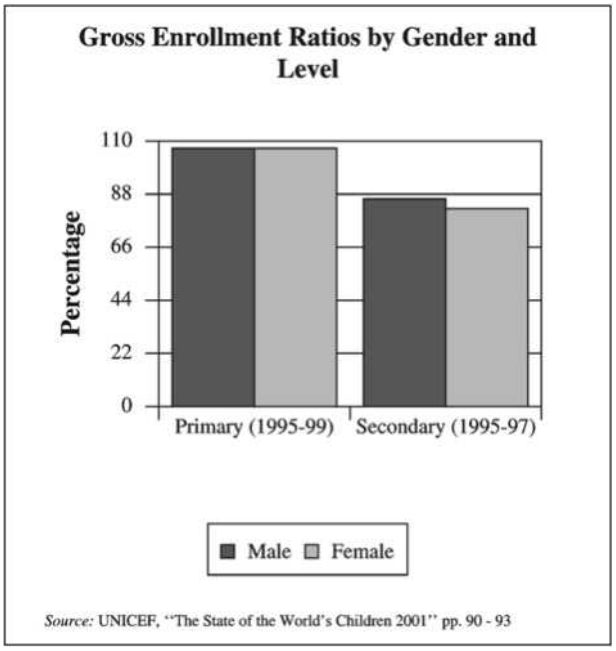
Labor policies reorganized higher education, stressing vocational rather than academic courses. Departments in liberal arts and sciences were disbanded. The polytechnic was merged into the prestigious University of Malta. Seeking to link higher education with employment, a compulsory student-worker program was introduced in 1978. College students were required to work six months a year and study six months a year. Admissions to higher education were determined by the availability of employment rather than academic achievement. These policies and the government's increasing press censorship led to an exodus of educators and intellectuals.

In 1987 the Nationalist Party was elected to power and reversed many educational policies, reintroducing the British use of competency testing and tracking. Private schools were allowed greater freedom, though the government monitored standards, course content, and credentials. The work study programs were dismantled, so that entrance to higher education was based solely on academic achievement. Subsequent Labor governments have modified but not reversed these reforms, having renounced Mintoff's highly ideological approach to education.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Nationalist reforms were formalized in the Education Act of 1988, which provided free compulsory education, expanded scholarships, and called for the development of technological research and training. The Education Act recognized the role of church and private schools in education, eliminated compulsory work-study programs for university students, and reestablished competency testing. The 1988 Act expanded compulsory education by one year and obligated the state to provide free university education to all qualified students.

In November 1991 the Republic of Malta and the Holy See signed an agreement on Roman Catholic schools. The state recognized the church's right to establish and direct its own schools, and Catholic schools agreed to observe the National Minimum Curriculum and National Minimum Conditions regulations developed for state schools. Church schools agreed not to charge tuition in return for state financial assistance. Spiritual guidance and noneducational activities are supported by fundraising campaigns, free donations from parents, and other collections. The state guaranteed that teachers in Roman Catholic schools have equal access to scholarships, in-service training, and grants designed for state school faculty.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

EDUCATIONAL SYSTEM—OVERVIEW

In Malta education is compulsory from ages 5 to 16. Instruction is given in both Maltese and English. Approximately 30 percent of students attend church and private schools, which are regulated by the Ministry of Education. All special education programs are provided in state schools. Special needs children are mainstreamed as much as possible. The National Minimum Curriculum has made environmental education compulsory in primary and secondary schools. The curriculum is varied, but language studies are given great importance. By law the teachings of the Catholic Church that are taught in Catholic schools must be included in the state school curriculum.

Education in Malta is highly centralized, with national standards and examinations, though schools are encouraged to develop individual identities. Students in state schools complete six years of primary education and then take noncompetitive qualifying examinations for admission into junior lyceums. The first three years of secondary education are followed in either a junior lyceum or secondary school. Students may also enroll in a trade school for vocational training. At the end of secondary education, students take either the University of Malta's Secondary Education Certificate or General Certificate of Education examinations to qualify for university admission.

Approximately 60 percent of Maltese students continue education after completing compulsory studies. In addition to traditional university studies, Malta offers a range of vocational training opportunities. The Extended

Skills Training Scheme and Technician Apprenticeship Scheme are provided by the state. Students enrolling in these vocational programs receive allowances.

In 1998 the Ministry of Education announced the need to reform the tertiary education system to produce ''a well educated and trainable work force'' in order to help Malta compete in a global economy. Government officials, industrial leaders, and educational consultants argued that for too long vocational programs had been largely dismissed as schools for the less able. Recognizing the need for highly trained technicians, greater emphasis was given to reforming vocational education and educating the public about its role and purpose. In the late 1990s Malta devoted a higher percentage of its GDP on education than any other country applying for admission to the European Union, but had the lowest spending of any applicant country on vocational education and training. Experts called for reform to unite the efforts of training programs operated by the Ministry of Education and the Ministry of Labor. These programs had long operated independently and failed to coordinate activities. Efforts were made to include female students in engineering and other vocational training programs.

PREPRIMARY & PRIMARY EDUCATION

The majority of children attend a state or private kindergarten before beginning primary school. In 1988 the National Minimum Curriculum for kindergartens and primary schools was established. The new curriculum was transformed into specific objectives, and newly designed courses were introduced in 1990. About eleven examinations are given at the end of primary education.

SECONDARY EDUCATION

Secondary education in Malta follows the British model. At the conclusion of their primary studies, students take a comprehensive examination. High achievers are admitted into lyceums designed to prepare them for university admission. Low achievers are sent to general secondary schools to prepare them for employment or vocational training. After completing three years of secondary education, students may enroll in trade schools.

In the 1990s the curriculum in all three levels of secondary education was improved. Great effort was placed on introducing computers and information technology into the lyceums and secondary schools. Trade schools were reformed to offer a more rigorous academic background and a wider range of technology studies to maximize flexibility in the future workforce.

HIGHER EDUCATION

The largest and oldest institution of higher education on the islands is the University of Malta, founded by Jesuits in 1592. It became a state institution in 1769 and was reestablished in 1988. Though financed by the state, the university receives funds from banks and other private enterprises. The university is the highest degree granting institution in Malta and is open to all qualified students. Students receive a monthly stipend. In 1997 there were 7,000 students, including 400 foreign students, enrolled in full or part-time programs. The courses are designed to supply Malta with highly trained professionals in business, civil administration, science, and industry.

The university houses the International Maritime Law Institute and the Mediterranean Academy of Diplomatic Studies. The university is also linked to the Foundation for International Studies and its associated organizations, the International Environmental Institute, the Mediterranean Institute, and the Euro-Mediterranean Center on Marine Contamination Hazards.

Recently, the University of Malta has placed emphasis on strengthening its engineering departments and improving its use of information technology. The university has also sought to improve primary and secondary education in Malta and expand links to overseas universities.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The head of the state Education Division is the Director General of Education, appointed from within the teaching profession, who supervises the Directors of Planning and Development, Operations, Further Studies and Adult Education, Student Services and International Relations, Curriculum Management, and Finance and Administration.

The educational administration is highly centralized, though recent efforts have been made to give schools greater freedom of action. The Head Office manages recruitment, deployment, discipline, and staff promotion. Students are assigned to schools according to geographical areas. Textbooks are produced centrally, though individual schools are given funds to purchase ancillary materials. Annual examinations are administered nationally. Half-yearly examinations are school-based.

The total funds allocated for education by the state in 1996 was US$171.9 million (11 percent of the national budget).

A process of decentralization is taking place at all levels of education, encouraging decision-making at the school level. The curriculum is being reviewed in all grades to assure compliance with modern teaching practices. Great emphasis is placed on introducing information technology.

NONFORMAL EDUCATION

In the 1990s adult and evening classes were expanded to meet the needs of students and working professionals. The Further Studies and Adult Education Department began publishing an official catalog of evening courses in 1996. A cable television channel broadcast its first live transmission during an education fair in 1996, initiating a new avenue for distance learning.

TEACHING PROFESSION

Teachers are unionized and negotiate with the government on policy, wages, and benefits. The largest teachers' union, the Malta Union of Teachers (MUT), was founded in 1919 and now represents teachers at all levels, including university faculty. The Government-Malta Union of Teachers agreement raised teachers' pay grades to those corresponding to Civil Service professionals. The 1998 Education Act recognized teaching as a profession. The state provides scholarships for in-service and professional training for teachers. In the 1990s the Malta Union of Teachers worked to increase the professional status of preschool teachers.

SUMMARY

The Maltese educational system, once highly politicized, now serves to provide students with the academic and technical skills needed to help the country participate in the European economy. Malta's ties to the European Union, expanding tourist industry, and greater dependence on international relations indicates that the government will continue to devote resources to provide students with a quality education.

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—Mark Connelly

MARSHALL ISLANDS

BASIC DATA

Official Country Name:	Republic of the Marshall Islands
Region:	Oceania
Population:	68,126
Language(s):	English, Marshallese, Japanese
Literacy Rate:	93%

The Marshall Islands is a ''double chain'' of 34 coral islands and more than 800 reefs located about halfway between Hawaii and Papua, New Guinea, with a land area of 70 square miles and a population of about 68,126 people (2000 estimate). The island of Kwajalein is used by the United States as a missile tracking station; the islands of Bikini and Enewetak are uninhabited because of nuclear contamination from atomic and hydrogen bomb testing between 1946 and 1958. Germany unsuccessfully tried to colonize the islands in 1885; they were claimed by Japan in 1914. After several battles against the Japanese in World War II, the United States seized the Marshall Islands and, in 1947, the United Nations made them a U.S. trust territory. In 1986 the islands became a self-governing republic under the Compact of Free Association with the United States, which specified that the Marshall Islands would receive military and economic aid and that the United States would have full responsibility for defense.

Marshallese, a branch of the Malayo-Polynesian family, is the official language, but English is widely spoken. A complex class structure exists in Marshallese society. Each inhabited atoll has a local government. Education is modeled after the U.S. system; most funding for education comes from the U.S. Department of the Interior and the U.S. Office of Education.

The public schools in the Marshall Islands come under the administration of the Minister of Education and Secretary of Education. Seventy-five public elementary schools, one middle school, and two secondary schools

enrolled more than 10,000 students. Twenty-six elementary and 10 secondary private schools, mostly affiliated with Protestant churches, served approximately 5,000 students. Education is compulsory from ages 6 to 14 (or completion of the eighth grade), with instruction in both Marshallese and English. Secondary education is not universal, and public high schools are selective. A number of the public schools need repair and have no electricity. The College of the Marshall Islands, a two-year institution, is also located in Majuro and serves 431 students.

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—Richard E. Mezo

MARTINIQUE

BASIC DATA

Official Country Name:	Department of Martinique
Region:	Puerto Rico & Lesser Antilles
Population:	414,516
Language(s):	French, Creole patois
Literacy Rate:	93%

Except for brief periods, Martinique has been a French possession since 1635, and it became a department of France in 1946. In July 2000, the population was estimated at 414,516. Unemployment is high—27 percent in 1997. Consequently, many Martiniquais live in metropolitan France. GDP per capita was $10,700 in 1996. French is the official language, but Creole is widely spoken. In fact, the study of Creole is now available in the upper grades of some secondary schools, and an Institute for Creole Studies has been created at the university.

Martinique is an overseas department of France; therefore, the education system is the same as in France. Education is compulsory for 10 years from the ages of 6 to 16. The school year runs from the first week of September to the end of June. The language of instruction is French, although the proponents of *créolité* (creoleness) (who emphasize the existence of a distinctive Caribbean culture composed of elements of African, European, Amerindian and Asian cultures, and a racially inclusive Creole identity) have urged the increased use of Creole in the school system. Since 1999, programs have been in place to train school heads, resource personnel, and teachers in the pedagogy of the new technologies: computers and the modern world, multimedia, and networks, including the Internet.

At age two, students may enter preprimary education. Primary education begins at age six and lasts five years. In 1999-2000, there were 19,508 students enrolled in preprimary education, 34,292 in primary education, and 527 in special education, taught by 3,266 teachers.

Secondary education begins at age 11 and is divided into two cycles: the premier cycle (lower secondary), completed in the *collège* and lasts four years; the second cycle (upper secondary), completed in the *lycée* and lasts three years. The *baccalauréat* exam marks the end of the *lycée* education, and passing is required for admission to the university. In 1999-2000, there were 28,859 students in the *collèges* and 21,034 in the *lycées,* taught by 4,227 teachers.

The Université des Antilles et de la Guyane was founded in the 1880s as a School of Law, became the Centre Universitaire des Antilles-Guyane in 1970, and a university in 1982. The Martinique campus of the university has the Schools of Letters and Human Sciences and of Law and Economics. The *Institut Universitaire de Formation des Maîtres* (University Institute for Teacher Training), affiliated with the university, provides teacher training. Since January 1997, the school system is headed by the recteur of the newly created *Académie de la Martinique* (the Martinique Academy), responsible to the French Ministry of Education.

The education system has been very successful in reducing illiteracy to 2.6 percent in the year 2000; in fact, at 0.2 percent, it has been practically eliminated for those aged 15 to 24. Failure rates, however, although declining, remain too high in the *collèges* and the first year of the *lycée.* For 1999-2000, failure rates in the first, third, and fourth years of the *collège* and the first year of the *lycée* were 16.2 percent, 17.7 percent, 9.4 percent, and 20.3 percent, respectively. In the *lycée,* there is also a much greater demand for some programs than actual places available.

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—Gilles Labrie

MAURITANIA

BASIC DATA

Official Country Name:	Islamic Republic of Mauritania
Region:	Africa
Population:	2,667,859
Language(s):	Hasaniya Arabic, Pular, Soninke, Wolof, French
Literacy Rate:	37.7%

HISTORY & BACKGROUND

Early public schools in Mauritania were established when the west African nation was colonized by the French. A particularly nomadic people, the Mauritanians quite often ignored these new schools and continued to send their children to the existing Islamic schools, which favored religious instruction based on the teaching of the Koran. Boys typically received seven years of education, beginning at age eight, while girls remained in school for a much shorter duration.

When World War II ended in 1945, the French colonial administration began setting up mobile ''tent'' schools as a means of reaching these nomadic communities. However, in the mid-1960s, only 14 percent of all school-age children had enrolled in the public schools. It wasn't until the Mauritanians themselves began to view traditional religious education as inadequate to prepare their children for the future that enrollment levels at secular schools began to climb, reaching roughly 35 percent by the mid-1980s. At that time, 878 primary schools—employing 2,900 teachers—and 44 secondary schools—employing 1,563 teachers, more than one-fourth of whom were from other countries—were in operation.

CONSTITUTIONAL & LEGAL FOUNDATIONS

After achieving independence in the mid-1960s, Mauritania began experimenting with ways to mold its educational system to the specific needs of its students. In 1966 the government passed legislation that mandated schools to offer instruction in both the French and the Arabic languages. A similar bill passed early in the 1980s required that instruction be offered in the languages of Pulaar, Azayr, and Wolof. A plan conceived in the late 1970s to completely eliminate French in the schools was dissolved by the end of the following decade after vehement resistance by Mauritanians who already spoke French.

EDUCATIONAL SYSTEM

Education in Mauritania is mandatory from ages 6 to 16. The school year runs from October to June. Primary and secondary education is divided into three quarters, the first one lasting 11 weeks and the remaining two lasting 13 weeks. Higher education is split into two six-month periods. The languages of instruction are both Arabic and French.

PREPRIMARY & PRIMARY EDUCATION

Primary education begins at age six and lasts for six years. General studies include arithmetic, science, and language. Upon successful graduation from *Ecole Fondamentale,* students are awarded a *Certificat d'Etudes Primaires.* Despite efforts to make primary education more accessible to girls, large disparities still remain among the sexes. Primary school enrollment reached 61 percent for males and 53 percent for females in 1997.

SECONDARY EDUCATION

Secondary education consists of three years of basic studies at a college. Students must pass a final examination to receive the *Brevet d'Etudes du Premier Cycle* (BEPC) certificate. Those wishing to continue their

studies may enroll in a lycée to take an additional three years of courses to earn the *Baccalaureat de l'Enseignement du Second Degre* with a focus in either mathematics, arts and literature, chemical and physical sciences, natural sciences, or Koran and Arabic. Students may also opt for three years of technical education, which culminates in either the *Brevet d'Enseignement Professionnel* (BEP) degree or the *Brevet de Technicien* degree.

HIGHER EDUCATION

The University of Nouakchott, established in 1981, offers higher education degrees in economics and law, arts and humanities, and science and technology. It employs 254 instructors and serves more than 8,500 students. Other institutions include the National College of Administration and the National College of Sciences—both founded in 1982—and various teaching and technical academies, such as *Ecole Normale Superieure* and *Centre Superieur d'Enseignement Technique,* which offers mechanical and electrical engineering programs. Students who successfully complete a two-year higher education program are awarded the *Diplome d'Etudes.* After an additional two years of study, students receive the *Maitrise.* Those wishing to pursue postgraduate work must do so outside of Mauritania.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education, based in Nouakchott, oversees the educational policies and procedures of Mauritania. In 1993 roughly 7 percent of the national budget was allocated to education. In both 1994 and 1995, this was reduced to 4 percent, forcing the schools to stretch their limited dollars even further. Education officials spent most of the 1990s working on developing a data processing system for the nation's educational system.

NONFORMAL EDUCATION

Literacy rates in 1985—among the lowest in Sub-Saharan Africa at roughly 20 percent—prompted the government to examine ways to establish a more educated base of workers. As a result, Mauritania established the State Secretariat of Culture, Information, and Telecommunications (SSCIT) to oversee the nation's largest adult literacy campaign to date. By increasing the number of classes offered, as well as the expanding the areas in which they were offered, the SSCIT saw literacy rates increase to 52 percent for adult males (older than the age of 15) and 31 percent for adult females in 1997.

TEACHING PROFESSION

Primary school teachers are required to hold a *Diplome de Fin d'Etudes.* To earn this degree, candidates with a BECP must gain entrance to a teaching academy and complete three years of courses, while those with a *Baccalaureat* need only complete one year of teaching classes. Those who wish to teach in a college must complete a one-year program at *Ecole Normale Superieure.* Lycée teachers are required to pass an external examination and complete a two-year program at *Ecole Normale Superieure;* students who opt to take an internal examination must complete a four-year program there.

SUMMARY

A major issue facing Mauritanian education officials in the twenty-first century is the debate over the relevance of curriculum; many education officials in the late 1990s were calling for expanding basic studies to cover such topics as family education, nutrition, the arts, and manual labor. Other areas of concern are inadequate funding, coupled with the need for additional infrastructure, and the disparities in the educational level of boys and girls and among the various regions of the nation.

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—AnnaMarie L. Sheldon

MAURITIUS

BASIC DATA

Official Country Name:	Republic of Mauritius
Region:	Africa
Population:	1,179,368
Language(s):	English, Creole, French, Hindi, Urdu, Hakka, Bojpoori
Literacy Rate:	82.9%

HISTORY & BACKGROUND

Since Mauritius gained its independence from Britain in 1968, its educational system, which is based upon the British model, has seen several upgrades. Primary and secondary education in the eastern African nation have been free to all residents since 1976; higher education became free in 1988.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Calls for educational reform throughout the 1980s and 1990s helped shape the country's workforce-based curriculum, which is geared toward producing easily trained and flexible graduates able to function in an increasingly industrialized country. A Master Plan of Education, presented by the minister of education in November 1991, put into motion several major changes including making primary education mandatory, establishing the Tertiary Education Commission to increase enrollment at institutions of higher education, and adding modern information technology to the educational infrastructure.

EDUCATIONAL SYSTEM—OVERVIEW

The Education Act of 1993 requires children between the ages of 5 and 12 to attend six years of primary school; enrollment is 98 percent, and roughly 50 percent of all students are female. The official language of instruction at all levels is English.

Nearly 78 percent of four-year-old children also attend preprimary schools. Students must pass a national examination, conducted by the Mauritius Examination Syndicate (MES), to receive a Certificate of Primary Education (CPE) and gain admission to secondary school. All students at the secondary school level—enrollment is 60 percent of children aged 12 to 19 years, 51 percent of whom are girls—attend three years of general courses (lower level). An additional two years of courses (upper level) prepare secondary students to earn one of two diplomas: the Cambridge School Certificate or the Cambridge Higher School Certificate. The University of Cambridge Local Examinations Syndicate, along with the MES, oversees the final examinations for secondary students. Only 15 to 20 percent of all students earn a Higher School Certificate, while less than 2 percent of all students actually enroll at an institution of higher learning.

Private schools are commonplace in Mauritius mainly because the Education Act allows any business or individual in the country to create a primary or secondary school. The Private Secondary Schools Authority oversees government funding to private institutions. Private postsecondary institutions must be approved by the Industrial and Vocational Training Board and are subject to audit by the National Accreditation and Equivalence Council.

State-owned secondary schools are all equipped with a minimum of ten computers; private schools seek out grant funding for instructional technology. Similarly, science classrooms in state schools are furnished with laboratory implements, while private institutions receive loans to fund the purchase of similar equipment. Textbooks are free to all primary school students. Secondary school students must pay for their texts, which are standardized at the lower level and selected by school-based curriculum committees for upper level courses.

PREPRIMARY & PRIMARY EDUCATION

The growing role of women in the workforce prompted the establishment of public preschools in 1984. Of the 1,087 preprimary schools in operation, 79 percent are private; 16 percent are overseen by Parent Teacher Associations; and 5 percent are run by municipal and village councils. In contrast, the government controls 225 of the 291 primary schools in operation. The majority (51) of the remaining primary schools are run by the Roman Catholic Education Authority (RCEA). Along with mathematics, French, English, religion, and environmental studies, primary curriculum offerings have included seven Asian languages since 1986. Primary school enrollment reached 135,237 in 2000. The student-teacher ratio is 36:1.

SECONDARY EDUCATION

The government runs 34 of the nation's 134 secondary schools, while religious organizations, including the RCEA and the Hindu Education Authority, oversee most of the remaining 100 schools. Enrollment grew to 95,448 students in 2000. The student-teacher ratio is 19:1. Students who choose not to attend a general secondary school may enroll in technical and vocational programs offered at 25 schools; the student-teacher ratio at those institutions is 16:1.

HIGHER EDUCATION

Students with the Higher School Certificate may choose to attend one of two *lycées* (polytechnical institutes), run by the Management Trust Fund, or one of four universities.

Established in 1972, the University of Mauritius (UOM) offers programs of study in agriculture, sugar technology, industrial technology, and policies and administration. Enrollment in 1997 reached 2,800 students. Faculty members, both full- and part-time, totaled 300.

Mainly a teaching college, Mauritius Institute of Education (MIE) offers education degrees in science, agri-

culture, mathematics, and computers, as well as programs in commerce and business studies, general education studies, English, French, movement and physical education, home economics, visual arts, design and technology, educational administration and management, media and teaching aids, and social studies. MIE also offers postgraduate teaching certification.

The Mahatma Gandhi Institute, founded in 1970 by the governments of India and Mauritius to promote Indian ethnology, operates three schools: Music and Fine Arts, Indian Studies, and Mauritian and Asian Studies.

Finally, Mauritius College of the Air, which broadcasts classes, offers postsecondary education in English, French, chemistry, physics, mathematics, business management, and accounting.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education and Human Resource Development oversees all support provided to educational institutions. Mauritius spent 14.9 percent of government total recurrent expenditure on education in 2000. As authorized by the Mauritius Research Council, national educational research is conducted in four areas: teacher education, multicultural issues, special education, and curriculum.

NONFORMAL EDUCATION

In 1995, a total of 17.8 percent of the population was deemed illiterate. Five government organizations and 51 nongovernment organizations offer literacy training to all age groups.

TEACHING PROFESSION

The Mauritius Institute of Education offers training to new and experienced teachers at the preprimary through secondary levels. Preprimary teachers are required to hold a Cambridge School Certificate and complete a training course. Primary education teachers must also complete a two-year program consisting of both coursework and teaching practice. State school teachers at the secondary level must have a degree from an accredited university to earn the title of ''Education Officer Grade A'' or a Cambridge Higher School Certificate and three-years of part-time teacher training, which culminates in a teaching diploma, to earn the title of ''Education Officer Grade B.''

Secondary school teachers at private institutions are required to hold a college degree to become an Education Officer; a Cambridge School Certificate and a teaching diploma to become a Grade I teacher; or a Cambridge Higher School Certificate to become a Grade II teacher. To earn a postgraduate certificate in education, students must take 24 credits of coursework and 8 credits of teaching practice.

SUMMARY

The educational policies and practices of Mauritius will likely remain closely tied to the nation's economic development. With legislation underway for the creation of a University of Technology and many education officials calling for the increase of mandatory education from six to nine years, the primary, secondary, and tertiary educational systems of the nation may undergo considerable changes early in the twenty-first century.

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MAYOTTE

BASIC DATA

Official Country Name:	Territorial Collectivity of Mayotte
Region:	Africa
Population:	155,911
Language(s):	Mahorian, French
Literacy Rate:	NA

Until 1975, Mayotte, also known as Mahoré, was one of the islands of Comoros, an archipelago in the

western Indian Ocean between eastern Africa and the island of Madagascar. When Comoros gained its independence from France in the mid-1970s, Mayotte voted to remain a French territory. The island's educational system is based on that of France, and the primary language of instruction is French.

Education is free and compulsory for children between the ages of 6 and 16. Primary education lasts for five years and is followed by another five years of secondary education. Secondary students pursuing general studies attend one of the island's seven colleges, while those in vocational programs attend the one *lycée*.

Preprimary and primary students totaled 25,805 in 1997; secondary students totaled 6,190 that year. Mayotte offers limited postsecondary training to its residents, and students seeking more advanced skills may go to the nearby island of Réunion. Those pursuing university degrees typically go to France.

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MEXICO

BASIC DATA

Official Country Name:	United Mexican States
Region:	North & Central America
Population:	100,349,766
Language(s):	Spanish, various Mayan, Nahuatl
Literacy Rate:	89.6%
Number of Primary Schools:	95,855
Compulsory Schooling:	6 years
Public Expenditure on Education:	4.9%
Educational Enrollment:	Primary: 14,650,521 Secondary: 7,914,165 Higher: 1,612,318
Educational Enrollment Rate:	Primary: 114% Secondary: 64% Higher: 16%
Teachers:	Primary: 524,927 Secondary: 485,059 Higher: 170,350
Student-Teacher Ratio:	Primary: 28:1 Secondary: 17:1
Female Enrollment Rate:	Primary: 113% Secondary: 64% Higher: 15%

HISTORY & BACKGROUND

Mexican education is linked to its turbulent history and its ethnic and class divisions: Indians, Spanish aristocrats, criollos, and peons/*mestizos* (those of mixed blood). Clearly, the Catholic Church played a significant role in Mexican education during the Colonial era, which extended from first European contact in the early sixteenth century until the Mexican revolution. The Spanish governor of Cuba, Diego de Velázquez, sent expeditions to the Mexican mainland via the Yucatán Peninsula. The first Spaniards arrived in 1517 and a year later reached the Gulf coast along what is now Veracruz. Hernán Cortez then landed in 1519 with eleven ships and 550 men and succeeded in conquering the Aztecs in three years. Once Montezuma II was captured, Cortez named this land ''New Spain.''

Spain, like the other major colonial powers in what is now North America, provided education mainly for the ruling Aristocracy. The indigenous peoples had their traditional ways of education destroyed by the Spanish, but elements of these beliefs and methods survived through the new Mexican culture that emerged. In the Spanish colonies, including Mexico, educational services were provided by the Catholic Church. Here, the upper class and clergy were educated in the classics, while the peons and *mestizos* remained ignorant. The Mayan and Aztec had their own traditional ways of education, an ethnomethodological process that was primarily oral.

The population of American Indians in what is now central Mexico at the time of European contact was estimated to be 25 million. Physical genocide, wars, slavery, and disease reduced these numbers to a mere 1 million by the seventeenth century. Most Indians continued their informal verbal educational heritage and lived on pueblos, while their *mestizo* and lower-class counterpart *campesinos* resided on *ejidos* (communal land holdings). Others were forced to work for the Spanish on farms and in mines. Even then, the Spanish attempted to change the communal lands into taxable ventures called *encomiendas.* Despite these challenges to their aboriginal culture, many of the Indian languages and traditional ways remained intact with many attributes incorporated into the large *mestizo* population.

Wary of the influence of Rome, the Crown, and the Holy Roman Empire, the local Spanish attempted to establish their own plantation form of government in Mexico, one that exploited the both the Indians and peasants. The Roman Catholic Church and Spanish crown, on the other hand, wanted to establish a colonial form of feudal privilege and religious dissent. Clearly, the Catholic Church was intent on cultural genocide, often building their churches on sacred sites of the aboriginal idols. The Indians revolted unsuccessfully in 1541 in the Mixton War but did manage to draw attention to their plight under the *encomienda* feudal system. Missions and monasteries came to replace the encomiendas as the form of local control over the indigenous population. Rural estates called *haciendas* surrounded these missions, and monasteries becoming self-sufficient centers of political and economic power. Within this system, Franciscans provided the early education of the Indians and *mestizo* peasants, which consisted mainly of instruction in Catholicism. The Jesuits and Augustinians, on the other hand, provided the more classical education for Spanish emigrants and the *criollos.* Vasco de Quiroga, a liberal Catholic judge and Bishop, is credited with starting the first school for the natives, the hospital-school of Santa Fe established on the outskirts of Mexico City in 1531. Viceroy Mendoza and Bishop Zumárraga established another Indian school, the School of Santa Cruz de Tlatelolco, in 1536. However, with its focus on Latin, rhetoric, logic, philosophy, music, and native medicine, the school's student body changed to comprise mainly the Spanish privileged class. Nonetheless, during colonial Mexico, the small group of well-educated Indians was still held to an inferior status even by the illiterate Spaniards.

In 1547 the Orphanage School of San Juan was opened for the education of both Indian and *mestizo* youth and, in 1548, the Caridad School was established for orphaned *mestizos;* this was the beginning of a number of schools for the limited education of female peasant youth. Nonetheless, few Indians or *mestizos* benefited from these schools, and most learned the Spanish language and customs informally. Soon this level of understanding among the native and mixed-bloods frightened the Spanish with fears that continued formal education would lead to rebellion, and the education of the Indians and *mestizos* now was widely perceived by the Spanish colonial rulers as undesirable. The vast masses of uneducated Spanish peasants (peons) were subjected to the *leva,* the system of forced conscription into the military or militia. Non-Spanish speaking Indians were exempt from this duty. During this same era, the Royal and Pontifical University of Mexico opened in 1553, making it the first university in the New World. Its main purpose was to educate the criollos for the Catholic clergy. During the colonial period, nearly 30,000 bachelors degrees and more than 1,000 masters and doctorates were awarded, providing many of New Spain's educated elite.

In 1791 another university began in Guadalajara. These schools were the exception and, by 1842, the time of the public school movement in the United States, less than one percent of the Mexican population was educated and only about 33 percent of education was free. Schools and education remained for the benefit of the wealthy. The ensuing revolutions and civil wars between the conservatives (pro-Catholic, elitists) and liberals (anticlericalists, reformers) did much to destroy the schools that did exist.

Under the haciendas system, a number of major urban centers emerged—including Puebla, Guanajuato, Guadalajara, and Mexico City. Universities soon became established within these major urban trade centers, again for the education of the white upper classes. By 1800, New Spain had about 6.5 million residents (with 18 percent being white, 60 percent Indian, and 21 percent *mestizo*). The white educated class now consisted mainly of native-born *criollos.* The *criollos* resentment of Spanish influence germinated the seeds of revolution in 1810. On February 24, 1821, Mexico declared its independence from Spain, and in 1822 it proclaimed its own Emperor, Agustín I. The empire was overthrown a year later, and Mexico was declared a republic.

The resulting wars with imperialistic Anglo-Americans, first in Texas (1836) and then with the United States (1846 to 1848), eventually led to the loss of half of Mexico's territory (Treaty of Guadalupe Hidalgo of 1848 and Gadsden Purchase of 1853). A popular revolt by both educated *criollos* liberals and indigenous peasants began in 1855 with the result of forcing the dictator Santa Anna from power, making the Catholic Church sell its land, and dissolving the *ejidos.* These actions did not produce the desired result of creating an educated middle-class. Instead, Mexico embarked on a new civil war (War of Reform, 1858-1861). It was during this war that conservatives sought foreign assistance from Napoleon III who attempted to establish a Mexican empire under the Austrian prince, Maximilian. The liberals, under the Indian leader, Benito Juárez, successfully drove the French and Catholic influence from Mexico in 1867. Juárez died before he could bring about the reforms he envisioned, one of educational and economic opportunities for the peasants (Indians and mestizos). His battle was later fought by Emiliano Zapata in the south and Pancho Villa in the north.

The revolution resulted in constitutionally guaranteed educational and social benefits for all. These efforts finally produced a new constitution in 1917—one based on anticlericalism, land reform, nationalism, workers

rights, and secular education. The hemisphere's first university, the Royal and Pontifical University was now named the National Autonomous University of Mexico and was a multicampus facility throughout Mexico. The new constitution provided greater powers to the federal government over education, including the structure and curricula. Religious, or parochial, schools were separated from public schools. Mexico was a federal republic composed of 31 states and a federal district with a president, elected for a single 6-year term, and a bicameral legislature. In 1921, a federal Secretariat of Public Education was created. At this time, a nationalistic theme was incorporated into all public schools in Mexico, a trend that continued in 2001; this nationalistic theme was a major feature of the revolution and was designed to obviate the foreign epistemological theme of the Catholic schools.

Marked changes occurred in Mexico following the revolution and World War II, which liberated the *mestizos* and Indians from their rural haciendas and pueblos, allowing them to migrate to larger communities. Rural schools grew rapidly within these larger communities providing greater educational opportunities for all Mexicans regardless of ethnicity or social class. This increase in educational opportunities coincided with a significant reduction in the infant mortality rate, which dropped from 222 deaths per 1,000 in 1920 to 125 per 1,000 by 1940.

World War II again forced Mexico to challenge outside influences including the United States, fascist Germany, and the Soviet Union. Mexico finally sided with the Allies providing both raw materials and human labor (*braceros*) to the United States. Initially these were agricultural workers, but by 1942 Mexico took steps to prepare its workers for industry forming the *Camara Nacional de la Industria de Transformación.* At wars end, some 300,000 Mexicans had worked in 25 of the United States, opening the door for the current illegal migrant-worker market in North America. In 1944 the Mexican Congress passed legislation opening the door to foreign participation—providing that Mexicans held a controlling stock in any mixed corporation. This led to the establishment of *maquiladoras,* most of which emerged along the U.S./Mexican frontier border. The *maquiladoras,* in turn, led to mass migration of mainly females from rural interior Mexico to the frontier borderland. Both these migrants and immigrants (both legal and illegal) became exposed to the U.S. school system, one which contrasted markedly from the basic ninth grade lower secondary education guaranteed to Mexican children and youth.

Post-World War II industrialization saw two avenues of growth in Mexican education. One was in the direction of adequate training for the new industrial workers, while the other was a focus on higher education. So determined were Mexican leaders at this time at transforming Mexico from rural isolation to an industrial powerhouse, the revolutionary party changed its name in 1946 to the *Partido Revolucionario Institucional* or PRI; it held power in Mexico until the 2000 elections.

A major project of the institutionalized revolution era (1946-1958) was the construction of the new University City built to house the National Autonomous University of Mexico. Completed in 1952, the National University of Mexico sits on three square miles and was one of the most modern structures in the world. However, beyond the facade lay a deficit of instructional materials including a near-empty library. Despite these shortfalls, an intellectual movement emerged, moving toward objective scholarship—especially in depicting the history of Mexico.

Between 1940 and 1951, the *El Colegio de Mexico,* the *Escuela National de Antropologia e Historia,* and the *Instituto de Historia of the National University* were founded, leading to a series of academic conferences in both Mexico and the United States that were relevant to a more accurate portrayal of Mexico. The conferences departed from the blatant partisan view provided by the pro-revolutionary curricula posited by the government during the 1920s and 1930s. These conferences began in Nuevo Leon in 1949; Austin, Texas, in 1958; Oaxtepec, Morelos, in 1969; Santa Monica, California, in 1973; Patzcuaro, Michoacán, in 1977; Chicago, Illinois, in 1981; Oaxaca in 1985; San Diego, California, in 1989; and in Mexico City in 1994.

The educational efforts of the revolution did reduce illiteracy in Mexico from 77 percent in 1910 to less than 38 percent in 1960. Due to the rapidly growing Mexican population, this figure represented more than 13 million Mexicans; a figure many felt was excessive. In their attack on illiteracy, the PRI established a network of rural schools comprised of prefabricated buildings. The government provided these buildings while the communities provided the land and construction labor, thereby increasing the cohesiveness of the community and education, a process that continues to the present. Here, the teachers often become respected leaders within the rural communities, replacing the priests of the past. At this time the educational system embarked upon a uniform curricula within this system. The compulsory textbooks were selected by the federal government and were provided free to the students. As would be expected, this process was met with resistance from a number of sources—including the conservatives, the churches, and even liberals who felt that the standardization of curricula was a form of indoctrination that tended to exalt the PRI at the expense of other political parties.

Mass student protests disrupted Mexican higher education during the mid- and late 1960s. Massive student

strikes crippled the National University campuses. Federal troops were brought to the campuses to maintain order. The campuses erupted again in 1968 just prior to the Summer Olympics being held in Mexico. This time the protest met with violence, due mainly to the intervention of the grenadiers, the despised paramilitary riot police. In August 1968, demonstrations on the campuses of the National University and the National Polytechnic Institute were coordinated by the National Student Strike Committee, an organization similar to the American organization Students for a Democratic Society (SDS). On August 27, 1968, the National Student Strike Committee organized a half-million people—the largest, organized, antigovernment demonstration in Mexico. With the Summer Olympics only a month away, President Diaz Ordaz cracked down on the student protesters placing the Army on the campus of the National University causing the university's rector to resign in protest. This round of university student protests climaxed in violence on October 2 at the *Tres Culturas District of Tlatelolco.* The Army and police crushed the protest by firing indiscriminately into the crowd of students; hundreds of people were killed, injured, or jailed.

The North American Free Trade Agreement, NAFTA, became effective on January 1, 1994, placing greater strains on Mexico's educational system. Its basic public educational system lagged in structure from that of its new trading partners, Canada and the United States. The kindergarten through ninth grade (K-9) compulsory school program in Mexico is at a disadvantage when compared with the kindergarten through twelfth grade (K-12) programs in Canada and the United States. (Compulsory education in the United States is through age 16, regardless of what grade you achieve.) NAFTA also curtailed the availability of free U.S. education for those Mexican families residing along the border frontier. Prior to 1996, hundreds of Mexican children and youth crossed the international border daily during the school year to attend public schools in the United States that provided a free twelfth grade education, which was not available in Mexico, especially in rural frontier towns. Since NAFTA, the 1996 U.S. Immigration and Nationalization Reform Act denied Mexican students F-1 visas, which in the past allowed these children and youth to cross the U.S./Mexican border to attend U.S. public schools. Now only those Mexican children who hold dual citizenship are afforded this luxury. These children, whose families reside in Mexico, were born in a U.S. hospital so they hold dual citizenship and, where tolerated, can attend public schools in California, Arizona, New Mexico, and Texas.

Immediately following its membership in NAFTA, the Mexican economy collapsed, greatly devaluating the peso against the U.S. dollar and forcing an end to the subsidized university system where tuition had been frozen since 1948. The tuition was raised overnight from a few cents per semester to the equivalent of $70.00 in 1999; this led to another massive student protest at the National Autonomous University, this time disrupting the classes of some 200,000 high school and college students. The Army and police again challenged the student strikers but with greater restraint this time due to the world attention NAFTA membership has afforded Mexico. At the beginning of the twenty-first century, the challenges to Mexico's educational needs continue with rural Indian areas such as Chiapas having one-third of the children receiving no schooling. And now that Mexico plans to join the world economy, it needs to augment its K-9 curriculum to meet that of other Western nations where a twelfth grade education is compulsory. Lastly, Mexico's post-World War II growth has resulted in a multicultural mix where 80 different languages are now spoken by citizens; these individuals now need to be accommodated by the public school system.

CONSTITUTIONAL & LEGAL FOUNDATIONS

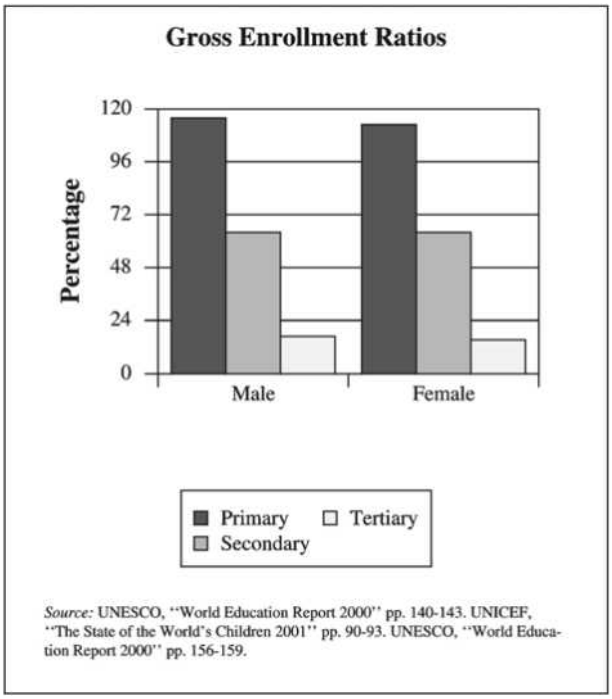
Title One, Chapter One, Article Three of the Constitution of Mexico outlines the Mexican educational philosophy: the education imparted by the State shall be designed to develop harmoniously all the faculties of the human being and shall foster in him at the same time a love of country and a consciousness of international solidarity, in independence and justice. Section I of Article Three provides the philosophy that separates religion and education, long a point of friction in Mexican society. Article 24 guarantees freedom of religious beliefs: the standard that shall guide such education shall be maintained entirely apart from any religious doctrine and, based on the results of scientific progress, shall strive against ignorance and its effects, servitudes, fanaticism, and prejudices. Moreover, education shall:

- be democratic, considering democracy not only as a legal structure and a political regimen, but as a system of life founded on a constant economic, social, and cultural betterment of the people;
- be national insofar as without hostility or exclusiveness it shall achieve the understanding of our problems, the utilization of our resources, the defense of our political independence, the assurance of our economic independence, and the continuity and growth of our culture; and
- be a contributor to better human relationships, not only with the elements that it contributes toward strengthening and at the same time inculcating, together with respect for the dignity of the person and the integrity of the family, but also by the care that

it devotes to the ideals of brotherhood and equality of rights of all men, avoiding privileges of race, creed, class, sex, or persons.

Section IV states that all education provided by the State shall be free. Section VI addresses private versus public education: private persons may engage in education of all kinds and grades. But with regards to elementary, secondary, and normal education, they must previously obtain, in every case, the express authorization of the State. This section also requires that all private educational institutions conform to the provisions of Sections I and II and must be in harmony with official plans and programs.

Article Three, Clause Three, provides for compulsory (primary and secondary) education for all Mexican citizens. The final section (VIII) provides for federal oversight of curricula throughout Mexico: The Congress of the Union, with a view to unifying and coordinating education throughout the Republic, shall issue the necessary laws for dividing the social function of education among the Federation, the States, and the Municipalities; for fixing the appropriate financial allocations for this public service; and for establishing the penalties applicable to officials who do not comply with or enforce the pertinent provisions.



Source: UNESCO, "World Education Report 2000" pp. 140-143. UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

EDUCATIONAL SYSTEM—OVERVIEW

The Mexican educational system consists of three levels: primary, secondary, and higher education. Formal basic education encompasses preschool, elementary, and lower secondary. Basic education accounts for approximately 81 percent of the total number of students receiving school services. Federal, state, and local governments provide 93 percent of basic education, while private schools provide about 7 percent.

In 2000 there were 29,700,000 students enrolled in all levels of education. Of these, 23,612,000 were enrolled in basic education grades. According to estimates from the *Secretaría de Educación Pública* or SEP (Public Education Secretariat), school enrollment for children aged 6 to 14 years stands at about 92.08 percent. However, only 46.68 percent of those between the ages of 15 to 19 years attend school.

The new legal framework adopted in 1993 under a new federalism continued to charge the Federal Government with the task of determining the study plans and programs for elementary, lower secondary, and teacher education for the entire country. Additional constitutional amendments made it a legal obligation for parents to send their children to elementary and lower secondary schools. Under the provisions of the 1993 General Education Law, the Federal Government, through SEP, continues to oversee the general implementation of education, but the states are given complete responsibility for administrating basic education, including indigenous and special education and teacher education. Preschool education in not mandatory but is available to children between the ages of three to five. It is not necessary to attend *jardín de niños* (kindergarten) to enroll in elementary school. However, preschool education is highly recommended.

Mandatory school age is 6 to 14 years, which covers primary and lower secondary school. Elementary school is from grades one through six; lower secondary education is taught in three levels, from first to third grade. Although elementary school enrollment improved for children in the compulsory ages from 86 percent in 1990 to 92 percent in 2000, completion of elementary school for those 15 years of age and older remained low. About 70 percent of those people beyond the compulsory school age were able to complete elementary school. This percentage, however, represented an increase in graduation rates for this age group from 62 in 1990. Mexicans 15 years and older who completed *secundaria* (lower secondary school or middle school) or its equivalent reached 46 percent in 2000 from 36 percent in 1990.

The academic year is set by the SEP for all public and private-incorporated schools offering preschool, elementary, secondary, and teacher education. The year consists of 200 working days of classes usually beginning in the last week of August and ending in the first week of July. Preschoolers attend school for three hours every day from Monday to Friday. Primary school children spend

between four and four and a half hours in class instruction every day. Students in *secundaria* (middle school) spend at least seven hours per day in school. There are morning, afternoon, night, and combined class shifts.

In general, in the compulsory school grades, boys and girls are almost equally represented: males, 92 percent; females, 91 percent. However, this balance is upset in the upper grades. Even though the gap is closing, males tend to be represented in greater numbers than females, particularly in higher education. With the exception of vocational, technical, and teacher education, representation of men at all levels of education (including university undergraduate and graduate levels) is higher than women's. The official language of instruction is Spanish.

However, increasing attention is being paid to Indigenous education. Mexico recognizes 62 indigenous ethnic groups that speak more than 80 languages. These groups are found in 24 of the 31 Mexican states. More than 1 million indigenous children receive bilingual instruction at the preschool and elementary school levels; this education is offered in 72 dialects from 49 parent languages. The grading system is based on a 1 to 10 scale, with 10 being the highest and 6 the minimum passing grade.

PREPRIMARY & PRIMARY EDUCATION

Nearly 7 out of 10 children receive kindergarten education. Although preschool education is not mandatory, it is an important part of basic education in Mexico. Most five-year-olds, 83 percent, attend preschool. Aside from preschool education, many government agencies offer guardería (nursery or day care) services for children younger than three years of age. Here parents and infants receive educational, health, and welfare services. While 30 years ago nearly 75 percent of all students in Mexico were enrolled in elementary school, in the year 2000 there were 14,808,000 (50 percent of those eligible) students attending primary school. The expansion of basic education to include lower secondary and an increase in educational opportunities at higher levels, as well as a decrease in demographic growth in the country (from 3.4 percent in 1964 to 1.4 percent in 2000), have spread the total number of students throughout the whole educational system. Also, as a consequence of the new federalism, school administration is no longer shared by the federal and state governments. State governments manage all schools providing education.

The median age for students in elementary school is between 6 and 11 years, but more than 1.2 million children, or 7.5 percent, enrolled in primary school are older than the age of 12. About 70 percent of the population 15 years and older has completed elementary school; however, there are 16 out 31 states with graduation rates below the national average. For example, in the state of Chiapas, only 43.5 percent of the population 15 years of age and older has completed primary school. Although there is little variation between men and women for completion of elementary school education at the national level (72 to 69 percent, respectively), women in this age bracket in Chiapas account for only 44 percent of those who have completed the 6 years of elementary school—9.5 percentage points below men. Preschool education is offered in three modalities: general, indigenous, and community education. State governments and private institutions offer general education. Indigenous community education is provided by the SEP, and classes are taught in the children's respective languages.

Primary school is also offered in several modalities: general, bilingual-bicultural, community education, and adult education. During the 20 hours of classes per week, first and second grade pupils take Spanish; mathematics; environmental knowledge, which includes natural sciences, history, geography, and civic education; artistic education; and physical education. From the third to the sixth grade, students continue taking these courses, with the exception of environmental knowledge, in addition to natural sciences, history, geography, and civic education. The curriculum places great emphasis in reading, writing, and oral expression. In the first two grades, children spend 45 percent of class time studying Spanish. From the third to the sixth grade, they spend 30 percent of class time on this subject. For more than 40 years, students in elementary school have been receiving free texts from the national government. Also, the minimum grade for promotion is 6 based on a scale of 1 to 10.

Indigenous and community primary school attendance grew by one-third from 1990 to 2000; this type of education is offered in the poorest and most isolated regions of the country. Community education services are delivered in 95 percent of the 50,636 rural schools spread throughout Mexico. All indigenous schools receive community education services.

In Mexico there are 72,650 preschools and 99,176 primary schools. There are 155,777 teachers engaged in preschool education, while 545,717 work in primary schools. In general the rural sector tends to be less favored than urban centers when it comes to educational opportunities. An analysis of school attendance by age groups in the year 2000 illustrates this phenomenon. School attendance for children aged 6 to 14 years (the compulsory ages) in communities of fewer than 15,000 people was 89 percent, while in localities of more than 15,000 inhabitants attendance was 95 percent. For those in the 15 to 19 age bracket, attendance greatly diminished. Small communities averaged 34 percent, while larger communities registered 55 percent. For those in the

20 to 24 age bracket, school attendance was 7 percent for those in communities of fewer than 15,000 inhabitants, while 23 percent went to school in communities of more than 15,000 people.

SECONDARY EDUCATION

Secondary education is divided in two levels: lower secondary, or *secundaria,* and upper secondary education. Since 1993 *secundaria* has become part of compulsory basic education. Lower secondary is structured into three grades and is offered in several modalities, including general, telesecondary, and technical. This type of education is offered to children between the ages of 12 and 16 years who have completed elementary school. People older than 16 years of age can obtain *secundaria* education by attending secondary school for workers or for adults, two other available modalities. There are 29,007 lower secondary schools with 2,462,000 females and 2,608,000 males attending them. The teaching staff consists of 307,763 people. In 1997, the government began the distribution of free texts for this educational level in the most marginal areas of the country.

The curriculum at this level stresses the need for students to sharpen their Spanish language oral and written abilities. At the same time, mathematics is also given great attention. *Secundaria* students spend an average of five hours per week in language-related instruction and the same number of hours in math. First graders in lower secondary are also required to take a course entitled physics and chemistry. In the second and third grades, physics, chemistry, and biology are taught as separate courses. A further emphasis in lower secondary education is the learning of a foreign language, usually English or French. Other courses include artistic expression and appreciation, physical education, and technological education.

Distance education is offered through telesecondary. This service is offered to children in rural areas in communities of fewer than 2,500 people or where lower secondary enrollment is too low to build a school. The system began in 1968, and it has been expanded to serve communities in several Central American countries and in U.S. border communities. During the 1998-1999 school cycle, this modality of education was serving 900,000 youths. In 1998 nearly 90 percent of the children in the lower secondary age group were enrolled in these schools. The dropout rate was 9.2 percent, while the graduation rate in that year reached 76.1 percent.

The second level of secondary education is upper secondary education; this level of education involves several options and is available to those who have completed compulsory education. There are three subsystems in this category: general upper secondary, which includes open and distance upper secondary education; technical professional education, which trains qualified professional in different fields; and technological upper secondary, which offers the opportunity to obtain professional technician degrees and prepares the students to continue on to higher education. General upper secondary education is offered through *bachiller* colleges (CB), *preparatoria* schools, science and humanities colleges (CCH), and incorporated *bachilleratos* (incorporated to a state or federal university).

Technical professional education can be obtained from the College of Professional Technical Education (Conalep); State Institutes for Work training (Icate, operated by state governments); State Colleges for Scientific and Technological Studies (CECyTE, operated by state governments); Centers for Industrial and Services Technological Studies (CETIS, coordinated by the federal government); Centers for Industrial and Services Technological *Bachillerato* (CBTIS, coordinated by the federal government); and the Nursing and Obstetrics School (ESEO, coordinated by the National Polytechnic Institute). Technological upper secondary education is offered by CETIS; CBTIS; Centers for Technical and Industrial Studies; CECyTE; Centers for Ocean Technological Studies (CETMar, coordinated by the federal government); Centers for Continental Water Studies (CETAC, coordinated by the federal government); Centers for Farming and Agricultural Technological *Bachillerato* (TA, coordinated by the federal government); and Centers for Forestry Technological *Bachillerato* (CBTF, coordinated by the federal government).

The upper secondary education structure has three cores: basic training, professional training, and work training. General basic training develops scientific, technical, and humanistic knowledge. Students are also taught research methodology and language mastery. *Bachiller* colleges offer general upper secondary education. In addition, general *bachillerato* offers open upper secondary education. Originally designed to serve adults who were not able to continue with their education after lower secondary school, open upper secondary has increasingly become an alternative for young people aged 14 to 18. This service is free and completely financed by the federal and state governments. In 1995 states began administering this form of education. There are 22 centers located throughout 10 states, including Mexico City. The technical professional education is designed to prepare students to hold mid-level positions in the workplace, such as the supervision and control and evaluation of production processes. The intent of this subsystem of education is to meet school and labor demands at the regional and national levels. In this type of institutions, students graduate as professional technicians, technical professionals, or basic-level technicians.

Technological upper secondary is a modality that affords students the opportunity to acquire both expertise in some technological field and to learn the fundamentals of a general *bachillerato.* In doing so, graduates of these institutions can enter the job market as professional technicians or/and continue with higher education. During the 1997-1998 school cycle, these schools offered 17 specialties. This subsystem of upper secondary education attends 2,892,846 students. Enrollment in the general *bachillerato* accounts for 59 percent of the total number of students, while 13 percent are enrolled in technical professional schools and 28 percent attend technological *bachillerato.* In total, there are 10,010 schools with a teaching staff of 212,056 instructors attending the educational needs of these students.

Different public state universities and the National Autonomous University (UNAM) also offer upper secondary education. During the 1999-2000 school year, 29 state universities offered educational opportunities leading to the *preparatoria* (high school) diploma or to an associate's degree. *Preparatorias* are integral parts of the universities, and they prepare students to enter college. These schools are divided into three grades, and completion of lower secondary education is a prerequisite to admission. *Preparatorias* enrolled 379,356 students in 1999-2000. UNAM had 103,258 students during the same cycle.

HIGHER EDUCATION

There are six subsystems of higher education institutions in Mexico: public universities, technological institutes, technological universities, private institutions, teacher training colleges, and other public institutions. When all of them are counted, Mexico has 1,250 institutions of higher education. Traditionally, universities operated under their own organic laws and enjoyed considerable legal autonomy; however, in 1973 they were integrated into the national education system. In 1997, SEP revitalized the State Commissions for Higher Education Planning to coordinate more effectively higher education in the different regions of the country.

A pattern of an increasing number of universities and enrollment began in 1940. The country had only 8 universities in that year, increasing its number to 124 in 1980. During the 1998-1999 academic year, ANUIES (National Association of Universities and Institutions of Higher Education) listed 213 universities. Of these, 45 are public universities, where 50 percent of the academic research in Mexico takes place. These universities enroll 52 percent of students pursuing undergraduate education and 48 percent of those pursuing a graduate degree.

There are 147 technological institutes offering higher education. The Ministry of Education (SEP) coordinates 102, while state governments coordinate the other 45. In the latter, students can choose between regular and three-year programs: two years of general education requirements and one year of specialization. There is also another group of institutions of higher education that is not part of the previous two subsystems; some of these are under the SEP and other government ministries. One percent of those pursuing bachelor's degrees and 7.5 percent of those pursuing graduate degrees attend them. Technological universities are institutions coordinated by state governments but created by federal, state and, in some instances, municipal governments. This educational modality was created in 1991 for students who want to obtain associate degrees. The length of studies is two years. As of 1999 there were 36 technological universities in 19 states. In the subsystem of private institutions, there were 598 schools, not including teacher colleges. Private institutions are grouped into universities (168), institutes (171), and centers, schools, and other institutions (259). Accreditation for these academic institutions is issued by SEP, state governments, or other public academic institutions authorized to accredit them. Private institutions of higher education have 27.6 percent of the undergraduate enrollment and 36.5 of the graduate enrollment in Mexico.

Teacher training colleges offer bachelor degrees in preschool education, elementary school education, *secundaria* school education, special education, and physical education. Duration of studies varies from four to six years depending on the major chosen. In 1984 the national government modified the level of teacher education by adding years to these programs. There are 220 public and 137 private schools of education, attending 11.5 percent of the student population seeking higher education degrees. Admissions to all academic institutions of higher education require completion of upper secondary school. Many institutions require admission exams. There are, however, some public institutions that offer upper secondary education, such as the autonomous public universities, which in turn might offer ''automatic'' admission to undergraduate studies to students who complete *bachillerato* in universities *preparatorias.*

Academic organization is not uniform. Some schools have adopted departmental forms of organization, but these are few. Duration of studies varies among academic institutions, depending on the level and type of program. Some organize their courses in semesters while others do so in quarters. Graduation requirements also vary depending on the type and level of studies. Most students have their knowledge tested through exams, written materials, and oral presentations. In the technological options, on-the-job performance, when appropriate, carries much weight in the accreditation of studies. Students can obtain professional degrees through different methods.

Many institutions require written work (such as a thesis, dissertation, or monographic reports) for presentation before an examining panel. Also, students may be required to have reading comprehension of one or two languages aside from Spanish.

Teaching is still done with lectures and note-taking, although the introduction of computers in some places has facilitated the use of other techniques. The quality of education depends in part on the quality of teaching. In Mexico most of the faculty engaged in higher education (62 percent of 192,402 people) are hired on an hourly basis, while only 29 percent work on a full-time basis and 9 percent are part-time.

Public universities and technological institutes of higher education offer affordable education to all Mexicans. Tuition is free, but there are fees for some administrative tasks. In some of the technological institutes, for example, where the demand for education is high, a semester of fees amounts to nearly $150 dollars. In some of the state public universities, semester fees are even lower. Private universities, however, vary in tuition prices, some charge fees that are comparable to or higher than out-of-state tuition charged by U.S. universities.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

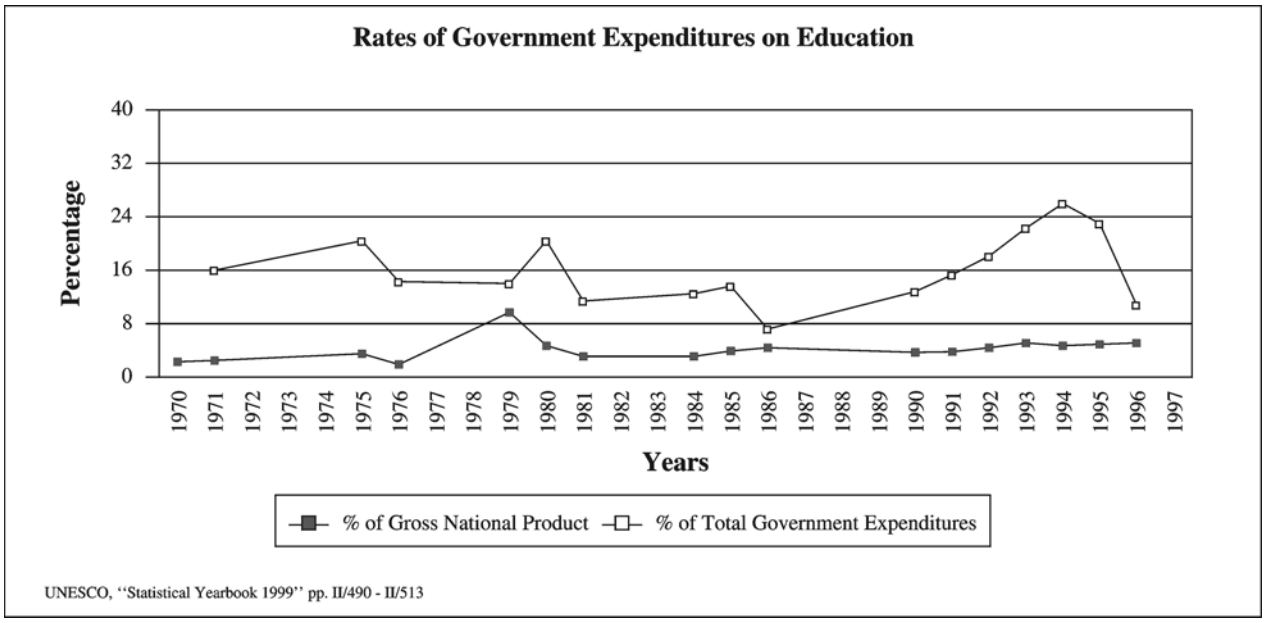
The main educational agency in Mexico is the Public Education Secretariat, or SEP. This government ministry coordinates basic education within and between all the states. Under the provisions of the 1993 educational reform, the bulk of the administrative and daily operations of schools were transferred from the SEP and other federal agencies to the states. Under this new federalism, the SEP continues to funnel money for public education, but state governments are also increasingly under pressure to share in the burden of providing affordable public education to all their inhabitants.

Private education is guaranteed under the Mexican Constitution. Educational institutions that want to engage in providing basic education and teacher education must first secure authorization from the government and other related public institutions that provide training for teachers. For preschool, upper secondary, and higher education, private establishments may also require official recognition of validity. Some of these requirements for validation of their programs of study include certification of teaching personnel and adequate pedagogical material and infrastructure. In the case of basic education and the training of teachers, they must follow the study plans and programs established by SEP. In all other cases, private institutions must follow the plans and programs of studies considered appropriate by the accrediting authority. They are also required to provide a certain minimum number of student scholarships.

In terms of educational investment, Mexico has continued to increase public expenditure in this regard. In 1978 education expenditures accounted for 4.8 percent of the GDP; by 1999 it was 5.1 percent. The Organization for Economic Cooperation and Development indicated that in 1994 about 50 percent of its member states allocated between 5 and 6 percent of its GDP to education. However, the distribution of these funds varies depending on several factors. Although Mexico spends a similar proportion of its GDP on education as the other developed nations, a big difference on the impact that this spending produces is found in per capita spending. It is known that other countries devote more per capita spending for education than countries like Mexico. This is possible in part due to the number of children enrolled in basic education. Also, once countries have been able to satisfactorily meet the most pressing needs of basic education, funds could be used for higher education and research, where cost per student tends to be higher. The SEP, for example, spends slightly more than 65.0 percent of its money on basic education, while upper secondary education accounts for 9.5 percent of the expenditures, and higher undergraduate education gets about 14.0 percent. Graduate education receives only 1 percent.

NONFORMAL EDUCATION

Throughout the twentieth century, literacy was of great concern to Mexican authorities. At the outset of the Mexican Revolution of 1910, only 15 percent of the population was literate. After the revolution, literacy campaigns made it possible to increase literacy rates to 37 percent in 1940. Census figures for the year 2000 indicated that more than 90 percent of the population was literate. Men and women seem to have similar rates of literary. Literacy campaigns have continued in different parts of the country. In some instances, like in the 1960s, the most outstanding elementary school students from rural schools were trained by their own teachers to teach adults to read and write. At the end of the campaigns, many of these elementary school students were given a trip to Mexico City, where they toured the capital city and had meetings with high-level officials, including the secretary of education. At the close of the twentieth century, literacy campaigns were still implemented in parts of the country. Students from the *bachilleres* were teaching literacy courses. Although literacy rates have decreased, the absolute number of illiterate people has remained constant since 1970, at around 6,000,000 people. But one must take into consideration that population growth has increased from 35,000,000 in 1960 to nearly 100,000,000 in 2000. Illiteracy is concentrated in groups of elderly people and in isolated and dispersed communities. Indigenous groups are disproportionally affected and, within these groups, it is women who show greater rates of illit-



eracy than men. In 1995 the national government released information indicating that in 1995 nearly 80 percent of indigenous women were illiterate; males between the ages of 15 and 24 years had an illiteracy rate of 3.8 percent. In 1998 the National Institute for Adult Education (INEA) offered literacy, as well elementary and secondary education, to 2.6 million adults in 1998. Of these adults, 21 percent participated in literacy courses. Since 1996 a new curriculum has focused on providing adults with literacy education and their first elementary school examination.

TEACHING PROFESSION

In the 2000-2001 school cycle, the SEP estimated that there were a total of 1,468,355 teachers in the country, including those working in private academic institutions. There were 155,777 people employed in preschools, primary schools had 545,717 teachers, and *secundaria* had 307,763 instructors. Institutions of higher education offering undergraduate degrees, including teacher colleges, had a total of 192,406 professors. There were 17,031 professors teaching in graduate programs. The teacher-student ratio was 1:22 in preschool, 1:27 in elementary school, 1:17 in lower secondary school, 1:15 in upper secondary school, and 1:12 in normal school. Before the early 1990's reforms, teacher education was obtained primarily in *escuelas normales.* The middle-level normal school graduates did not receive a *licenciatura.*

Teachers were held in high esteem in their communities, but as the fervor of revolutionary nationalism began to subside, the sense of mission, which motivated many teachers, started to wear off. Mexico does not appear to have a shortage of teachers. However, it is hard to find teachers who want to go to remote or dangerous areas. Even though the government gives incentives for such jobs, apparently these are not enough. For a long time the practice of buying plazas (buying a tenured teaching post) was detrimental to basic education. Recent graduates who were not able to find a teaching job in the best schools, if they had the right networking or some savings, could entice a teacher to lease his/her teaching post to the new graduate. This practice has not completely died.

Salaries, like in just about any developing country, are low for teachers. In 1998 the entry level, gross annual salary for elementary school teachers in Mexico City was $6,068. Teachers with 10 years of experience earned an annual gross salary of $7,904. These earnings included bonuses, vacations, and other benefits. Jobs in Mexico City are among the best paid. Considering that a *campesino* in one of the poorest regions may earn the equivalent of about half the entry level salary of a teacher, the profession is no longer seen as prestigious as it once was.

University teaching is for the most part a part-time occupation. The bulk of expenditures devoted to education are funneled to basic education (65 percent), leaving a relatively small portion for higher education (15 percent). Adjunct positions, however, carry a degree of prestige. Civil servants, new graduates, and other personalities of the private sector take advantage of the opportunity to hold a teaching appointment. Universities also benefit from the economic advantages offered by these instructors.

SUMMARY

Mexico's formal integration into the global economy by way of the North American Free Trade Agreement, NAFTA, has had impact on the expansion of education at levels. The education reforms of the early 1990s were in keeping with the government's intentions to prepare Mexico to enter NAFTA; therefore, the long overdue expansion of compulsory basic education to include lower secondary education was quickly implemented. At the same time, upper secondary education became more accessible due to the increase in the construction of new schools and the expansion of new programs of study. For example, the creation of technological universities, based on the French model, and the enlargement of the teacher-training curriculum were part of an integral approach to improve the human resource pool. Confronted with competition from its two northern neighbors, Mexico had to accelerate the quality and quantity of technical education.

In 1999, Mexico signed about 323 international agreements to promote research and cooperation in educational matters. In terms of bilateral agreements, 26 were signed with different U.S. entities. In 1998, two agreements were signed with the World Bank; one to enhance basic education particularly in isolated rural and indigenous areas; the other, to finance higher education projects such as scholarship for students of all economic backgrounds. Mexico has continuously pursued bilateral and multilateral agreements to boost the educational opportunities of its people. Through the CONACyT, the Science and Technology National Council, many students pursuing graduate studies have benefited from generous scholarship to attend colleges in Mexico or in other countries. In 1999 there were 17,851 scholarships through CONACyT, of which 3,828 were granted to those involved in graduate and postgraduate studies abroad.

Notwithstanding the progress in educational attainment of the Mexican population, economic pressures have widened the gap between rich and poor. At the same time, Mexico's democratic transition has brought to the forefront candid discussions about educational opportunities. There is evidence suggesting the need for improvements in access and quality at all levels of the educational system. Of particular urgency is the need to meet the demands of the most marginalized segments of society. In this regard, the indigenous population is the most impacted, not only in terms of access to education, but also in terms of their portrayal in the school's curriculum. Speaking about this last point, prominent education intellectual Pablo Latapí Serra commented that ''our racism is rooted in the denial of the cultures of currently living Indians and the official glorification of the dead Indian. I don't know of concrete measures [in curricula] that would help teachers and pupils reach awareness of their racist attitudes in daily behavior.''

Another problem facing the educational system is the few incentives offered by the teaching profession in Mexico. As in most Latin American countries, teachers are poorly paid in Mexico. Economic conditions affecting the country during the 1980s and the 1990s brought the salaries of teachers to new lows. The challenges facing this nation are enormous and education continues to be the key.

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—Laurence Armand French and Magdaleno Manzanárez

MICRONESIA

BASIC DATA

Official Country Name:	Federated States of Micronesia
Region:	Oceania
Population:	133,144
Language(s):	English, Trukese, Pohnpeian, Yapese, Kosrean
Literacy Rate:	89%

Public education in the western Pacific archipelago most commonly known as Micronesia began early in the twentieth century. The first educational program of Micronesia was launched as part of an effort by German colonizers to mold island inhabitants into citizens willing and able to assimilate a more European work ethic and the desire for financial gain. Children began attending school at the age of 6 and were required to continue their studies until the age of 13.

When the Japanese occupied Micronesia during World War I and set up their own public school system there, learning the Japanese language became the focus in Micronesian classrooms. Schools were eventually established in each of the six island groups, with a minimum requirement of three years of instruction for children aged 8 to 14. The school day lasted roughly six hours, and the curriculum was expanded beyond the Japanese language to include moral and vocational education, mathematics, geography, and exercise. Like their German predecessors, Japanese authorities wished the natives of Micronesia to adopt their value system.

By the end of the 1920s, despite the logistical difficulties in reaching the more rural communities, nearly 50 percent of all school aged children were enrolled in school, a fact that reflects the widespread belief among the island inhabitants that education was a means of achieving wealth and power.

At the end of World War II, a United Nations Trusteeship Agreement gave the United States administrative authority over the Micronesian islands—which had become known as the Trust Territories of the Pacific Islands (TTPI)—and also the responsibility for helping the people of TTPI become self-reliant. Part of this agreement charged the United States with the task of advancing the education of the residents of TTPI. Efforts to this end began in earnest when U.S. President John F. Kennedy established the Accelerated Elementary School Construction Program in 1962, which doubled the education budget of TTPI from $7.5 million that year to $15 million in 1963 to $17.5 million in 1964. As a result, primary school enrollment increased nearly twofold from 15,119 students at the beginning of the decade to 28,906 students by 1970. Secondary school enrollment soared from 335 students to 5,726 students over the same time period, and college graduates in TTPI grew from 117 people to 595 people. Education was now based upon the U.S. model.

In 1979, TTPI split into several entities. Four island groups—Kusaie (Kosrae), Ponape (Pohnpei), Truk (Chuuk), and Yap—were colonized as the Federated States of Micronesia (FSM), an independent state that relied heavily on the U.S. for financial support and military defense. Although FSM became a fully self-governing entity in 1986, its schools remained modeled after those in the United States.

Eight years of public schooling is mandatory in FSM. Roughly 76 percent of all residents receive some sort of public education, according to a 1994 Census, with 30.3 percent completing some elementary school, 15.1 percent completing some high school, 13.6 percent holding a high school diploma, 7.5 completing some college, 6.1 percent holding an associates degree, 3.1 percent holding a bachelors degree, and 1.6 percent pursuing graduate studies.

Students begin primary schooling, which is free, at the age of six. The eight-year curriculum includes science, mathematics, language arts, social studies, and physical education. Religious groups also offer private schooling.

Public secondary education is available free of charge. Residents may also attend private secondary schools such as Pohnpei Agricultural and Trade School and Xavier High School in Chuuk.

The College of Micronesia-FSM is the only institution of higher education in the country. It offers various

two- and three-year associate degree programs. In the late 1990s, the U.S. Department of Agriculture approved a land grant to the College of Micronesia to construct a campus in Pohnpei. Many students seeking higher education attend the University of Guam.

When the government of FSM was first established in 1979, a Division of Education was created as part of the Department of Social Services. In 1992, FSM's Congress passed PL 7-97, which called for the establishment of a full-fledged Department of Education, complete with four divisions: Curriculum, Standards, Testing, and Evaluation; Vocational Education Manpower Development and Training; Postsecondary and Scholarship; and Federal Community and Foreign Assistance.

The National Literacy Act of 1991 established a grant that allowed for the creation of the FSM Adult Education Program two years later. The program offers adult education and literacy training to adults in Micronesia.

Having adopted the educational models of first the Germans, then the Japanese, and finally the Americans, Micronesia has found itself the subject of debate regarding what type of education actually best meets the needs of its residents. Because the economy there has not kept pace with the increasing costs of its growing educational system, Micronesia struggles to maintain facilities, offer adequate compensation to teachers, and purchase educational materials. Graduates also have difficulty finding jobs that utilize their education, and many relocate to other countries. Some scholars argue that these difficulties support the notion that education in FSM should be scaled back to stay in better step with the economy, while others assert that such difficulties don't outweigh the rights of the islanders to have access to a public education system that allows them to compete in an increasingly global economy. At the onset of the twenty-first century, the University of Ohio, with financing from the United States, was researching ways to identify the curriculum most appropriate for FSM.

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—AnnaMarie L. Sheldon

MOLDOVA

BASIC DATA

Official Country Name:	Republic of Moldova
Region:	Europe
Population:	4,430,654
Language(s):	Moldovan, Russian, Gagauz
Literacy Rate:	96%
Compulsory Schooling:	11 years
Public Expenditure on Education:	1,0.6%
Foreign Students in National Universities:	1,187
Libraries:	3,200
Educational Enrollment:	Primary: 320,725 Secondary: 445,501 Higher: 93,759
Educational Enrollment Rate:	Primary: 97% Secondary: 80%
Teachers:	Primary: 14,097 Secondary: 28,615 Higher: 8,814
Student-Teacher Ratio:	Primary: 23:1
Female Enrollment Rate:	Primary: 97% Secondary: 82%

HISTORY & BACKGROUND

Moldova is a small landlocked southeast European country of 33,843 square kilometers located between Romania in the west and the Ukraine in the east. It was a part of the former Union of Soviet Socialist Republics (USSR) but declared independence in 1991 and became a member of the Commonwealth of Independent States (CIS). In the year 2000, Moldova had a population of

over 4 million people, with 23 percent of its population 14 years or younger. The population growth rate was zero, implying a completely stable population. The life expectancy at birth was 64 years. It was among the fifteenth most densely populated nations in Europe with 128 people residing per square kilometer. Administratively, the country is organized into 10 *judete* (divisions), 1 municipality, the capital Chisinau, and 1 territorial unit, Gagauzia.

Moldova's economy is predominantly agricultural-based with a highly fertile land of which 53 percent is arable. Fifty-three percent of the country's population lives in rural areas. Of the urban population, 60 percent is concentrated in the capital city of Chisinau. However, the country has no mineral deposits and imports most of its fuel from abroad. As a result, Moldova is classified as a low-income group country with approximately three-fourths of the population living below the poverty line.

Moldova, for a large part of its recorded history, has been dominated by other cultures. In ancient times it was an outpost of the Roman Empire. After the collapse of the Roman Empire, an influx of Slavic and Vlach continued in the region until the formation of Basarabia in the 1400s. It narrowly escaped becoming a *pashalik* (Turkish province) under the Ottoman Empire in the fifteenth century. However, the Ottoman influence continued in the region until 1739 when it briefly came under Russian military occupation. After the Russo-Turkish War (1806-1812), Russia annexed the region. Russian rule was interrupted by its defeat in the Crimean War (1853-1856). At that time, the principalities of Moldova and Wallachia became independent and united to form Romania in 1862. However, this unification did not last long, and, after the Russo-Turkish-Romanian war in 1878, Russia regained southern Bessarabia. The Russian imperialism continued until the end of World War I (1914-1918) when Russia briefly lost control. A provisional self-government, *Sfatul Tarii,* with a majority of native Moldavians emerged and voted for union with Romania. This union had the blessings of the western powers, but was not recognized by the USSR. Stalin established a largely artificial Moldavian Autonomous Soviet Socialist Republic (MASSR) on the east bank of the Nistru (Dniester) River in the Ukraine. Before the beginning of World War II (1939), under the Russian-German Pact, Moldova once again came under Russian control and Chisinau (Russian Kishinev) became the capital. Germany attacked the Soviets in 1941 and captured Moldova until 1944 when Russians again reclaimed the region.

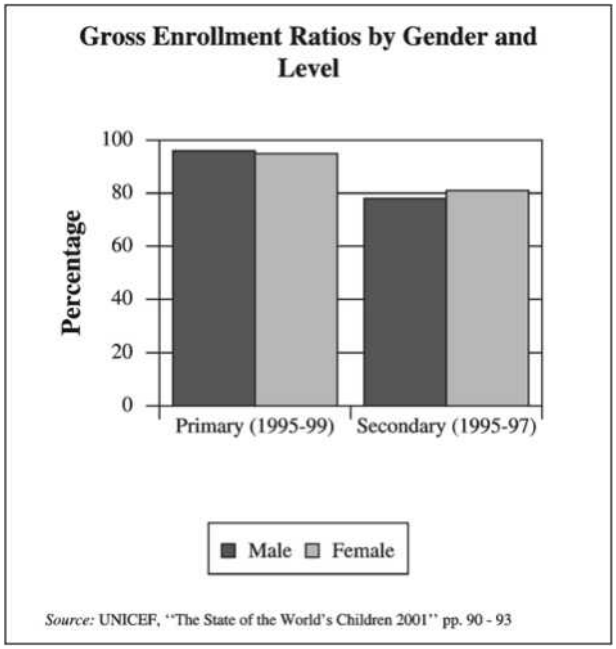
After World War II, the Russification of Moldova began full scale when private property was abolished, collective farms were established, and a large number of people were deported to Siberia. As a result, the native population became bilingual, speaking both Russian and Romanian. In the 1970s the region was the ''breadbasket'' of the USSR with its agricultural boom. It was the smallest republic of the old USSR with less than 0.2 percent of the land, but ranked sixth in its agricultural production. However, the undercurrents against the Russification were present throughout the period and gained momentum in 1980s with the introduction of openness and the rebuilding of socio-economic policies by Mikhail Gorbachev. A new political group, the Moldavian Popular Front, demanded self-rule and free elections. At the same time, the USSR was in turmoil, and Gorbachev, surviving a failed coup, declared the dissolution of USSR into the CIS. On August 27, 1991, Moldova became independent with Mircea Snegur as president. It adopted its first constitution in 1994. In 1995 Moldova was admitted to the Council of Europe and ratified its Convention on the Protection of Ethnic Minorities the next year. In 1996, in the first multi-candidate presidential elections, Petru Lucinschi, a member of the Communist Party of Moldova, became the President. Present day Moldova is an ethnically diverse country with about 64 percent ethnic Romanians, 13 percent ethnic Russians, 14 percent ethnic Ukrainians, 3 percent Gagauz (or Turks who migrated in eighteenth century and adopted Christianity), 2 percent Jews, 2 percent Bulgarian, and 2 percent Belarussians and Gypsies. Furthermore, at the advent of twenty-first century, Moldova was reeling under foreign debt and the economy was in disarray with the quality of living at its lowest ebb. In 1999, the debt was 1,572 million lei, and the costs for servicing that loan were as high as 11 percent of the Gross Domestic Product (GDP.)

The historical evolution of Moldova had important implications in the shaping of its educational system. At the beginning of the twentieth century, a large majority of the population was illiterate, and Romanian was the language spoken by the majority. Under Soviet rule, Russian was emphasized and became the official language. The USSR's education policies made education available to all citizens. However, Russian and Ukrainian ethnic students were given preference in higher education, and laws were passed to suppress Romanian culture. In the 1980s the growing nationalist movement led to the establishment of a literary debating society named after Moldovan poet Alexie Mateevici. This started an intellectual movement to restore the national culture and led to the development of the Moldovan language that reverted to the use of the Latin alphabet instead of the Cyrillic script. Since 1989, Moldovan has been the official language of instruction. At the beginning of the twenty-first century, the country, undergoing serious economic crises, was poised toward privatization of education. This occurred primarily in the higher education sector, and Moldova struggled to maintain the benefits accrued from high levels of literacy.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Moldova is a democratic republic. The new constitution was ratified in 1994. The President is the head of the state and is elected every four years with a maximum of two consecutive terms. The unicameral Parliament is the supreme legislative body with 104 deputies elected by popular vote to serve four-year terms. The judiciary branch of the government is headed by the Supreme Court and includes the Court of Appeal and the Constitutional Court. There are also Higher Magistrate's Council, Tribunals, and Courts at the local levels.

In 1995, Moldova's Parliament approved the Policy and Law on Education. This policy is the conceptual and legal framework of the educational system and is in consonance with Moldova's constitution, international documents on human rights, rights of children, and contemporary educational theories. A 10-year National Education Program for the period 1995-2005 was approved in 1995. The country is committed to free and universal education. Basic education in Moldova is compulsory for 10 years. After that, a student can pursue technical school or further study leading to higher education. The education system prior to 1991 was largely shaped by Soviet policies but, after its independence, Moldova has leaned more toward the Romanian system of education and greater privatization, especially of higher education based on Western Models. Textbooks and curricula have been donated by Romania to build the education system in schools separate from the old Russian model.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

EDUCATIONAL SYSTEM—OVERVIEW

The education system in Moldova consists of preschool, primary, secondary and higher education. The preschool education is for children up to the age of seven years. The primary education is between grades one through four and typically involves children between the ages of 8-12. The secondary education consists of two tracks: general and vocational. General secondary education from grades 5-9 is called the gymnasium, and grades 10-12 is called *liceul* (lyceum). The vocational track is called the professional *liceul*. Higher education consists of two stages, short-term college education and university education. These institutions were traditionally awarding Diplomas but, in the year 2000, were also using the titles of Bachelor and Master to conform to international standards.

The language of instruction under the Soviet rule was Russian. However, since 1989, Moldovan was adopted as the official language and in the year 2000, nearly two-thirds of all pupils were studying in schools where Moldovan was the language of instruction. However, schools serving the needs of minorities and schools with Russian, Gagauzian, Ukrainian, and Bulgarian as the language of instruction are also present. Students of other nationalities (Jewish, Polish, and German) have the opportunity to study these as a separate subject. Nonetheless, state policy emphasizes that all citizens should study Moldovan. Since its independence the Moldovan government has also added substantial courses in Romanian literature and history to the curriculum. Strong ties have been established between the education systems in Romania and Moldova. Throughout the 1990s Romania extensively donated textbooks to replace books from the Soviet era. At the university level, change is coming slowly and Russian still remains the predominant language of instruction. The academic year starts on September 1 and continues until June with a winter break in December and January.

In 1994, there were 2,062 preschools with an enrollment of 223,300 students and 20,100 preschool teachers. In 1994, there were 1,692 primary and secondary schools with 731,000 students and 50,300 teachers. The number of colleges was 62 with an enrollment of 43,800 students. The higher education institutions were 18 in number and enrolled 55,200 students. In addition, there were 87 vocational institutions with 39,800 students.

Since the late 1990s, private education as an alternative to state education has also begun in Moldova. The institutions follow the regulations established by the Ministry of Education and Science. In 2001, there were 137 private institutions with 20 universities, 9 short-term colleges, 14 pre and primary schools, 12 gymnasiums and lyceums, and 82 schools of trade. In 2001, there were

19,800 students in these institutions. There is a growing emphasis in promoting the private sector for meeting the educational needs of the country. This is evident from several governmental policies. In December 1999, the Government proposed an Action Program that prioritized the agenda in the educational sector as improving the hierarchical-organizational and institutional structure of professional and higher education system; developing the private sector and accrediting private educational institutions; developing and widely using national education standards; upgrading the qualifications and training level of experts within educational institutions; and orienting public funds towards improvement of preprimary, primary, secondary, and vocational education.

PREPRIMARY & PRIMARY EDUCATION

The preschool education as defined by The Law on Education (Article 17) begins at age three and continues until age six or seven. The law allows for a guarantee of the education of preschoolers in nurseries and kindergartens through provision of material and financial support. However, the Ministry of Education and Science has noted that since 1993 there has been a decline in preschool education and has called this a phenomenon of ''kindergarten depopulation.'' For example, in 1993 there were 1,877 kindergartens with 202,300 children enrolled, that declined in 1995 to 1,668 kindergartens with 161,200 children, and further to 1,581 kindergartens with 147,300 children in 1997, despite no significant change in demographic composition of the population. According to UNESCO statistics, in 1996 there were a total of 133,426 students in preprimary schools, of which 62,719 were females. Nearly 22,415 pupils were in the private preprimary schools. The gross preprimary enrollment ratio was estimated to be as low as 45 percent. The reasons for this decline included the closure of preschools by local authorities that could not sustain the financial costs to run these institutions. No significant differences in enrollment of male and female children have been found. Foreign bilateral and multilateral agencies have been supporting special projects in this area such as the Program of Early Individual Education (PETI) by UNICEF. In addition, the private sector has also started some preschools, but mostly in the urban areas, catering to the more affluent sections of the population. In 1996, the teacher-pupil ratio was one per seven pupils at the preprimary level. In 1996, all preprimary teachers were females.

The primary education includes grades 1-4 and typically involves children between the ages of 8-12. According to the Law on Education, ''primary education contributes to children's formation as a free and creative personality, to the development of intellectual capacities, of strong reading, writing, and calculating skills, providing the development of communicating skills and the abilities of expression in a foreign language.'' Since the law mandates education, and schooling is mandatory at age seven, primary enrollment rates remain high when compared to other low-income countries. According to UNESCO statistics, in 1996, the intake in primary schools was 98 percent of all children in the age group. There were 320,725 children in primary schools of which 156,417 were females. The number of students in first grade were 81,067; in second grade 80,437; in third grade 79,709; and in fourth grade 79,512. The number of repeaters was very small with a total of 3,726 (1.2 percent) of which 1,736 (2 percent) were in the first grade; 1,721 (2 percent) were in the second grade; 617 (0.8 percent) were in the third grade; and 652 (0.8 percent) were in the fourth grade. According to UNICEF, in 1999 the gross primary enrollment ratio for males was 96 percent and 95 percent for females. A UNDP Report noted that in 1995, there were only 3,989 (0.7 percent) of all school aged children who were not in the primary school. Family poverty was the main reason for this non-attendance.

The teacher-pupil ratio at the primary level was 1 teacher per 23 students. A large majority of primary teachers were females (97 percent). The curriculum in primary grades emphasizes skills in reading, writing, and math. Two-thirds of all primary schools offer these skills through Moldovan while also teaching additional languages, such as Russian. Some primary schools also offer groups with prolonged programs extending into the afternoons. The examinations that determine passage or failure are held yearly at the school level.

SECONDARY EDUCATION

The secondary education consists of two tracks: general and vocational. General secondary education from grades 5-9 is called the gymnasium level. The gymnasium level accepts all primary school students without any competition. The emphasis of this level is to prepare the students for *liceul* or professional education. The level ends with final examinations in several subjects conducted by the Ministry. At completion of this level, the Gymnasium Studies Certificate is awarded.

The grades 10-12 (three years) are called the *liceul* level. The vocational track is called the professional *liceul* and may in some cases have three to five years of training. Admission to the tracks is decided through competition based on guidelines stipulated by the Ministry. Graduates from lyceum are awarded a Diploma of Baccalaureate. In cases of failure, the examinations can be taken at least two more times within the next three years.

According to UNESCO statistics, in 1996, there were a total of 445,501 students in the secondary school system of which 223,162 (50 percent) were females and

419,256 (94 percent) were in the general secondary track. In 2000, there were 79 professional vocational education units of which 17 were trade schools. About 33,000 students were studying in professional tracks.

HIGHER EDUCATION

At the tertiary level, colleges provide short-term higher education typically for two to three years. Universities provide education that lasts for four to six years to meet long-term needs. During the Soviet era, preference for higher education was given to Russian and Ukrainian students. In 1940, there were only 10 students per 10,000 people in Moldova. This had increased to 170 per 10,000 in the year 2000, with a growing representation of ethnic Romanians. According to 1996 UNESCO statistics, 93,759 students were enrolled in tertiary education of which 51,411 students were females. Of these students, 38,295 were in social sciences, 30,074 were in natural sciences, 9,181 were in medical sciences, 8,375 were in education (including religion and theology), 4,377 were in humanities, and 3,457 were classified as others. In 1996, 13,249 students graduated from the tertiary level.

In the year 2000, there were 53 colleges. Out of these 53 colleges, 48 were state governed and 5 were private. According to their area of specialty, 9 colleges were pedagogical, 10 were agrarian, 6 were medical, 5 were art and music, 9 were economics and law, 8 were technical, 2 were technological, 2 were military, 1 was ecological, and 1 was foreign language. At the university level, there were 28 institutions. Of these, 13 were state owned and 15 were private. About two-thirds of the students in the tertiary level were being supported by the state, and only one-third were paying for their studies.

Post university or doctoral and postdoctoral education in Moldova is also available for graduates from higher education. The admission is competitive and based on criteria established by the state attestation commission and the agreement with Academies. In the public sector, three Academies have been established. The Academy of Sciences is the oldest and was founded in 1961 in Moldova. In the year 2000, it had six sections: Physical-Mathematical, Biological and Chemical, Humanities and Social, Agricultural, Medical, and Technical. With a shift to the market economy and greater demand for professionals in economics and management, Moldova started the Academy of Economic Sciences in 1991. The academy had the following faculties: Management, Marketing, Accounting, Finance, International Economic Relations, Cybernetics, Economic Statistics, and Informatics. In 1999, there were 8,435 students enrolled in the Academy of Economic Sciences and there were 547 faculty members working in its 23 Departments. In 1999, eight years since its inception, 8,716 students had graduated from the Academy of Economic Sciences. The third Academy in Moldova is the Academy of Public Administration. The Doctorate of Philosophy (Ph.D.), which culminates with a thesis defense, is awarded after post university education. The Doctorate of Science (D.Sc.) is conferred after two years of postdoctoral research work and attestation by a State Commission.

Higher education for graduates in professional positions is also available. The only public institution for higher technical education in the country is the Technical University of Moldova (TUM). At TUM, the education is offered in 58 branches of engineering, with 95 options, and undergraduate education is for a minimum four years. At the completion of undergraduate education, the Diploma of Licentiate Engineer is awarded. At the graduate level, TUM also awards a master's degree, a Doctorate of Philosophy (Ph.D.), and a Doctorate of Science (D.Sc. or postdoctoral degree). In 2001, TUM consisted of 9 faculties, 13 colleges, and had an enrollment of close to 10,000 students. The university had 750 faculty members with 4 serving as members of the Academy of Sciences (considered as the most prestigious recognition), 45 professors with Doctor of Science degrees, 400 associate professors with Doctor of Philosophy degrees, and 195 lecturers with minimum masters' level training.

An internationally respected trade institution of its own kind in Moldova is the College of Wine Culture. The College was established around 1850 and draws students from all over Eastern Europe and other parts of the world; it graduates about 300 wine experts every year.

In 2000, according to the Department of Statistics and Sociology in Moldova, only one in eight who completed higher education got a job. At the beginning of 2001, more than 75,000 students were registered for higher education in Moldova, a large number on part-time basis. Law and Economics were the most prestigious specialties in 2000.

Students pursuing higher education also seek opportunities to study abroad. Romania is the most popular destination for pursuing higher education because of proximity, language, and similarity in culture. Several exchange programs with universities in Romania have been established. The United States and countries in Europe are also popular places for seeking higher education by students. As reported in the media, the selection procedures for awarding these exchange scholarships are often a source of contention between politicians and academicians with each wanting greater role in selection and blaming the other for corruption.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

In 2001, the Ministry of Education and Science was the governmental division looking after the education sector. In 2001, the Ministry was headed by a Minister and four Vice Ministers, with each being responsible for a division of the Ministry. The four divisions under the vice-ministers are the Department of General Secondary Education, the Department of Vocational Education, the Youth and Sport Department, and the Higher Education Department. In addition, the Minister looks after the fifth division called the Department of Prognosis, Resources, and Funding and that is responsible for statistics, prognostication, administrative organization, direction of didactic personnel, attestation, personnel management, international relations, and interstate exchange education.

The Department of General Secondary Education is responsible for directing preprimary and primary education, general secondary education, language, didactic supply, libraries, quality assessment, and documentation. The Department of Vocational Education is responsible for the direction of projecting and assessment of vocational education, coordination of professional lyceums, and special education. The Youth and Sport Department provides direction to youth and sport activities. The Higher Education Department is responsible for the main direction of university studies, accreditation, and authorization. It is also responsible for continuing education of didactic personnel (educators). The Higher Education Department is further comprised of four institutions. The first is the Faculties of Institutions of Higher Education (FIHE) that oversees the training of education administrators at the ''Ion Creanga'' State Pedagogical State University of Moldova. The second is The National Institute of Physical Education and Sport (NIPES) that trains sport coaches. The third is The National Institute of Continuing Education (NICE) that trains personnel from private institutions, looks after bilateral agreements for training abroad, looks after the training needs of the Ministry personnel, and conducts various refresher courses. And the fourth is The Division of Teacher Training and Post University Centers.

Financing of the education sector in the new republic has been a constant struggle. In 2001, government funding ensured only basic functioning of educational establishments. No funding was allocated for construction or for teaching aids. In 1995, of the 93 book titles to be published, only 14 were issued. In 1999, the consolidated budget expenditure on education was 614 million lei. In 1990, the public expenditure on education as a percentage of total government expenditure was 17 percent, and in 1996 this was 28 percent. According to UNESCO statistics, in 1996, teachers' emoluments as a percentage of total education expenditure accounted for 71 percent. The percentage expenditure by level revealed spending as 25 percent on preprimary and primary levels, 53 percent on secondary levels, and 13 percent on tertiary levels. In 1996, expenditure per pupil as a percentage of GNP per capita was 24 percent for preprimary and primary school, 53 percent for secondary schools, and 64 percent for tertiary level schools.

NONFORMAL EDUCATION

Since the country has enjoyed very high levels of literacy as a byproduct of being a part of the former USSR, at present, there is no need for having formalized adult education sector. Furthermore, in independent Moldova, the 1995 Policy and Law on Education mandates that education and primary education rates continue to be near universal; adult education does not seem to be needed in the near future.

Another sector within the educational system is the education of children with special needs. In 2000, according to the Ministry of Education and Science, for children with special needs there were 9 institutions at the preprimary level and 64 at the primary level. In addition there were 32 auxiliary schools for children with mental deficiencies with an enrollment of 4,300 students. For children with physical deficiencies, there were 14 specialized schools enrolling 2,000 such students. There was one school for the visually impaired, which enrolled about 100 students. For children with speech deficiencies, there were 120 specialized centers enrolling 4,000 children. In addition, several speech therapy institutions have also been created in Moldova.

In the area of fine arts, Moldova also has 116 artistic schools, of which 10 are directly under the Ministry of Culture, and 106 are operated through Territorial Departments of Culture. Of the 10 institutions under the Ministry of Culture, 5 are music institutions, 1 is a choreography institution, 2 are fine art institutions, and 1 is a popular arts and general artistic activity institution.

The primary mode of distance education in Moldova was through correspondence courses offered through the Academies and the National Institute of Continuing Education (NICE). A person could even complete a doctoral thesis via correspondence study. As of 2000, Internet based online computer-mediated courses were nonexistent in Moldova. However, the Internet was gaining prominence in Chisinau, the main city and capital of Moldova. Perhaps in future years, online courses will be offered, especially at higher education levels.

TEACHING PROFESSION

According to UNESCO statistics, in 1996 there were a total of 18,395 preprimary teachers (all females),

14,097 primary teachers (of which 13,731 were females), 28,615 secondary teachers (of which 20,832 were females), and 8,814 tertiary level teachers (of which 3,928 were females). In 1990 there were 61 teachers at all levels per 1,000 people of the nonagricultural labor force. This ratio was down to 44 per 1,000 in 1996.

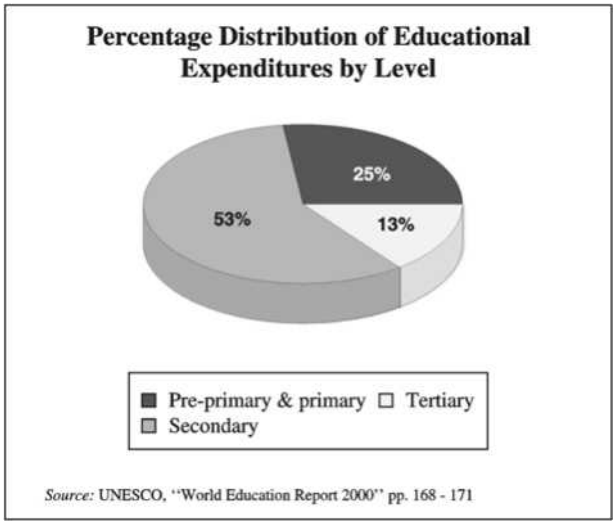
All teachers must complete further training in pedagogy through the ''Ion Creanga'' State Pedagogical State University of Moldova or its affiliates. The continuing education of the teachers is undertaken by the Division of Teacher Training within the Ministry of Education and Science. The Division of Teacher Training has four centers. These are the Center for training and qualifying technical instructors at The Technical University of Moldova, the Center for New Information Technologies at the Ministry, the Center for Training and Economic Assistance at The Academy of Economic Sciences, and the Center of Post University Studies at the University of Moldova.

In 2000, teachers were struggling with receiving salaries regularly and it was the norm for the salaries to be delayed by a few months. Strikes among teachers, once nonexistent, are becoming more common. For example, in March 2000 every Moldovan public school went on a strike. Teachers have formed unions and associations.

SUMMARY

At the advent of the twenty-first century, Moldova has put aside the Russian dominance in its education and is working to establish the education system in native Moldovan as distinct from Russian and somewhat different from, but still similar to, the Romanian model. The primary education and literacy rates continue to be impressive for a newly formed country. However, Moldova has been undergoing a serious economic crisis throughout the 1990s that has been adversely affecting the educational sector. Compounding this problem are issues of unemployment, bureaucratic corruption, energy crises (especially in winter, which leads to school closures), foreign debt, inability to attract foreign investment, growing number of strikes among teachers due to delayed salaries and lack of increase in emoluments, and erosion of values. Moldova is struggling to maintain the high literacy levels inherited from the Soviet era. The emphasis in modern Moldova is to establish a greater base of qualified professionals at international standards who are well versed in market economy and managerial sciences. Moldova is looking more and more toward the private sector to deliver some of these goods. It is still uncertain how much success it will get in this direction through these measures.

Education in Moldova has received and continues to receive liberal assistance in ''content'' and ''process'' from Romania. Furthermore, the educational system in Moldova has been receiving financial help from World Bank. In 1998, the World Bank initiated a General Education Project to support the introduction of new general education standards, to develop tests and implement new curricula, to purchase teaching materials and textbooks, and to update teaching methodology and teacher training. The total budget for this project was US$20 million. How much this foreign aid will impact the already weakened economy and aid in strengthening the education sector remains to be seen.



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—Manoj Sharma

MONACO

BASIC DATA

Official Country Name:	Principality of Monaco
Region:	Europe
Population:	31,693
Language(s):	French, English, Italian, Monegasque
Literacy Rate:	99%

The nation of Monaco is a constitutional hereditary monarchy with close ties, by treaty and geography, with France. Monaco is only 1.95 square kilometers in total area with a population of 31,693 Monegasques, according to a 2000 estimate. The country has a literacy rate of 99 percent for the total population, including many well-trained workers from other countries who have come to work in a multitude of professions. Various economic interests (including tourism, technology, banking, and chemicals) have a direct impact on the principality's curriculum.

National Education, which is overseen by the government's Councilor for the Interior, is compulsory for all children in Monaco from the ages of 6 to 16. The course syllabi are identical to those used in France; this conforms to the deep relationship Monaco has with France, which extends to issues like trade and military protection. In addition, their curriculum covers the history of Monaco and the native Monegasque language. The three main languages in Monaco are French, Italian, and the indigenous tongue.

There are four public schools and two secondary schools in the principality. The secondary and higher education institutions more directly reflect the needs of Monaco's economy. The Lycée Albert I emphasizes secretarial studies and accounting, while the Technical Lycée of Monte Carlo centers on hotel management and hospitality, business, and specialized education. Charles III College and the privately run University of Southern Europe-Monaco (USE-M) offer undergraduate and graduate programs in Business Administration. USE-M has provided special programs for international students to study in Monaco and for students from the Monegasque region to study overseas, such as in the United States. Four other institutions with specialized missions are the Nursing School at the Princess Grace Hospital Complex, the Rainier III Academy of Music, the Princess Grace Academy of Classical Dance, and the Municipal School of Plastic Arts.

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—Michael W. Young

MONGOLIA

BASIC DATA

Official Country Name:	Mongolia
Region:	East & South Asia
Population:	2,650,952
Language(s):	Khalkha Mongol, Turkic, Russian
Literacy Rate:	82.9%

Mongolia is a landlocked country of 2.65 million inhabitants living in an area of 1.565 million square kilometers. The country is sandwiched between Russia and China, each of which also has a Mongolian population (.5 and 3.5 million, respectively). Thirty-four percent of the population is under the age of 14. About 25 percent of the population resides in the capital city, Ulaanbaatar, 25 percent resides in other urban areas, and most of the remainder is nomadic. Estimated 1999 per capita gross domestic product (GDP: purchasing power parity) was $2,320 distributed as follows: 33 percent agriculture, 24 percent industry, and 43 percent services. Real GDP growth was about 3.5 percent in 1999. Forty percent of the population was living below the official poverty level (CIA World Factbook 2000).

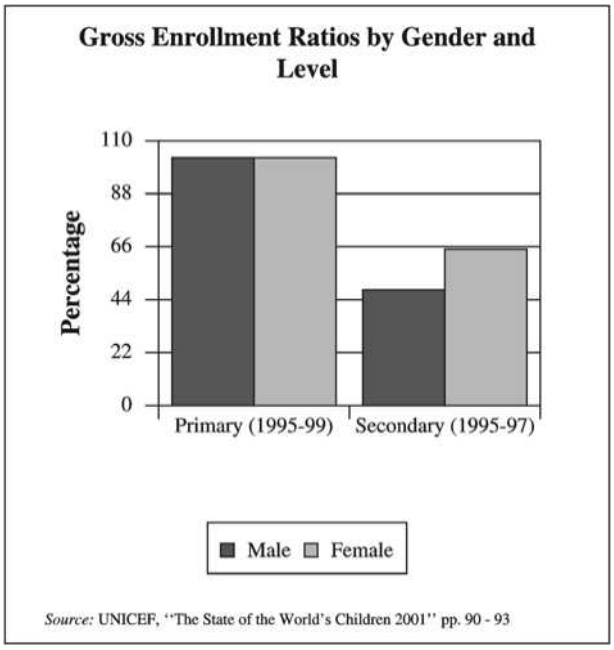
The People's Government of Mongolia was declared in 1921 under a single-party government that held power until 1990. The Mongolian People's Republic was established in 1924 as the world's second communist country. Mongolia maintained close political and economic ties with the USSR but was never one of its constituent republics. At the peak of this relationship, almost a third of Mongolia's GDP was provided by the Soviet Union; this included significant support (e.g., books, equipment, training of academics and researchers) for Mongolian education. Following the fall of the Soviet Union in 1989, the external financial support coming from the Council for Mutual Economic Cooperation (CMEC) evaporated. A new, political structure was established with the passage of a constitution in 1992 to guide the country's transition to a democratic government and a market rather than a command economy (Weidman and Bat-Erdene 2002).

The Mongolian education system has several components:

1) preschool and kindergarten;
2) 4 years of primary education, beginning at age 8;
3) 4 years of lower secondary education, with compulsory education ending after Grade 8;
4) 2 years of upper secondary education;
5) postsecondary and higher education; and
6) technical education and vocational training (TEVT).

The TEVT component comprises specialized upper secondary schools as well as postsecondary diploma programs housed in higher education institutions. The vestiges of its Soviet heritage remain in a separate science and technology component under the Mongolian Academy of Sciences, though there continue to be efforts to bring the research institutes and advanced degree granting authority of the Academy under the universities. Most Ph.D. programs have been moved into the universities, but the Academy retains control over the advanced research degree, the doctor of science. Nonformal and distance education activities cut across the entire system (Mongolia Education Sector Strategy 2000-2005).

The gross enrollment rates in 2000 were: 96.6 percent for the 4-year primary education cycle, with a total of 253,441 students; 80.2 percent for the 4-year lower secondary cycle, with 195,511 students; 46.9 percent for the 2-year upper secondary cycle, with 49,083 students; and 11.6 percent in technical and vocational education, with 12,177 students. For higher education, the gross enrollment rate was 35 percent, with 84,970 students. At each succeeding level of education, females outnumber males, resulting in higher education enrollments in which there are twice as many females as males (Statistics from the Ministry of Science, Education, Technology and Culture of Mongolia).



Enrollments in primary and secondary education have leveled off and are, in fact, dropping due to reduced population growth and entrance rates. Higher education has been expanding rapidly, with public sector enrollments more than doubling since 1992. In addition, the government has allowed the development of a private higher education sector that is approaching half of the total students in Mongolian higher education. Commerce and business administration degree programs enroll the largest numbers of students in private institutions, and more students are studying law in private than public sector higher education institutions (Mongolia Education Sector Strategy 2000-2005).

Ongoing reforms in Mongolian education have been designed to change from a highly specialized and compartmentalized system of education based on the Russian model to a more flexible system, including improving efficiency and effectiveness of education at all levels through rationalization and decentralization. Since 1990, there has been a relaxation of state control over curriculum in Mongolia with efforts at diversification based on local community needs. This includes eliminating the ideological content that had been prevalent, especially in social science and humanities disciplines, and shifting from a teacher-centered to a more student-centered curriculum.

Administration of schools at all levels has been decentralized and less reliance placed on national planning approaches to the allocation of spaces for students in various types of curricula. The government has introduced measures aimed at cost sharing with parents and students

so that education funding can be supplemented by sources other than the central government. Legislation has also been passed allowing private sector provision of education at all levels.

A student fee structure was introduced for public higher education institutions in 1993, but unlike most other countries, student fees in Mongolia are expected to cover the full cost of faculty salaries, instructional costs, and other expenses. Initially, the government provided funds for utilities as well as building maintenance and upkeep, but since 1997 only heat, water, and electricity costs are covered. Despite these shifts, the 1997 annual tuition cost has remained at the same inflation-adjusted level as when the fee structure was first introduced, about four months' salary of a university senior lecturer or senior government employee (Weidman and Bat-Erdene 2002).

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—John C. Weidman and Regsurengiin Bat-Erdene

MONTENEGRO

BASIC DATA

Official Country Name:	Montenegro
Region:	Europe
Population:	680,158
Language(s):	Serbian, Albanian
Literacy Rate:	NA
Academic Year:	September-June
Compulsory Schooling:	9 years
Libraries:	51
Educational Enrollment Rate:	Primary: 72% Secondary: 63% Higher: 22%
Student-Teacher Ratio:	Primary: 22:1 Secondary: 15:1

HISTORY & BACKGROUND

The Republic of Montenegro (*Crna Gora* or ''Black Mountain'') is located on the Adriatic Sea in southeastern Europe. Bordered by Bosnia and Herzegovina to the northwest, Serbia to the northeast, the autonomous province of Kosovo to the east, Albania to the southeast, and the Adriatic to the southwest, Montenegro in early 2001 belonged to the Federal Republic of Yugoslavia (FRY), along with Serbia. A referendum was anticipated for the second half of 2001 or early 2002 to decide Montenegro's future status as either an independent republic or a republic within the FRY. Montenegro's roughly diamond-shaped territory measures 13,938 square kilometers, which is slightly less than the U.S. state of Connecticut, and constitutes about 13.5 percent of the FRY's total territory.

Montenegro was settled by Slavic tribes and belonged to the Serbian kingdom as part of the Zeta province during the Middle Ages. With the incursion of the Ottoman Turks into southeastern Europe and Albanian families settling in the Kosovo region that separates Montenegro from Serbia, Montenegro became more separate from Serbia and developed a distinct variation of Orthodox Christian practice and a somewhat different version of the Serbian language, although the Cyrillic alphabet continued to be used. The Montenegrin version of Serbo-Croatian is more similar to Croatian than it is to Serbian. Fighting the Ottoman Turks from the mountains, Montenegro maintained its independence until 1516 when a Greek Catholic Bishop named Vladika assumed civil authority of the territory. Rule of Montenegro was transferred to other prince-bishops for three and a half centuries, until Nicholas I gave Montenegro its first constitution in 1868. During the World War I, Austria occupied Montenegro in 1916. When Austria-Hungary lost the war, Montenegro joined the Kingdom of the Serbs, Croats, and the Slovenes in 1918, which was renamed Yugoslavia in 1929. With the advent of World War II and the invasion of the Balkans in 1941 by the Axis powers, Montenegro was declared independent and became a protectorate of Italy. In 1945, following the war, Montenegro became one of the republics of socialist Yugoslavia.

The population of Montenegro in the year 2000 was estimated to be 680,158 people, including 46,631 refugees and internally displaced persons (IDPs), according to the UN High Commissioner for Refugees. Due to extensive population movements in the Balkan peninsula during the 1990s resulting from ethnic violence and war-

fare and the very difficult economic circumstances and living conditions of this politically troubled region, population measures during the 1990s were either not taken or relatively unreliable for the most part. In the year 2000, about 230,000 displaced persons from Kosovo were living in other parts of the FRY (such as Montenegro), as were 500,000 refugees from Bosnia and Croatia. Population statistics and education-related counts for the 1990s and the early-2000 decade thus should be interpreted with care. A new census scheduled for March 2001 in the FRY should yield updated statistics toward the end of 2001.

In 1991 the ethnic composition of Montenegro was 61.9 percent Montenegrin, 14.6 percent Bosniac, 9.3 percent Serb, 6.6 percent Albanian, 0.5 percent Roma, and 7.1 percent other. In terms of religious affiliation, approximately 65 percent of the combined population of Serbia and Montenegro was Orthodox, 19 percent was Muslim, 4 percent was Roman Catholic, 1 percent was Protestant, and 11 percent was other. About 95 percent of this same population spoke Serbian, though the Montenegrin version of the language differs slightly from the language principally spoken in Serbia and 5 percent spoke Albanian. Approximately 70 percent of Montenegrins lived in urban areas in 1991. With a population density of 47 persons per square kilometer, Montenegro is rather sparsely populated, especially in the north, although greater concentrations of Montenegrins live along the coast and inland around the capital, Podgorica, near northwestern Albania. In 1911 just 18,907 Montenegrins (8.9 percent of the country's total population) had lived in towns of 2,000 inhabitants or more. In 2000 a significant proportion of Montenegrins still resided in villages.

In 2000 the total fertility rate in Montenegro was about two children per woman. An estimated 22 percent of the country's population was 14 years old or younger while nearly two-thirds of the population was between 15 and 64 and about 12 percent were 65 years of age or older. (Again, this assumes an age balance in 2000 equivalent to that in 1991, when the last census was taken. Due to population shifts, this may not be the case.) In 2000 Montenegro had an infant-mortality rate of 11 per 1,000 live births. The average life expectancy at birth in the year 2000 was 75.5 years (71.5 for men and 79.8 for women—a significant gender difference).

The Montenegrin workforce in 1999 was composed as follows: 30.5 percent of the labor force was employed in industry and mining, and just 4.3 percent was employed in agriculture, fisheries, and forestry; 65.2 percent was employed in service jobs. In 1999 the FRY had an annual economic growth rate of -20 percent of the GDP. Economic outputs were declining substantially, and the area stood in great need of international economic assistance, although international aid, especially to Serbia, was limited because of Serbia and Montenegro's lack of favor in the world's eye due to the FRY's reluctance to cooperate with the United Nations International Criminal Tribunal for the former Yugoslavia before late June 2001. In 1999 Montenegro's real GDP was only 58 percent of the 1990 real GDP. However, significant black-market activity and gray-market activity also existed in the FRY, making it difficult to state with much accuracy the actual economic output of the FRY in the 1990s. GDP per capita in Montenegro in 1998 was estimated at US$1709. Unemployment in Montenegro in July 2000 ranged from 0.2 to nearly 32 percent, depending on the skill level and educational attainment of the worker. Unskilled laborers, persons with intermediate specialist training, and skilled workers had the highest unemployment rates (31.0 percent, 29.4 percent, and 26.9 percent, respectively). Earlier, as part of the Socialist Federal Republic of Yugoslavia, Montenegro had been one of the poorest of the six republics, with its economy, based mainly on industry and large state-owned enterprises, reaching only 75 to 80 percent of the average level of development for the socialist federation. During the late 1990s, Montenegro increased its revenues from tourism and the marine trade, profiting from its favorable location on the Adriatic in contrast to landlocked Serbia.

Montenegro required substantial international development assistance during the 1990s and early twenty-first century to recover from the economic disruptions caused by a decade of war in the Balkans, sanctions imposed by the international community on the FRY in 1993, and sanctions Serbia itself imposed on Montenegro in 1999 for Montenegro's attempts to politically distance itself from Serbia. Until the international donors conference met on June 29, 2001, to discuss assistance to the FRY, Montenegro's aid packages from abroad were somewhat limited. At the June 2001 conference representatives from about 40 countries, UN agencies, and the World Bank met in Brussels, Belgium, and pledged about US$1.2 billion to assist the FRY primarily with rebuilding infrastructure and paying the salaries of teachers and doctors.

CONSTITUTIONAL & LEGAL FOUNDATIONS

As noted above, Montenegro is one of the two republics of the Federal Republic of Yugoslavia, self-declared on 11 April 1992 as the successor state to the former Socialist Federal Republic of Yugoslavia (SFRY) and formally established by the Constitution of April 27, 1992. The new federal government formed in November 2000 dropped its previous claim of being the sole successor to the SFRY and was recognized by the international community. Montenegrin law is based on a civil law system. All Montenegrins, women and men, are eligible to vote

at age 18; 16- and 17-year-olds can also vote if they are employed. Besides participating in the election of the president of the federation, Montenegrins elect their own republican president to a four-year term of service as head of state of the Republic of Montenegro. Milo Djukanovic, an advocate of greater autonomy for Montenegro in the federation with Serbia, was elected president of Montenegro on December 21, 1997. At the federal level, the president of the FRY was Slobodan Miloševic from 1987 until October 2000; he lost the September 2000 presidential election to Vojislav Kostunica, who had advocated for democratic reforms, economic improvements, and an end to corruption. The executive branch at the federal level also includes a prime minister, several deputy ministers, and a cabinet known as the Federal Executive Council.

At the federal level the legislative branch of the FRY is a bicameral Federal Assembly (*Savezna Skupstina*) composed of a Chamber of Republics (*Vece Republika*) of 40 members, 20 of them Serbian representatives and 20 Montenegrin representatives, elected to 4-year terms and distributed according to the party distributions in the republican assemblies of Serbia and Montenegro, and a Chamber of Citizens (*Vece Gradjana*) of 138 members, 108 of them Serbian representatives (half of whom are elected by constituency majorities and half by proportional representation) and 30 of them Montenegrin representatives (6 elected by constituency majorities and 24 by proportional representation), all of whom serve 4-year terms. Decision-making in the republican government of Montenegro increased in importance in 1999 and later as Montenegro's nationalist movement gained further strength and Montenegrins attempted to regulate their internal affairs more to their own liking with less interference from Serbia. The third branch of the federal government is the judicial branch, consisting of the Federal Court (*Savezni Sud*) and the Constitutional Court, both of whose judges are elected to nine-year terms by the Federal Assembly, the federal legislative body.

During the 1990s the human rights situation in Montenegro markedly worsened as ethnic violence spread in the Balkans. Large flows of refugees and IDPs sought shelter from the violence in Bosnia and Herzegovina, Croatia, and Kosovo and from the 1999 NATO bombing campaign aimed at halting Miloševic's alleged mass expulsions and murders of ethnic Albanians in Kosovo. Indictments against Montenegrins for war crimes associated with the ethnic violence in the region had yet to produce arrests by early 2001. With the arrest and extradition of Miloševic to The Hague on June 28, 2001, however, other arrests were expected in both Serbia and Montenegro, as well as a potentially more cooperative stance with the United Nations International Criminal Tribunal for the former Yugoslavia by the republican governments and eventually by the federal government. The promise of substantial international donations to reconstruct the economies and infrastructure of the FRY following Miloševic's extradition in late June 2001 was viewed as a spur likely to produce a more positive climate within both Montenegro and Serbia for international cooperation that could positively impact the social and economic situations of the local Montenegrin population.

Within the FRY in 2000, serious human rights problems had existed, including violence and discrimination against women, trafficking in women and girls for forced prostitution, and police repression, as well as official and societal discrimination against Muslims, Roma, and other minorities in various parts of the FRY. Severe repression of political critics, student activists, the media, and political dissidents under the Miloševic regime also was a serious problem up through the first part of 2000. Hopes within the FRY and among international actors ran high by mid-2001 that the human rights climate would turn in a more positive direction with Miloševic out of the country.

EDUCATIONAL SYSTEM—OVERVIEW

The education system in Montenegro has been strongly influenced by the former education system of the Socialist Federal Republic of Yugoslavia as well as by laws passed in the 1990s when Montenegro was part of the Federal Republic of Yugoslavia. Educational policy is determined by the federal government and the Ministry of Education and Science of the Republic of Montenegro, with significant input from international partners, such as the European Union and several national governments and nongovernmental organizations who have provided financial and technical support for education reforms. Key educational reforms at the turn of the millennium included efforts to improve vocational education and training in Montenegro and to upgrade the curriculum at various educational levels.

Compulsory education in Montenegro includes the 8 grades of primary school, attended by students typically aged 7 through 14. Serbian is the official language of instruction in Montenegrin schools, almost all of which are public. In some areas, Albanian is also offered as a language of instruction at the elementary and secondary levels. About 95.8 percent of primary students in Montenegro were taught in Serbian in the year 2000, while 4.2 percent of primary students were taught in Albanian. At the secondary level, 97.6 percent of students were taught in Serbian, and 2.4 percent were taught in Albanian. The official language of instruction at the university level was Serbian.

In 1997 about 32.2 percent of the population in the FRY was of school age or between 3 and 24 years of age.

In 1999-2000, approximately 118,000 Montenegrin pupils and students were enrolled in primary, secondary, and university institutions out of the country's total population of about 680,000. The gross enrollment ratio that year for the basic education grades (the free, compulsory 8 years of primary schooling) was 98.5 percent.

Participation in preschool programming is optional, with infants and children up to three years of age sometimes cared for in childcare settings and preprimary schooling available for children between the ages of three and seven. Basic education includes the 8 years of compulsory schooling and is divided into two stages: lower primary, covering grades 1 through 4 for children generally 7 through 10 years of age; and upper primary, covering grades 5 through 8 for children aged 11 through 14. In 2000 about 84 percent of Montenegrin students were completing their compulsory education in 8 years.

Upper secondary schooling includes either 4 years of general education for students 15 through 18 years of age or 2, 3, or 4 years of vocational education for students starting at age 15. Specialized secondary schools also exist to provide four years of education in the arts, music, or ballet. Tertiary education is provided at the University of Montenegro and its 15 associated faculties. No nonuniversity higher education existed in Montenegro as of the 2000-2001 academic year, although university programs could be relatively long (lasting 4 through 6 years, beginning at age 19) or short (lasting 2 years). Postgraduate studies leading to the Master of Art or Master of Science degree also existed, although no special doctoral programs were to be found. Students interested in preparing a doctoral thesis could do so upon successful completion of a Master's degree program.

PREPRIMARY & PRIMARY EDUCATION

As noted above, preprimary education in Montenegro is optional. However, nearly 12,500 children—about 24 percent of all children ages 0 to 7—were enrolled in childcare or preprimary educational programs in the 1999-2000 school year. Starting in 1994, the Open Society Institute, a private foundation based in the United States and funded by philanthropist George Soros, introduced the ''Step by Step'' program into Montenegrin preschools with strong cooperation from the Ministry of Education and Science. Established in 2000 as an independent program, ''Step by Step'' in Montenegro also started primary level programming in eight model primary schools. ''Step by Step'' has emphasized reforming teacher training programs to prepare early childhood educators who are better versed in child-centered methodologies and democratic principles of classroom and school management. Across the transitional countries of Eastern and Central Europe, ''Step by Step'' has developed a positive reputation for building democratic partnerships among school staff, parents, and local community members and for fostering creativity and programs designed to support the educational needs of minority children. In Montenegro, children with disabilities, Roma, refugees, and the impoverished have especially benefited from ''Step by Step'' programs.

In 1999-2000, approximately 38,198 students were enrolled in lower primary schooling (grades 1 through 4) and 39,839 students were enrolled in the upper primary grades (grades 5 through 8) at 167 central schools and 303 branch (i.e., village) schools in Montenegro. All of the schools were publicly funded except for one private music school at the primary level. With an average of 22.5 pupils per class, about 4,888 teachers taught primary school in Montenegro that year. Significant differences in class size existed between village schools and town schools. In the villages, the pupil to teacher ratio was 11.8:1 for the first 4 primary grades, whereas in towns the comparable ratio was 24.5:1. In Montenegro's upper primary grades, classes averaged 24.4 pupils, although the pupil to teacher ratio was actually only 12.7:1 due to the high number of part-time teachers employed. In comparison, the pupil to teacher ratio for the FRY as a whole was 16.9:1 for basic education in 1997.

Educational innovations in the late 1990s included reductions of 10 to 30 percent in the subject contents and reductions in the number of classes taught weekly in specific subjects in the first three grades of basic education. Additionally, instruction in a first foreign language was added in grade 3 of the lower primary level for two 45-minute class periods each week.

SECONDARY EDUCATION

In 1999-2000, a reported 31,817 students were enrolled in secondary schools covering 4 grades of general education in Montenegro (9,109 students in general education programs and 22,708 students taking 2-, 3-, or 4-year vocational programs, including part-time students). Art schools, apprentice schools, and teacher training institutes also exist at the secondary level in Montenegro. The balance of general versus vocational secondary education in the FRY as a whole has been somewhat different than in Montenegro. In 1996 nearly 56 percent of upper secondary students in FRY followed general courses of study while 44.3 percent were enrolled in vocational and technical programs. In the 1999-2000 academic year, secondary schools in Montenegro numbered 44 central schools and 1 branch school, all of them public. Twenty of the central schools provided general education and 24, plus the 1 branch school, offered vocational instruction at the secondary level in Montenegro. With 2,321 teachers providing secondary instruction,

class sizes ranged from fewer than 10 students per class in some villages to an average of 30 to 40 students per class in towns. Vocational schools also had significantly smaller student to teacher ratios because of the fairly common practice in Montenegro of hiring a variety of teachers with special expertise in various vocational subjects, even when relatively few students sought training in particular vocational areas.

In the 1999-2000 academic year, 52.5 percent of secondary students in the FRY were female. Gender-related educational statistics for Montenegro were not readily available. Gross enrollment ratios at the secondary level in Montenegro were also rather difficult to estimate, as different information sources provide widely varying estimates. This is perhaps due to diverse methods of categorizing general and vocational secondary school programs.

At the general secondary level, curricular changes in Montenegro in the mid-1990s included new mathematics and philology gymnasium courses. The need to revise history textbooks was highlighted at the start of the new millennium by certain reform-minded individuals who found history instruction in Montenegro to be overly biased in a Serbian nationalist direction. Apparently history texts in use in Montenegro gave interpretations of historical events such as the war in Bosnia and the breakup of the Socialist Federal Republic of Yugoslavia with a decidedly Serbian ethnonationalist slant; thus, they stood in dire need of revision so as to promote a more accurate depiction of Balkan history. In 1999 a new art curriculum was adopted in Montenegro for vocational education at the secondary level, and curricular changes were introduced in the secondary communications school with new subjects added. Changes also were made in the content of computer courses.

HIGHER EDUCATION

Participation rates at the tertiary level in Montenegro have increased steadily since 1991, although significant numbers of Montenegrin students continue to go outside of Montenegro to obtain their higher education. Montenegro has only one publicly funded university with 15 associated faculties, the University of Montenegro. Gross tertiary enrollment ratios in the mid-1990s for the FRY were reported as roughly 16.5 percent to 21 percent, with somewhat higher participation rates by females than by males. In 1999-2000 a total of 7,082 students were enrolled at the University of Montenegro and its 15 faculties. No private tertiary institutions existed in Montenegro. University-level teaching staff numbered 667, and the student to teacher ratio was reported to be about 12:1 (the slight numerical discrepancy perhaps due to the inclusion of some part-time faculty). In 1997 tertiary students in the FRY specialized in various disciplines according to the following proportions: 7.7 percent of students concentrated in the humanities, 20.8 percent in the social and behavioral sciences, 7.4 percent in the natural sciences, 11.1 percent in medicine, 17.9 percent in engineering, and 35.2 percent in other subject areas.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of Education and Science has primary administrative responsibility for Montenegro's basic education system and for the secondary and tertiary levels of instruction as well. At the federal level, the Rectors' Conference of Yugoslavia seated in Belgrade also formulates and administers education policy and practices. Costs of primary and secondary education are covered by the government in Montenegro, and mid-day meals are provided at state expense. In the year 2000 public expenditures on education and training in Montenegro amounted to about 7.1 percent of the GDP. Most of the government expenditures went to salaries of education-related personnel (91 percent) with much smaller portions of the public budget going to investments (5.6 percent) and school equipment (3.2 percent). Subsidies to student residence halls, student loans, textbook production, commuting expenses of educational staff, maintenance costs, and pupil and student fees also are included in the state budget for education. Parents and other individuals provide relatively modest amounts of additional funds for education-related expenses.

Significantly, international donors provided substantial grants and loans for education in Montenegro beginning in the 1990s, even before the sizable injection of international funds that followed the June 2001 international donors conference for the former Yugoslavia held in Brussels. For example, the EC ''Obnova'' Programme provided 500,000 euro for elementary education in 1998, and UNICEF gave US$1 million for basic education, school furniture, and teaching training in active-learning methodology in 1999. In the year 2000 UNICEF provided US$1.4 million to further support teacher training, education for peace and tolerance, and strategizing in early childcare programming. In 1999 the Open Society Institute (OSI) gave US$500,000 for the ''Step by Step'' program in preprimary and primary schools and to support educational reform and capacity building; in 2000 OSI gave US$647,000 for similar measures and to support higher education. WUS Austria provided funding in the amount of 450,000 DEM for each semester of the 1998-1999 academic year for the reconstruction of schools and other infrastructure, including Internet access and a University Internet Centre, and for other educational purposes, such as the introduction of language and computing courses for students and staff. International donors active in Montenegro's education sector also have

included nongovernmental organizations and government-related agencies such as Save the Children, Catholic Relief Services, World Vision, the British Council, the Danish Council, Cooperacione Italiana, COOPI, HELP, Swiss Disaster Relief, and JEN.

NONFORMAL EDUCATION

A limited number of adult education programs existed in Montenegro at the turn of the millennium through part-time studies and evening schools, although in 1999 no special training courses for adults were provided on a regular basis. Fifty programs for training adults in some of the 3,952 state-recognized occupations had been approved by the state, though most were designed for the employees of specific employers; just a few of these were open to the general labor market. Training programs for adults generally lasted between 2 to 3 months and 6 months; some lasted 12 months for occupations with more specialized requirements. Additionally, in 1999-2000, a total of 153 adult learners were enrolled in basic education courses in Montenegro (i.e., covering the 8 grades of primary schooling) in 2 institutions with a total of 12 teachers and a student to teacher ratio of about 12.8:1.

TEACHING PROFESSION

Teacher preparation in Montenegro is provided through the university faculties. Preprimary teachers receive two years of postsecondary training at the faculty in Nik, whereas primary and secondary educators receive four years of higher education. Educators at the tertiary level—assistants, docents, faculty professors, regular professors, and extraordinary professors—obtain their higher education (and research training, depending on the level of education and area of expertise) in university undergraduate and post-graduate programs. Those interested in promotion to the highest positions must obtain the *Doktor Nauka* (Doctor of Science) degree in the appropriate fields of higher education and research. All teachers at the tertiary level must receive some form of specialized training.

New efforts in the late 1990s to increase the skills of teachers in service included training in student-centered methodology for about 2,000 basic education teachers, provided by UNICEF's Active Learning Project, the Open Society Institute's ''Step by Step'' program, seminars offered by the Ministry of Education and Science and the British Council, and seminars run by Longman Publishing Company for teachers using their published texts. Some training in evaluation and testing was also provided to basic education teachers through the above programs. About 150 teachers at the upper secondary level (both general and vocational) received further training through seminars offered by the Ministry and through language and methodology seminars taught through the British Council. Other secondary teachers received civic education training through such projects as Education for Tolerance, Peace, and Humane Development and Education for Democratic Citizenship.

SUMMARY

At the beginning of the new millennium, Montenegro was poised for significant political and societal changes. After experiencing an economic decline during the 1980s and 1990s, changing its political status from one of the former six republics of the Socialist Republic of Yugoslavia to one of two republics in the Federal Republic of Yugoslavia in 1992, participating to some extent in the ethnic violence that swept the Balkan region in the 1990s, and witnessing the movement of thousands of IDPs and refugees through its territory, Montenegro had an educational system that was ripe for revision by the year 2001. Efforts to improve the quality of instruction in the vocational area and to upgrade adult education offerings appeared to be among the most needed reforms, along with democratization of school management and the conduct of classes and the reformation of course content to more accurately depict historical events and to reflect the multicultural, multilinguistic nature of Montenegro and the other Balkan states. By June 2001 a large conference of international donors was meeting in Brussels to discuss an international package of financial assistance to the Federal Republic of Yugoslavia, including Montenegro. Much of the US$1.2 billion in funds pledged at the conference would be directed to the educational sector to address such problems as teacher salaries being so low that qualified persons often declined the opportunity to teach and school facilities so in need of upgrading and sometimes outright reconstruction that few laboratories or technological equipment were available to serve the basic educational needs of Montenegro's upcoming generations of students.

At mid-year 2001 Montenegro itself was considering holding a referendum to determine its own status as an independent republic or a continuing member of the Federal Republic of Yugoslavia. No matter how the referendum would turn out, it was clear that significant reforms—political, economic, and social, including in the education sector—would need to be made to satisfy the Montenegrin public, many of whom had grown weary of state-centered direction and overbearing governance from Belgrade with a Serbian flavor. The possibilities for significant, publicly responsive educational reforms appeared promising for the second half of 2001, with former Yugoslav president Slobodan Miloševic out of power and new, more democratically minded government officials at the helm both at the federal level and in

Serbia, the long-dominant republic in Yugoslav affairs. Montenegro's own president, Milo Djukanovic, appeared increasingly willing to resist Serbian attempts to exert control over Montenegro's internal affairs and eager to address the needs, interests, and sentiments of Montenegrins. This included the desire of many Montenegrins to improve their educational system so that graduates of all levels of instruction would be better prepared to meet the demands of a rapidly changing labor market, to contribute to their country's economic development, and to take their part in a more locally responsive, democratic society where greater decision-making authority would rest in the hands of the Montenegrin people.

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—Barbara Lakeberg Dridi

MONTSERRAT

BASIC DATA

Official Country Name:	Montserrat
Region:	Puerto Rico & Lesser Antilles
Population:	6,409
Language(s):	English
Literacy Rate:	97%

The island of Montserrat is a British territory located roughly 27 miles southwest of Antigua. In July of 1995,

the Souffriere Hills Volcano on Montserrat became active, prompting widespread evacuation. Many schools were forced to serve as shelters for the island residents who did remain, and classes were not held for nearly six weeks.

The island had been spending roughly 20 percent of its budget on education until the volcanic disaster. In 1998, only 8 percent of the budget was allocated to education. That year, 2 of the 10 nursery schools and 1 of the 3 day care centers resumed operation. Nearly 24 percent of all children from birth to three years old were enrolled in day care schools, and more than 80 percent of all three- to five-year-olds were enrolled at preschools. One of the nine public primary schools and one of the two private schools also reopened. Primary school enrollment was nearly 100 percent.

Montserrat's educational system is based closely on the British model, and the primary language of instruction at all levels is English. Education is free and mandatory for children between the ages of 5 and 16. Primary education lasts for six years. Secondary education begins at age 11 and lasts for four years.

The Montserrat Technical College, founded in 1972 to offer technical and vocational education to secondary school graduates, had been considering upgrading its status to the level of a community college in the mid-1990s. In the wake of the volcanic activity, however, the institution was forced to cease operations in 1997. The island's other tertiary institution—the University of the West Indies School of Continuing Studies—was able to remain open mainly by focusing on distance education. In the late 1990s, officials continued to work toward reopening schools as islanders began to return to their homes.

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—AnnaMarie L. Sheldon

Morocco

Basic Data

Official Country Name:	Kingdom of Morocco
Region:	Africa
Population:	30,122,350
Language(s):	Arabic, Berber, French
Literacy Rate:	43.7%
Number of Primary Schools:	5,806
Compulsory Schooling:	6 years
Public Expenditure on Education:	5.0%
Foreign Students in National Universities:	3,617
Educational Enrollment:	Primary: 3,160,907 Secondary: 1,442,049 Higher: 294,502
Educational Enrollment Rate:	Primary: 86% Secondary: 39% Higher: 11%
Teachers:	Primary: 114,406 Secondary: 84,202 Higher: 13,155
Student-Teacher Ratio:	Primary: 28:1 Secondary: 17:1
Female Enrollment Rate:	Primary: 74% Secondary: 34% Higher: 9%

History & Background

The Kingdom of Morocco is known locally as *Al Mamlakah al Maghribiyah* or *Al Maghreb*. Morocco is an Arab-Islamic country located in North Africa. It is surrounded on the west by the Atlantic Ocean, on the north by the Mediterranean Sea, on the east by Algeria, and on the south by Mauritania. In 1976 Morocco annexed the northern two-thirds of the Western Sahara, which was formerly known as the Spanish Sahara. Since the late 1970s, Morocco has been in political and military conflict over its claim to this large phosphate-rich region that has 443 kilometers of land border. The United Nations has managed a cease-fire since 1991. Spain continues to control five areas of sovereignty or *plazas de soberania*. These include the northern coastal cities of Ceuta (*Sebta*) and Melilia (*M'lilia*) as well as the islands of Penon de Alhucemas, Penon de Velez de la Gomera, and Islas Chafarinas. Full sovereignty of the Western Sahara remained unsettled in 2001, and the United Nations plans to hold a referendum on the matter.

Morocco is strategically located along the Strait of Gibraltar. The total coastline of Morocco is 1,835 kilo-

meters excluding the coastal Sahara. Without the Western Sahara, Morocco occupies a total territory of 446,550 square kilometers. The total land area is 446,300 square kilometers.

Morocco is the world's third largest producer of phosphates. Other economic resources include iron ore, manganese, lead, zinc, fish, and salt. Morocco is concerned with a number of environmental issues: land degradation, desertification, and water contamination due to raw sewage and oil pollution. Morocco's global environmental-legal arrangements address climate change, desertification, biodiversity, endangered species, nuclear test ban, ozone layer protection, ship pollution, and wetlands.

In July 2000 Morocco's population was estimated to be 30.1 million people with 35 percent of the population aged 0 to 14 years, 60 percent between 15 and 64 years of age, and 5 percent above 65 years old. The life expectancy for males is 66.9 years and is 71.4 years for females. Ethnically, 99 percent of the population is Arab-Berber (South and Soussi, Middle and Atlassi, and North and Rifi), 0.7 percent is other, and 0.3 percent is Jewish. Most of the population is Muslim (98.7 percent), but 1.1 percent are Christians and 0.2 percent are Jewish. Arabic is the official language, but most Moroccans use Arabic-Berber dialects. French is the language most often used for law, government, business, and diplomacy.

Agriculture dominates the Moroccan economy, but industry, the service sector, and information technology are growing. Since 1956, the year of its independence from France, Morocco has adopted continuous economic plans to enhance its gross national product growth, local aggregate consumption, private investment projects, government and public infrastructure, and macro-interactions with the rest of the world. Most of these plans have been quinquennial (five-year plans). Erratic droughts and imported inflation, especially attributable to high costs of energy, have impacted the plans. The basic tenets of the Moroccan system address human capital formation and education, democracy and the rule of law, technology and resource productivity, inputs supply and cost, transparent governance and optimum public management, and free market economics.

Like its neighbors, Morocco was invaded by many cultures in its long and varied history. Phoenicians, Romans, Byzantines, and Arabs all invaded what is now Morocco. The Arabs came at the end of the seventh century, bringing with them Islamic Openness (*Infitah Islami*). During most of the medieval ages, the sixth through the thirteenth centuries, Moroccan legal scholars, philosophers, historians, geographers, architects, physicians, chemists, sociologists, and economists traveled over the Mediterranean. Learning declined with the rise of internal and external challenges and conflicts. The Renaissance movement in Europe and the domination of the Ottoman Empire over North Africa, except for Morocco, began in the sixteenth century. The *Siba* (political and legal chaos) movement was followed by French colonization between 1906 and 1956 (*Le Régime de la Porte Ouverte* or the Open Door Regime).

Throughout the French colonial period, constant efforts were made to Christianize and franchise the Moroccan society. Priests, missionaries, physicians, religious nurses (*R'hibates*), teachers, administrators, and general residents encouraged and enforced an educational and cultural imperialism. Very few in the population benefited from this system. Less than 10 percent of the population, most of whom were males, enrolled or were allowed to enroll in this French system of education. When allowed, it was with the purpose of creating local bureaucrats. Islam, Arabic, and Islamic philosophy and sciences were not allowed.

After much resistance from the locals, one to two hours of formal Arabic a week were included in the French schools. Local freedom fighters (the Alaouite dynasty, Allal Fassi and the Independence (*Istiqlal*) Party, Socialist and Liberation Movements, inter alia) adopted and competed with the French by launching several types of schools. *Ulema* schools taught Islamic theology. *Qur'anic* schools taught the Holy Qur'an. *Madaressh* schools taught Arabic and Islam as well as French, mathematics, geography, history, the arts, and the modern sciences.

In 1956 Morocco was politically liberated. The new national government, led by King Mohammed V, centered the public policy on massive education. After Mohamed V's death in 1961, his eldest son, King Hassan II, continued to emphasize the role, values, mandates, and the high socio-economic potential and priority of educating Moroccans. The first Moroccan macro-economic plan was developed for 1961 through 1965. King Hassan II recognized that multidisciplinary education in French and Arabic was paramount.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Immediately after gaining independence from France on March 2, 1956, Morocco opted for a constitutional monarchy form of government. Under this type of political structure, the king is a hereditary monarch. He is the head of state and appoints the government chief or prime minister (*premier ministre*) and the cabinet (*conseil de ministres*). King Hassan II accessed the throne on March 3, 1961, and reigned until his death in 1999. King Mohamed VI became king on July 23, 1999.

On March 10, 1972, and September 4, 1992, the Moroccan constitution was approved and expanded, and, in

September 1996, it was amended to create a bicameral legislature. The upper house or Chamber of Counselors (*Chambre de Conseillers*) is composed of 270 members who are indirectly elected by local councils (*conseillers locaux*), professional organizations (*organisations professionnelles*), and labor syndicates or unions (*syndicats de travail*) for nine-year terms; one-third of the members are elected every three years. The lower house or Chamber of Representatives (*Chambre de Représentants*) has 325 members who are elected directly by popular vote for five-year terms. Both males and females can vote at age 21.

There are more than 20 political parties, professional organizations, and unions in Morocco. Among the most prominent are the Independence (*Istiqlal*) Party, the Socialist Union of Popular Forces (USFP), the Party of Progress and Socialism (PPS), the Organization of Democratic and Popular Action (OADP), the Democratic Socialist Party (PSD), the Constitutional Union (UC), the Labor Party (UT), the General Union of Moroccan Workers (UGTM), and the Democratic Trade Union (SD).

Judicially, the Moroccan legal system is equally multi-based. It is predicated upon Islamic law (*Chari'a Islamya*) and French and Spanish civil laws. The highest court of the land is the Moroccan Supreme Court, which is located in Rabat, the country's political and administrative capital. Justices are appointed on the advisory of the Supreme Council of the Judiciary (*le Conseil Judiciare Suprême*), which, in turn, is headed by the Moroccan king.

Morocco faces many of the typical challenges and opportunities of a developing nation. Since the early 1960s, the government has recognized the importance of education at all levels: preschool, primary, secondary, university, technical, and vocational.

EDUCATION SYSTEM—OVERVIEW

Some children attend non-compulsory, two-year preschool programs. Students begin Morocco's nine-year basic education program at age seven. The basic education program consists of five years of primary school (K1-K5) followed by four years of primary secondary school (K6-K9). The basic education program is followed by three years of general secondary or technical education (K10-K12) leading to the *baccalaureate* degree.

Prior to 2000, students wishing to enter a university took the baccalaureate examination, a national test that required three to four days to complete. This test was very competitive; approximately 10 to 20 percent scored high enough to enter a university with a national governmental scholarship that pays full tuition and provides a quarterly stipend to cover board, room, books, and incidental expenses. Since 2000, the national exam has been replaced by a correlating of the students' averages in the final year of secondary school with admittance into certain college programs.

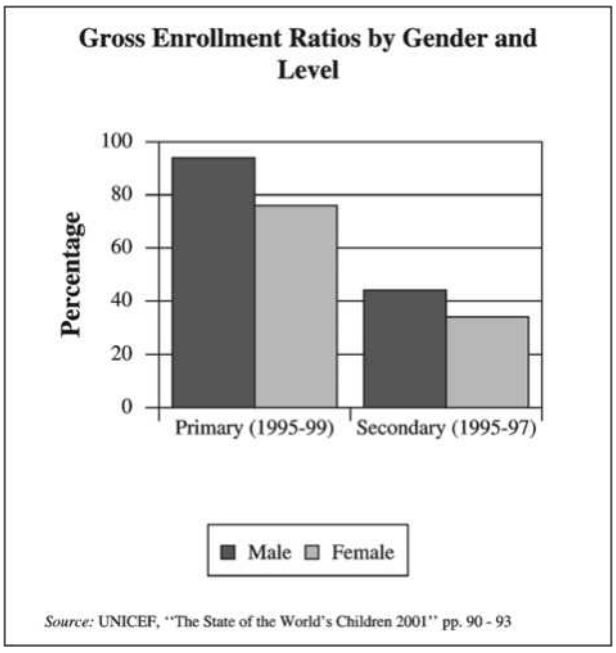
The language of instruction at most elementary and secondary schools is formal Arabic, but at the university level French is the primary language of instruction. Approximately 40 percent of the elementary population is Berber and speak a Berber dialect (*tachilhet*, *Tamazight*). Non-Berbers often speak Berber or a Moroccan dialect that is a mixture of Arabic, French, Berber, and Spanish. When children are enrolled in schools, they must learn one or more foreign languages, including classical Arabic. This language barrier causes some children not to attend school. Parents who can afford to usually enroll their children in private schools where classical Arabic, French, English, and Spanish are taught. A high percentage of these private school graduates are admitted to universities.

Morocco is keenly aware of the critical value of education to national socioeconomic development. In 2000, 50 percent of the Moroccan people were illiterate. Only 40 percent of the men and 30 percent of the women could read and write.

Education is the responsibility of the Supreme Council for Education (*Conseil Supréme d'Education*). This council occupies a central position, along with the Supreme Council for National Development and Planning (*Conseil Supréme du Développement National et de Plannification*), in the national government of the country. The king is at the top of the political hierarchy, followed by the Regency Council, the Council of Ministers, the Prime Minister, 2 Ministers of State, 12 Ministries, and the Supreme Council for National Development & Planning. Parliament is comprised of the House of Representatives and the House of Counselors and is responsible for legislative matters. The Morocco judiciary system is comprised of the Supreme Council of the Judiciary, the Supreme Court, 15 Courts of Appeals, and regional and local tribunals.

When Morocco became independent from France, the country's leaders recognized the need to place education at the center of its socioeconomic and political future. In 1956 there were approximately 2 million children in Morocco, but only 10 percent were enrolled in elementary schools (*education primaire*), and only 15,000 boys were enrolled in secondary education. There were no girls enrolled at the secondary level in 1956. Only 350 students were enrolled at the university level.

In 1956 liberated Morocco had to develop a comprehensive education policy. First, anti-analphabetism



schools (*madares muharabat al umiya*) were set up. Second, the nine year basic education system was developed. At the end of the 1990s, primary education received 35.5 percent of the total education budget, secondary received 46 percent, and higher education received 18.5 percent. In 1968, these amounts were 49 percent for the elementary, 40.5 percent for the secondary, and 10.5 percent for higher education.

PREPRIMARY & PRIMARY EDUCATION

There are two types of non-compulsory, two-year preschooling: traditional Koran schools (*Qur'anic*), where sacred texts are learned by rote, and modern private kindergartens.

Students begin Morocco's nine-year basic education program at age seven. The basic education program consists of five years of compulsory primary school (K1-K5) followed by four years of primary secondary school (K6-K9).

Subjects studied in primary schools include grammar, composition and reading, languages (Arabic, French, and Spanish), civics, and arithmetic. At the end of the fifth year, students take a national exam. Those who successfully complete the exam receive the primary studies certificate (*certificat d'études primaires* or CM2) and are eligible to continue their education, if their family's socioeconomic conditions permits.

The number of students completing primary school has increased steadily. Since the 1980s, an annual average of 2.5 million children have enrolled in primary schools. In the early 1980s, there were approximately 1.0 million primary school graduates; at the end of the 1990s, there were approximately 1.4 million primary school graduates. Two of the 1990-1993 educational goals were to increase the annual primary school enrollment rate by approximately 8 percent and decrease the average class size. The annual enrollment grew by approximately 6.5 percent, and the average number of pupils per classroom decreased from 42 to 38. In 2000 the average class size was 28. In 2000, approximately 75 percent of primary school age children attended school, but only 55 percent of girls attended primary school.

Enrollments are lowest in rural areas where girls are needed for traditional tasks, such as household chores and agriculture, and boys are needed to harvest crops, care for livestock, or work at the traditional market centers. Rural schools are usually built a considerable distance from the villages, and the schools often lack boarding facilities, schooling supplies, staff, and reliable teachers. Even where schools are close to villages, only 20 percent of pupils from rural areas enter the fifth year of primary school education.

SECONDARY EDUCATION

Secondary education is divided into a four-year primary cycle (*premier cycle d'education secondaire*) and, for those students who successfully complete the primary cycle, a three-year secondary cycle (*deuxième cycle secondaire*). Vocational or technical training is available for those who do not enter the secondary cycle. Although progress is being made in reducing the size of classes, the average pupil to teacher ratio at the end of the 1990s was 38:1.

The primary secondary cycle (K6-K9) consists of additional fundamental education. The curriculum includes history, geography, mathematics, French, Arabic, religious studies, civics, and physical education. Students who successfully complete the fourth year, *quatrième année secondaire* or *brevet*, choose vocational or technical training or further secondary education at a *lycée*. The three years of this high school cycle (K10-K12) are the fifth or *cinquième*, sixth or *sixième*, and seventh or *année de baccalauréat*. *Le Lycée* provides advanced studies and training in humanities and letters, social sciences, economics and business, natural sciences, or mathematics. Since the early 1970s, English has become a major language taught in the secondary cycle. In addition to Arabic and French, students may alternatively choose among third languages such as Spanish, Russian, or German.

Prior to 2000, high school graduates who wanted to continue their academic studies had to score well on a very competitive national baccalaureate examination. Since 2000 the students' averages in seventh or *année de*

baccalauréat determine their admittance into certain university programs. Between 1980 and 2000, the number of students enrolled in secondary public education increased. The average enrollment growth rate increased from 6 percent in 1979 to 9 percent in the 1990s, due primarily to the 1985 educational reform and the increase in the number of primary school graduates. The number of high school graduates increased from 33 percent in 1983-1984 to 54 percent in 1999-2000. Almost 60,000 students received their *baccalauréat* in 1999-2000.

HIGHER EDUCATION

Higher learning in Morocco has existed for centuries. In fact, Kairouyine University in Fez was built from 859 to 862 A.D. The Almoravid Dynasty, led by Youssef Ben Tachfin, spread knowledge and advanced Islam, philosophy, art, and science in Morocco, Andalussya, Algeria, Tunisia, and part of Libya. In the thirteenth century, Morocco entered the Merinid Dynasty rule for 200 years; several schools and university centers were built during this period. Chief among these is Ali Ben Youssef Medersa, an Islamic university in Marrakech, which was erected in the fourteenth century by Sultan Abou el Hassan and revamped in the mid-sixteenth century.

After its decolonization in 1956, Morocco began developing its modern university and college system. Since the 1960s, Morocco has emphasized the importance of colleges, institutes, higher learning centers, pedagogical facilities, and universities. In a March 3, 1997, televised royal discourse, King Hassan II stated: ''The most precious good or resource of a nation is not its gold or currency reserves, as considerable as such might be. Neither are a nation's underground wealth or the power of its industry. The power of a nation rests on its human capital and health.''

The number of college students has been steadily increasing. In the 1980s there were approximately 100,000 college students; by the end of the 1990s the number of college students had increased to more than 250,000. In 2000 more than 60,000 students were enrolled in higher education and training centers in the capital Rabat. Female university enrollment has increased significantly. At the end of the 1990s, 41 percent of the total enrollment was female. In some areas, such as medicine, dentistry, and the humanities, female enrollment is 51 percent. From 1985 to 2000 the annualized average growth rate in university enrollment was 6.3 percent. It has been projected that in 2000-2001 the annual rate of growth will be 3 percent in the scientific and technical areas; 4 percent in the economic, legal, administrative, and social fields; and 3 percent in pedagogy and teaching.

The higher education curriculum includes the humanities, arts and literature, social and behavioral sciences, economics and law, politics, economics, history, geography, biology and geology, medicine, pharmacology and pharmacy, biological and geological sciences, physics and chemistry, information technology, computer and information systems, military and technical studies, engineering, architecture, pedagogy and teachers' formation, and cadres' creation.

Prior to 2000, the baccalaureate examination, a national test that took three days to complete, was used to determine university admittance and to award national government scholarships. The tests were very competitive, and the students' scores were published in the national print media. Approximately 10 to 20 percent scored high enough to enter the university with a national governmental scholarship that paid full tuition and provided a quarterly stipend to cover board, room, books, and incidental expenses. During the 1960s and the 1970s, successful high school graduates (*bacheliers* and *bachelières*) could choose to enroll in Moroccan universities and higher learning institutes or, if the college level field of study was not yet available in Morocco, they could enroll in French, Canadian, Russian, or other international schools and universities.

Since 2000, high school graduates average their senior year to determine which type of higher education programs they may enter. Those earning a Bac ''A'' may choose to study programs such as law; politics; letters and humanities; languages; behavioral sciences such as psychology, sociology, and anthropology; history; and geography. If they graduate from a *lycée* with a Bac ''B,'' then they may study areas such as economics or business. Those graduating with a Bac ''C'' may pursue areas such as medicine, health sciences, or biology. Those graduating with a Bac ''D'' may enroll in engineering, physics, and/or chemistry colleges and institutes.

Since the 1960s there have been significant improvements in Morocco's material and socioeconomic-educational structures. Based on a 1997 university performance study, the National Report on Human Development, the ratio of professor to students was 1 to 27 in colleges and 1 to 6 in technical institutes. The report notes that Moroccan higher education has grown at an average annualized rate of 11 percent in the post-colonial period. In 2000 approximately 40,000 Moroccans held college degrees in contrast to a few hundred before 1960. This enormous growth mirrors the philosophy of decentralizing education, diversifying vocational and technical training, and constantly launching new colleges and institutes. In 1960-1961 there were 6 higher education institutions; in 2000 there were more than 70. Major public universities include the University Hassan II, University Cadi Ayyad, AlAkhawayn University, Moulay Ismail University, Agadir University, Oujda University, and

Settat University. The University Mohammed V is Morocco's largest university both in student enrollments and the number of departments.

Graduate schools have not been easily accessible, and many institutions offered only undergraduate programs. At the end of the 1990s, approximately 92 percent of the college students were undergraduate students; however, only about 10 percent of the undergraduate population graduated. Approximately 80 percent of the students must repeat one or more academic years. Suggestions for improving the higher education program include reviewing students progress and university programs each term; examining the testing policies and grading standards; revising higher pedagogical delivery via students' portfolios and college-to-work programs; and examining the success of students during internships, externships, inter-African and middle Eastern exchanges, European exchanges, and global university exchanges. To implement many of these proposed changes, additional funds are needed.

In 2000 approximately 7,000 assistants, lecturers, professors, and researchers worked in Moroccan colleges, institutes, *grandes écoles*, and universities; 4 percent were teacher assistants, 61 percent master assistants, 11 percent lecturers, 17 percent professors, and 7 percent researchers. Approximately 72 percent of teachers were in the areas of law, literature, education, political science, social sciences, and economics. Only 28 percent specialized in the scientific, technical, and health care professions.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The National Report on Human Development states that the educational budgetary resources allocation has increased considerably. From 1981 through 1997, the budget grew by an average annualized affectation rate of 15 percent, whereas the government budget increased, for the same period, by an average of 11 percent.

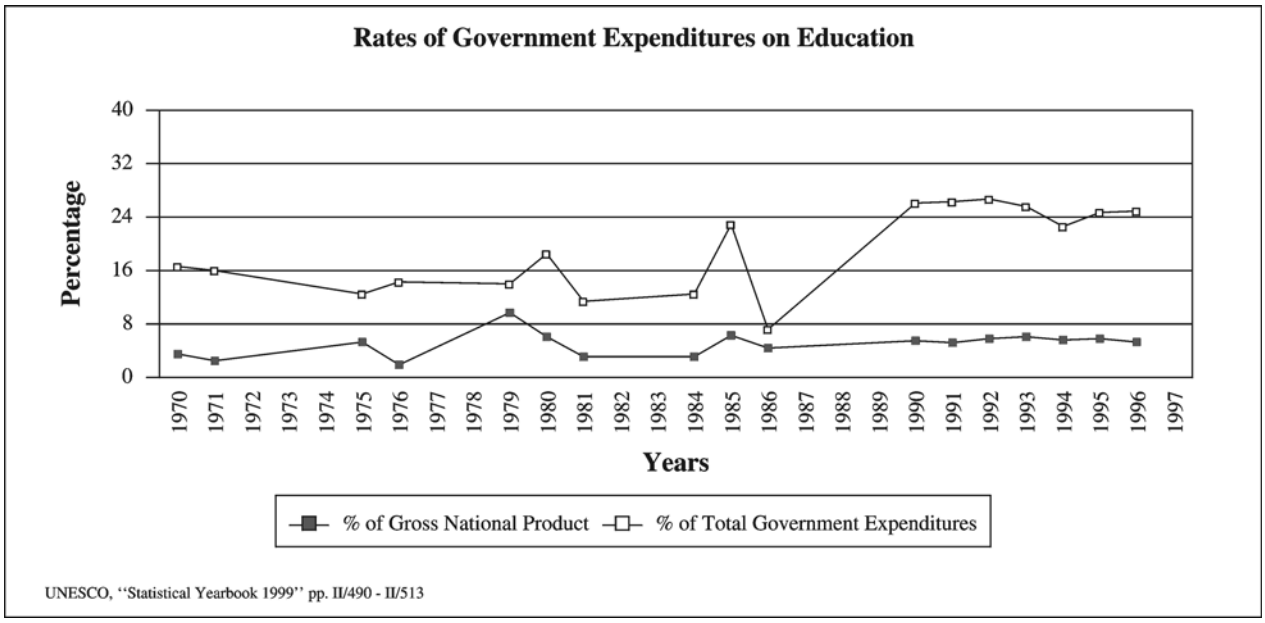
From 1980 to 2000, the university system's operational costs averaged an 11 percent increase per annum. In 1980 the government spent 70 million dirhams (DH 10 is approximately US$1) or $7 million in new university investments and 680 million dirhams ($68 million) in operational costs. In 2000 the collegiate spending budget grew to 600 million dirhams ($60 million) in investments and over 2,000 million dirhams ($200 million) in operational costs. The average annualized cost per student, however, declined from 17,000 dirhams ($1,700) in 1983 to 12,000 dirhams ($1,200) in 2000.

There are 23 higher learning/formation facilities that cover all modern fields of study, research, and application. Some institutions award degrees for completion of two years programs. Others award degrees for doctorates. Students may receive a scholarship, a stipend, and/or financial aid. Once they graduate, they may be required to work for the Civil Service (*le Service Civil*), for at least two years, at a relatively lower salary to serve their country and pay back Moroccan taxpayers' sponsorship.

Morocco supports studies and research overseas. Students may receive a stipend, a scholarship, and/or a fellowship. For example, students wishing to attend an American graduate schools (*troisième cycle*) to pursue either a Masters or doctoral degree may apply to the Department of Higher Education and Scientific Research (*Ministère de l'Ensignement Supérieur et de la Recherche Scientifique*) for a scholarship (*une bourse*). Since 1980 more than 200 such scholarships have been allocated to Moroccan student candidates, primarily for Masters degrees in Business Administration, engineering, telecommunications, information technology, finance, agriculture, resource planning, and law. The average scholarship is $70,000 for 2 years, but students applying for a Masters in Business Administration program may receive $80,000. Students in a doctoral program may receive up to a $140,000 for a maximum period of 4 years. Tuition, board and room, books, and a round trip ticket are covered by these graduate scholarships.

To qualify for a graduate scholarship to study abroad, students must be Moroccan citizens; hold a Bachelors or an equivalent degree; receive 213 on the computerized or 550 on pencil and paper Test of English as a Foreign Language (TOEFL); and pass the Graduate Record Examinations (GRE). Instead of the GRE, students applying for a Masters in Business Administration program must score higher than 500 on the Graduate Management Admission Test (GMAT) and have proof of at least 12 months of an a-priori professional experience. Additional requirements include three letters of recommendation, a medical clear health certificate, and an imperative to return to Morocco for at least two years after graduation. Moroccan students who hold dual citizenship with the United States and Morocco are not eligible to apply for scholarships. Scholarships are awarded based upon the compatibility of the graduate field to Morocco's developmental needs. Female applicants are given priority. At the end of the 1990s, approximately 40,000 Moroccan students were enrolled in higher education institutions abroad.

There are 14 scientific, technical, and military establishments that provide specialized economic and business, juridical, political and public management, social, behavioral studies and training, and research and development programs. These institutions award degrees equivalent to an Associate Degree (*premier cycle* or *Di-*



plôme d'Etudes Universitaires Fondamentales, *DEUF*) as well as to the Bachelors, Masters, and doctoral degrees. Approximately one-third of the 2,750 faculty members are female professors.

Since the 1980s approximately 30 private, higher learning schools and institutes have been established in Morocco. Among these are the Higher School of Applied Informatics to Management (ESIAC); the Polyvalent School of Informatics and Electronics (EPSIEL); the International School of Management at Casablanca, Rabat, Fez, and Marrakech (ESIG); the Higher Institute of Economics and Social Sciences (IHEES); the Higher Institute of Biology and Biochemistry at Casablanca and Marrakech (ISBB); the Preparatory Higher Institute in Food Technologies (ISFORT); and, the Technical Higher Institute of Fishing.

Since 1995 approximately 10,000 Moroccans graduated with a scientific/technical degree. About 40 percent of these were females. In 1997-1998, a total of 2,867 male and 1,084 female students graduated in economics, law, public management, and behavioral sciences. In 1997-1998, approximately 321 graduates were foreign students from Africa, the Middle East, France, and the United States.

At the university level English is often offered as a one or two hour weekly subject, notably in those research-based subjects like physics and chemistry, medicine, economics, political science, or philosophy. College students may even select a four-year degree program, the English Section, and graduate with a Bachelors of Arts in English. The University of Mohammed V's College of Literature and Humanities is the main center of this English specialization and offers areas of specialization such as composition, reading, English as a second language, technical and business English, British literature, and American literature.

Additional English teaching/learning facilities include the American Cultural Association, composed of American language centers in main Morocco; the American School of Tangiers, pre-K through K12; Casablanca American School, K1 through K12; High Technology School of Rabat; Rabat American School, pre-K through K12; English Teachers in Morocco, a non-commercial and an unaffiliated digital association that supports TEFL and all English teachers in Morocco; the Al-Akhawayn University in Ifran, modeled after the United States, that collaborates with the University of Southern California in areas such as comparative studies, architecture, history, and social sciences; and The British Council of Morocco, which aims at spreading a wider knowledge and understanding of the United Kingdom in Morocco, British English, and other educational opportunities for Moroccans.

Even with a degree, it is difficult for some graduates to find work. In the late 1990s, 45 percent of college graduates between the ages of 25 and 34 were unemployed. In October 1999 the Special Commission on Education and Human Capital Formation in Morocco conducted a macro-education national project, Education and Formation National Chart Project (*Projet de Charte Nationale d'Education et de Formation*). The project examined seven areas and made recommendations for each.

The section on Moroccan educational methodologies, rights, and obligations acknowledged that Moroc-

can culture and social ethics are based primarily on Islamic theology and faith; therefore, Moroccans should be taught and trained in virtuous individual excellence, responsible citizenship, rectitude, moderation, practical wisdom, tolerance, reciprocity, scientific spirit and inquiry, economic individual initiative and entrepreneurship, global friendship, courage, magnificence, generosity, and justice. They should also be taught to respect and appreciate other world religions and cultures. Students should learn to uphold their natural rights of worshiping God (*Allah Almighty*), to pursue rational liberty and happiness, and to oblige by their civic and political duties national identity and constitutional monarchy. Use of Standard Arabic should be encouraged, both in writing and speaking, schools, cultural and religious settings, the work place, and the street. Learning foreign languages is encouraged. Positive religious, psychological, emotional, and aesthetic values and principles should be acquired from an early age through preschool programs and home education and incorporated into all levels of education and workplace environments. Education is the center of Morocco's social and economic expansion, progress, economic growth, and development. Moroccan pedagogy and educational-teaching-learning methodologies should be based on educational research and focus on active learning. College and university education should prepare and develop a productive human capital that stimulates national development and competes regionally and globally.

The second main section of the report examined Moroccan educational methodologies, rights, and obligations. All Moroccans are entitled to national schooling and training. Children, women, and the physically and mentally challenged must be encouraged to enroll in Moroccan educational institutions and training centers. More effort should be given to achieving urban-rural educational balance and harmony. Compulsory education, up to a working age, should be implemented gradually and forcefully. All citizens should be actively involved in and support the educational domestic mission. Parental movements and philanthropic organization should be encouraged to become more involved in education via governmental broadcasting and fiscal advantages and credits. Education must include all media: print, radio, television, and cyberspace. Continued education and voluntary teaching must fight illiteracy and learning stagnation. Multilateral dialectics, participatory education, collaborative learning, and fair testing are some of the cornerstones of an improved national educational system. Testing and examination should be polarized around learning performance, outcome objectives, seriousness, honesty, work ethics, discipline and time consciousness, and competitive learning acquisition.

The third area of the report focused on educational innovations and renovations. Educational programs from 2000 to 2019 should focus on the preschool, elementary (K1-K5), and junior secondary (K6-K9) levels. Education should reflect both Moroccan territorial integrity and Moroccan pluralistic educational philosophy. Education should receive the maximum budgetary and financial support. Moroccan education should reflect the needs and requirements of national economic and social development.

The fourth area examined education generalization, democratization, socio-economic development, and modernity. The report projects that by 2004, preschools will be available for three to six years olds; by 2005 a total of 90 percent of elementary students will hold elementary education certificates; by 2008 some 80 percent of the pupils will receive their K9 diploma (*Brevet d'Etudes Secondaires*); by 2011 a total of 60 percent of the students will be preparing for a technical or vocational career; by 2002 there will be 10,000 graduates of vocational training programs; by 2006 there will be 50,000 graduates of vocational training programs; and by 2011 a total of 40 percent of the students will receive their high school diploma (*le baccalauréat*). The report emphasized that laboratory work; modern technology, notably electronics and cyberspace; and school-to-work programs are needed to achieve these projections.

Another area of the report examined alphabetization, literacy, and various channels of learning. The report predicts that by 2011 less than 20 percent of Morocco's population will be illiterate. Special emphasis should be given to rural areas, girls, and seniors. The media, professional organizations, chambers of commerce, volunteers, and religious institutions should work to eliminate illiteracy. Literate training should be a component of Moroccan craftsmanship and artistry. Internships and externships areencouraged. Families and households should be involved in volunteer and tutorial programs.

The technical and higher learning training and education portion of the report endorsed vocational and school-to-work projects, especially in technical high schools (*Baccalauréat d'Enseignment Technique et Professionnel*). High school graduates may enroll in a two-year associate degree program (*Diplôme d'Etudes Universitaires Fondamentales* or DEUF) or a four-year bachelors program. Hassanya University of Islamic (*Chri'a Dar Hadith Hassanya*) or other similar theological institutes should provide theology programs. Information technology and distance learning should be developed. A variety of educational tools should be used: books, videos, Internet, television, and videoconferencing. Primary and secondary education programs should include 1,000 hours or 24 weeks of preu-

niversity schooling and should begin the second Wednesday of September; universities should open on September 15. Languages of instruction should include Scientific Arabic, French, English, Spanish, and Tamazight (Berber). Scholarships, fellowships, awards, and prizes should be available. Pedagogical centers should graduate the number of quality teachers needed in the sciences, economics, mathematics, and law. Research and development should continue at the Hassan II Academy of Sciences and Technology. Physical education and sports pedagogy should be equally available at universities, Pedagogical Regional Centers, and Higher Normal Schools. Colleges, universities, specialized schools, and institutes should continually train educational staff, administration, and management. Teachers for special education, child development, and the physically and mentally challenged students should receive special training.

The general and college education administration and governance section noted that special, autonomous government agencies (*Services d'Etat Gérés de Manière Autonome* or SEGMAs) are available to train and prepare education economists, administrators, managers, accountants, examiners, and monitors. University councils comprised of student representatives, professors, directors, deans, and business and community leaders should select college presidents for renewable four-year periods. All levels of public and private schools should implement the national educational plan. Tax credits, exemptions, and other monetary, banking, investment, fiscal, and regional cooperation provisions should be available.

NONFORMAL EDUCATION

In 1984 approximately 69 percent of Morocco's labor force did not have any degrees or certificates. In 2000, this number declined to 55 percent. In 1984 some 11 percent of the labor force held an elementary certificate versus 15 percent in 2000; 2 percent held a high school diploma compared to 4 percent in 2000; and 2 percent had a management degree compared to 5 percent in 2000. Several areas have seen some positive recruitment changes. Management and business increased from 15 percent in 1984 to 20 percent in 1995. During the same period, financial services rose from 1.5 to 2.5 percent, public administration from 10.5 to 14.5 percent, manufacturing from 25 to 26 percent, and transports from 4.4 to 6.0 percent. Overall, the labor force participation ratio increased from 47 percent in 1985 to 55 percent in 1998.

Community involvement in the learning process is being encouraged. Informal utilitarian education is presented via the media, the Internet, and other channels. Workshops, seminars, and productive eco-religious circles and meetings in mosques are being encouraged and supported.

TEACHING PROFESSION

Several pedagogical institutions train secondary level teachers. High school graduates who have an appropriate entrance exam score may enroll in a two-year program at Pedagogical Regional Centers (*Centres Pédagogiques Régionaux* or CPRs). These centers are geographically localized, based on the administrative, decentralized law of Morocco and its regional socioeconomic developmental needs and requirements. They are located in the Fez region in Boulmane; Tangier region in Tetouan; Souss region in Massa Daraa; the eastern region; Marrakech region in Tansift-Haouz; Tadla region in Azilal; the grand Casablanca region; and the Rabat region. Students enrolled at a CPR study specialized subjects ranging from languages, notably French and Arabic, to mathematics, the sciences, humanities, social sciences, physical education, and the arts. Students graduating from a CPR can teach only at the first cycle or junior high school.

High school graduates with appropriate entrance exam scores may enroll in Higher Normal Schools (*Ecoles Normales Supérieures* or ENSs). These four-year programs offer courses in pedagogy, the art of teaching, and a variety of academic subjects depending on the chosen field of teaching. Specialized academic areas include mathematics, physics, chemistry, biology and geology, the health sciences, business and economics, literature and the humanities, the arts, social sciences, physical education, history and geography, theology, and philosophy. ENS graduates become secondary high school teachers. A specified priority-ranking and pedagogical needs determine the placement of the new teacher. Generally, after teaching a few years, teachers may request to be moved to another geographical area. At the end of the 1990s, there were 10 ENSs in Casablanca, Marrakech, Fez, Meknes, Rabat, and Tetouan.

Higher Normal Schools of Technical Education (*Ecoles Normales Superiéures d'Enseignement Technique* or ENSET) prepare students interested in technical fields (Bacs techniques) to teach in high schools. ENSET's are located in two main areas: the beach city of Mohammedia, which is about 20 miles north of Casablanca, and the capital Rabat. Training in the areas of technology and applied scientific knowledge include electronics, information technology, computing and information systems, home appliances, refrigeration, and auto-mechanic.

Teaching Examiners Formation Centers (*Centres de Formation des Inspecteurs de l'Enseignement* or CFIEs) prepare examiners to monitor, assess, and provide feedback on the quantity and quality in the pre-college teaching profession; relationships among schools, administrators, principals, and teachers; teaching market issues;

pupil performance and learning objective outcomes; and even teaching material, building furniture, and school supplies.

Planning and Orientation Educational Centers (*Centres d'Orientation et de Planification de l'Education* or COPEs) are responsible for macro-, micro-, and meso-educational aims, objectives, needs, and appropriately dynamic strategies and educational tactics. COPEs, in liaison with the national Supreme Council of Education, brainstorm the educational aggregates and needs. The following areas are among those considered: supply, demand, pedagogical needs, recruitment, costs, savings, educational investment infrastructure, educational socio-economic infra-structure, educational bond issues and financing securities, and the role of education in national economic growth.

Employment in the educational profession has been steadily increasing. In the recent pedagogical triennium, the three-year period from 1996 to 1998, CPRs, ENSs, ENSETs, CFIEs, and COPEs supplied the following: 2,636 graduates in the academic year 1996-1997 (758 females); 2,453 newly accepted-enrolled (736 females) in 1997-1998; and 3,995 graduates (1083 females) in 1997-1998. In 1997-1998 there were 1,470 full-time faculty and 365 adjunct faculty at the CPRs, ENSs, ENSETs, CFIEs, and COPEs.

SUMMARY

The Moroccan system of education is a progressive one. Since its liberation from French rule in 1956, Morocco has worked to establish an education system that will prepare its citizens to meet the country's needs and to compete in a world market. However, in 2000 more than 50 percent of the population was illiterate. Compulsory education is gradually being established, new perspectives on pedagogy and the art of teaching are being incorporated, and a focus on school-to-career programs is being adopted at all levels of education.

Morocco continues to face challenges: improving education; generalizing its impact, especially within the female population; equalizing urban and rural education; boosting multi-factorial productivity, particularly that of its youthful human capital; enhancing its peoples' lifestyle; creating jobs; liberalizing open macroeconomic relations; reforming many of its banking and financial structures; attracting foreign capital, direct and portfolio; alleviating its external debt; and diversifying its economic tissue beyond traditional agriculture and tourism. The constant reassessment and investment of its human capital, its employability, effective utilization, and pragmatic optimum training are central components of the country's long-term socioeconomic development.

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—Samuel Sarri

MOZAMBIQUE

BASIC DATA

Official Country Name:	Republic of Mozambique
Region:	Africa
Population:	19,104,696
Language(s):	Portuguese
Literacy Rate:	40.1%
Number of Primary Schools:	4,167
Compulsory Schooling:	7 years
Educational Enrollment:	Primary: 1,415,428 Secondary: 185,181 Higher: 7,143
Educational Enrollment Rate:	Primary: 60% Secondary: 7%

Teachers:	Primary: 24,575 Secondary: 5,615 Higher: 915
Student-Teacher Ratio:	Primary: 58:1 Secondary: 38:1
Female Enrollment Rate:	Primary: 50% Secondary: 5% Higher: 0.2%

HISTORY & BACKGROUND

The Republic of Mozambique (*República de Moçambique*) is situated on the southeast coast of Africa. Washed by the warm Agulhas current that comes all the way across from Western Australia along the equator, Mozambique's beaches on the Indian Ocean were long the attraction of numerous tourists who flocked there from neighboring countries. The capital, Maputo (formerly *Lourenço Marques*), situated on Delgoa Bay, is the country's chief port. Probably hunters and gatherers, ancestors of the Khoisan peoples, lived in what is now Mozambique since about 4000 B.C., and Bantu-speaking people settled there before A.D. 100. Before the fourth century A.D., the southward and eastward migrations of iron-working Bantu peoples absorbed these original nomadic peoples. During the eighth century A.D., Arab merchants settled on the Mozambican coast trading in gold, ivory, and slaves. In 1497 the Portuguese navigator Vasco Da Gama landed on the coast of Mozambique, and in 1505 Portuguese settlers occupied the Muslim settlement on the *Ilha de Moçambique,* making it a slave-trading center and part of its maritime empire. The Portuguese brought gold from the mines on the Zimbabwe plateau to India to purchase the spices that ensured Portugal's prosperity during the sixteenth century. In 1884, when Africa was divided among various European powers, Angola on the Atlantic Ocean and Mozambique on the Indian became recognized as Portuguese colonies.

During the early years of Portuguese activity and expansion into the African interior towards the Kingdom of Munhumutapa, which assured the supply of gold and slaves, the Roman Catholic Church, too, gained access to the region. In 1561 the Jesuit missionary Gonçalo de Silveira baptised the Munhumutapa Negomo. Silveira was later accused of being a spy for the Portuguese and was killed. The Jesuits, however, continued to be missionaries and an educational presence in the area until they were expelled from Portuguese territory in 1759; the Jesuit school at Sena, the depot established on the trade route between the coast and Tete, had to be closed, thus terminating the cultural ties the *prazeros* (originally Portuguese recipients of land leased from the Portuguese crown who later became Africanized) had with Portugal.

During the 1780s the *prazeros* expanded slaving operations in Mozambique, and by 1790 approximately 9,000 slaves were being exported each year—primarily to Brazil, but also to Yao and to Swahili traders who worked the Indian Ocean markets. This figure rose to 15,000 slaves per year during the 1820s and 1830s. The slave trade became Mozambique's most important business and resulted in the depopulation especially of the coastal areas. The slave trade drew to an end only after the publication of reports on the conditions in Mozambique by the missionary-explorer David Livingstone. A decree of total abolition was published in 1878.

Despite the abolition of slavery, Africans were forced to work long hours with very little pay for the Portuguese colonists. Often food was withheld so people were compelled to work. Cotton and other cash crops, grown for sale to the Chartered Companies—which had been granted concessionary rights to develop land and natural resources, forced labor, and the sale of labor to other parts of Africa—resulted in the retardation of development in Mozambique. The construction of the railroad linking the port of Beira with the present-day Zimbabwe, the settling of Portuguese families, and the building of schools and hospitals did not benefit the African population at all. Neither education nor health-care was available to those who were not Portuguese. A massive flight to the neighboring colonies resulted in further depopulation.

In 1891 a treaty establishing the boundaries between British and Portuguese holdings in southeast Africa was negotiated and, in 1910, the status of Mozambique changed from that of Portuguese province to Portuguese colony. In 1962 several nationalist groups united to form the Front for the Liberation of Mozambique (*Frente de Libertação de Moçambique* or FRELIMO) under the leadership of Eduardo Mondlane, who was assassinated in Dar es Salaam in 1969. After 1964 FRELIMO initiated guerrilla warfare in northern Mozambique and by the early 1970s controlled much of northern and central Mozambique. In June 1975, a year after a military coup overthrew the government in Portugal, Mozambique became an independent nation. The exodus of Europeans after independence brought about a tremendous brain drain. FRELIMO established a single-party socialist state and instituted health and education reforms. Many of those who disagreed with the new direction taken in Mozambique formed the Mozambique National Resistance Movement (*RENAMO* or MNR). The actions of *RENAMO* led to a 16-year war that killed millions and destroyed 50 percent of the primary schools in the rural areas and several teacher-training centers. Since the Peace Accord signed in 1992, specific rehabilitation and restructuring programs attempt to make education more available at all levels.

Political, Social, & Cultural Bases of Education During Colonialism: During the more than 300 years of nominal and actual colonization, Mozambique was seen primarily as a source of trade with Europe and of cheap labor for the European plantations, the construction of ports and roads in Mozambique, and the mines in South Africa. During the time of Portuguese colonialism, the Bantu-speaking peoples were forced to work on European-owned land. Colonial policy, based on the egalitarian theory of assimilation, stated that if an African was fluent in Portuguese, was Christian, and had a good character, he was to be given the same status as a Portuguese citizen. Very few Africans qualified for citizenship, mainly because educational opportunities were inadequate or non-existent. In fact, the colonial powers had no interest in educating the Mozambican indigenous population beyond their usefulness to the needs identified by the authorities. Consequently, little effort was made to provide meaningful education.

There were a very limited number of schools scattered along the coast; attendance was minimal. By 1900 only 1,195 African and mulatto children attended schools. Approximately 607 of these were in missionary schools, 146 in government schools, 412 in municipal schools, and 30 in private institutions. By 1909 there were 48 primary schools for boys and 18 for girls, the great majority run by missionaries, along with some trade and agricultural schools. Reports compiled during the 1920s by the High Commissioner to Mozambique, Brito Camacho, by the African Education Commission under the auspices of the Phelps-Stokes Fund and the foreign mission societies of North America and Europe, had nothing positive to say about education in Mozambique. Education deteriorated even further when the Salazar regime came into power in Portugal in 1926 and made it almost impossible for anybody who was classified as *indigenous* to obtain education, instruction, and Christianity, as well as the distinction to be reclassified as *civilized* and thus be assimilated and given the rights of Portuguese citizenship—the criteria for which was the almost unobtainable school certificate. This state of affairs was ironic and racist as late as 1966, when 90 percent of the African population was found to be illiterate. It was also found that 40 percent of white settlers from Portugal were illiterate.

The Salazar Era & Education: Antonio de Oliveira Salazar, the Portuguese dictator who ruled Portugal from 1932 to 1968, was intent on repressing opposition in Portugal's African colonies. Thus, the programs of state-sponsored schooling established by the Salazar regime created a schooling system available for the children of settlers. This was a duplication of the primary and secondary schooling system operating in Portugal, directed by the Ministry of National Education in Lisbon, which included within it a Department of Overseas Education. Until the 1950s enrollment was small. Between 1954 and 1956, with the influx of settlers from Portugal, enrollment increased by 30 percent, and it tripled by 1964. These schools were open only to ''assimilated'' Africans and, as late as 1954, only 322 Africans were enrolled in the government primary schools. By 1954, there were 71 primary schools, 12 elementary professional schools, 2 government technical schools, 1 government high school, and no government teacher training institutions in the public schooling system.

Schooling for Africans denied more access than it created and failed more students than it passed. The first stage, a three-year rudimentary education, was designed ''gradually to lead the 'Indigenous' from savage life to civilization. . . .'' It included subjects such as Portuguese language, arithmetic, history and geography of Portugal, design and manual work, physical education and hygiene, moral education, and choral music. The six-year primary school program, which led up to entrance to secondary school, was fraught with enormous hurdles and age restrictions, making it almost impossible for African students to succeed. Unlike in South Africa where the Roman Catholic Church was perceived as an agency of social justice and transformation, the Catholic educational missions in Mozambique were very much an instrument of the Portuguese government's strategy of nationalization. From the 1940s to the 1960s, Roman Catholic missions, which worked in close collaboration with the Portuguese government, expanded their field of operation dramatically from 296 missions in 1940 to 2,000 in 1960. In these schools Africans were taught mainly by rote, their chief focus being the Catechism. By contrast, the Protestant foreign missions, which were accused of validating African languages and culture and encouraging education for Africans in a way to give them a tendency to be ''uppity,'' were viewed with great suspicion by those in authority and declined from 41 in 1940 to 27 in 1960.

After 1964, with the forming of FRELIMO, the launching of the armed struggle for national independence, and the change in the Portuguese economy, Salazar's colonial educational policies came under review. Primary school was made compulsory for all children between the ages of 6 and 12; secondary schools were expanded and technical schools were created. Agricultural education was stressed. General studies offered during the 1960s later became the Faculty of General Studies, which was then designated as part of the university.

FRELIMO, the Liberation Struggle, & Education: In Mozambique, as in countries such as Cuba, Nicaragua, Vietnam, and Somalia, a national mass literacy campaign

was undertaken soon after the revolutionary movement began enjoying widespread popular support; in this case FRELIMO acceded to power. The incoming FRELIMO government declared that education was a right for all people and that all education should serve and defend the interests of the majority, the workers and peasants—those who had been most disadvantaged by the discrimination and elitism of the previous centuries. Adult literacy projects were a means to mobilize the people in the liberated areas, to bring new freedom to people who had long been derided for their ignorance yet had been prevented from access to the educational system. Despite its association with the oppression of the colonizers, and because of its potential to unite diverse populations, Portuguese became the language of the liberation struggle. New knowledge and increased access to education empowered the Mozambican people to fight for their liberation.

After the beginning of the armed struggle in Cabo Delgado province in northern Mozambique in 1964, a network of ''bush schools'' was established and, by 1967, more than 10,000 children were enrolled in FRELIMO primary schools. In the years that followed, teachers set up schools in other provinces, carrying on FRELIMO's vision, which saw education not as the creator of a national elite, but as a means to serve the people. By 1974 more than 20,000 children were enrolled in the four-year primary school program in the various provinces. More than 300 people were enrolled in the fifth to eighth year classes and training courses for primary teachers that had been running since 1972, and more than 100 students were doing postsecondary level courses abroad on FRELIMO scholarships.

The transitional government established on September 25, 1974, set up countrywide Dynamizing Groups that were to provide literacy activities throughout the country. Literacy, defined here as the ability to read and write Portuguese, was seen as the primary means to liberate the creative initiative of the Mozambican people and empower them to attain complete independence and work towards national reconstruction. In 1975 the transitional FRELIMO government identified an illiteracy rate of about 90 percent. By the end of the 1990s, illiteracy rates were estimated at 60 percent. Unfortunately, Mozambique's move to greater freedom and prosperity through education was beset by obstacles resulting from its geopolitical position in southern Africa; the effects of racial capitalism; the hostility of members of the international community to its socialist option; and the concerted challenge to its attempts to free the creative energies of its people through education.

Rhodesia, South Africa, *RENAMO,* & Education: During the war between the white regime and both the Zimbabwe African National Liberation Army (ZANLA) and the Zimbabwe African National Union (ZANU) in Zimbabwe, the former British colony of Rhodesia, the people of Mozambique, (especially those in the Tete province, the area in northern Mozambique wedged between Zimbabwe, Zambia, and Malawi) were drawn into the conflict. When Samora Machel's FRELIMO party came to power, he had established a government based on the principles of *scientific socialism* and committed himself to actively engaging in the elimination of white minority governments. The white government in Rhodesia, which once regarded the neighboring government as an ally, now saw it as an enemy, especially when Mozambique provided a haven to ZAPU and ZANLA forces and the base for guerrilla operations against the country. Zimbabwe's military strikes and hot pursuit operations into the Tete province were devastating not only for ZANU and ZANLA camps but also for the villages that were inhabited by civilian refugees seeking to escape the fighting.

The situation in Tete was compounded by South Africa's political and economical interest in the region. The giant hydroelectric complex at the Cahora Basa Dam on the Zambezi River had been constructed by a consortium largely financed and assisted by the South African government in Pretoria. The Cahora Basa scheme provided electrical power for South Africa that sold some of it back to users in southern Mozambique, especially Maputo. Supported by right-wing elements in the United States, both the Rhodesian and South African regimes supported the Mozambican National Resistance (*Resistência Nacional Moçambicana,* also known as RENAMO), made up of dissidents opposed to FRELIMO and Portuguese people who had fled Mozambique when FRELIMO came to power.

The Education of Refugees & Displaced People: The effects of war, terrorism, torture, and other atrocities committed in the area were horrendous, especially on education. Many fled to neighboring Zambia where they were held in refugee camps. One such refugee camp was *Ukwimi.* Members of the International Catholic Child Bureau worked with teachers and children in eight preschools in different villages within the *Ukwimi* Settlement. Both the children and the teachers had witnessed the most horrendous killings, which affected both teaching and learning. Teachers were first taught how to come to terms with their own distress and then, using the mechanisms of Mozambican culture, to devise methods to help the children cope with their memories, with the loss of family members and of their homeland, and with the pain they had seen inflicted on others or had experienced themselves. Teachers were then taught to move away from the rigid rote system they had used before and to

adopt new methods of teaching, involving the children in the learning process. Primary school teachers accompanied their pupils through a similar process, with the one difference that here the teachers were Zambian nationals who first had to learn to understand the concept of stress and recognize its symptoms. In 1994 the Ukwimi refugees repatriated to Mozambique, bringing their newfound knowledge and confidence back to a country where education plays a vital role in addressing the need for reconstruction of personal lives and societal structures.

Since the 1992 Peace Accord, more than 1 million other refugees from neighboring countries have been repatriated and reintegrated into Mozambique. Of these, there are thousands of adolescents who were once functionally literate in Portuguese but have now lost the ability they once had to read and write. Thousands of other returnees were born in refugee camps and are preliterate, which means unable to read and write and too old to be integrated into the preprimary and lower primary educational mainstream.

Distance education programs sponsored by the Mozambican government, the UNDP, the World Bank, and the government of the Netherlands attempted to train unqualified primary school teachers to improve the quality of education, to cope with the influx of nationals of school age returning from exile from neighboring states, and to enable them to be part of the reconstruction of a country whose political experience had led to the devastation of the fabric of life for the majority of its people.

Modern Mozambique: Today Mozambique remains one of the world's economically poorest countries. There is mass illiteracy in a primarily agricultural economy based on farming. The high international debt by which Mozambique has to service the exorbitant interest rates imposed on foreign loans made by the international banks and the restructuring demands made by the World Bank and the International Monetary Fund call for priority to be given to financial needs rather than to the immediate survival needs of the country's population; this affects the country's ability to provide essential health and education services. In the year 2000, despite devastating floods that destroyed roads and 140 school buildings in three flooded provinces, Mozambique had to pay $62 million to foreign creditors, and only $32 million of the budget was set aside for education. In a country of 16 million people where 11 million live below the poverty line and 10 million people do not have adequate drinking water, the education sector can only be revived with the recovery of the agricultural sector, as well as with investment in the country and in the infrastructure; this will provide the resources and the expertise the government needs to put into effect its will to reform the education system.

Children's rights and welfare are a priority of the Mozambican government; however, many children are in trouble. Although more than 1,000 new primary schools were opened during 1999, they were overcrowded and often parents had to bribe teachers so that their children could be given a place in school. The 1997 census estimated that 50 percent of children aged 6 through 10 are in primary school, and only a fraction of these go on to secondary school.

Girls have less access to education than boys above the primary level, and about 76 percent of females over 15 years of age are illiterate. Girls made up 42.0 percent of students in grades 1 through 5, 40.0 percent of students in grades 6 through 10, and 48.4 percent in grades 11 and 12. Outside the main cities, secondary schools are fewer and, where boarding is required for attendance, the number of female students drops significantly, especially when local residents, who blame schoolgirls for immoral behavior in the community, demand the exclusion of girls from dormitories.

An estimated 3,000 street children live in the Maputo metropolitan area, and during 1999 NGOs and the government took some steps to protect and reintegrate them into families or other supervised conditions. One NGO, the Association for Mozambican Children (ASEM), opened two alternative learning centers for more than 900 children who were not able to return to their regular schools after being expelled from their homes or because they had left school to work. ASEM was supplied with textbooks by the government. The Maputo City Social Action Coordination Office, through its program of rescuing orphans and assisting single mothers who head families of three or more persons, offered special classes in local schools to children of broken homes. Other NGO groups sponsor food, shelter, and education programs in all major cities. In May 1999 an Africa-wide conference on child soldiers was held in Maputo. The ''Maputo Declaration'' called for an end to the use of child soldiers, for pressure to be placed on nations in violation, and for the reintegration of child soldiers into civil society.

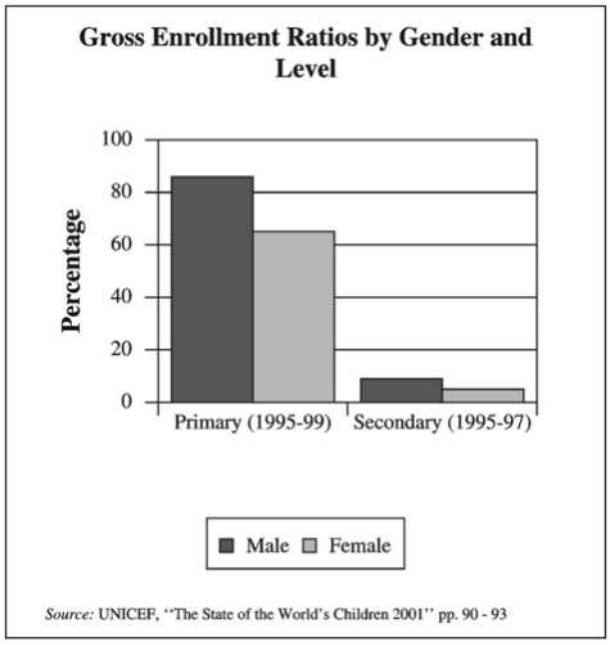
Language Policy: No one indigenous African linguistic group in Mozambique ever gained control over the whole territory. This process was cut short by the double colonization imposed by the Portuguese and the English. Furthermore, the forms of colonialism were such that as there was no widespread education for African people, no one European language became predominant. Criticism of the Portuguese included a denunciation of their inability to use Mozambique's indigenous languages. However, in the early 1960s FRELIMO decided to adopt Portuguese as the language that would unite nationalist freedom fighters with different language backgrounds in the national independence struggle. This decision was made

as there are at least four major Bantu languages, possibly eight, spoken in Mozambique. The four major languages are Makua, Tsonga, Nyanja-Sena, and Shona; the four minor languages are Makonde, Yao, Copi, and Gitonga. Kiswahili, Shangaan (or Tsonga), Zulu, and Swazi are also spoken. People in neighboring countries share all these languages. In order to unite a country with such a linguistically diverse population, Portuguese, which is the mother-tongue of only 3 percent of the nations citizens, has today been declared the official language of the Peoples' Republic of Mozambique and is thus the medium of communication in administration, religion, and education. It is also the language of literacy that was used even during the period of armed struggle (1964-1974) for national independence when FRELIMO spearheaded adult literacy activities. Thus, in Mozambique, literacy is equated not with the ability to read in the mother tongue, but to be in command of Portuguese and English, the language of the former colonial powers, and the languages of communication with the outside world. In many multilingual countries the mother tongue or a local vernacular are the medium of instruction during the first school years, and there is a shift to the national or official language only in later years.

In Mozambique, however, Portuguese is the exclusive medium of instruction from first grade onwards and is also a subject in primary and secondary education. English is a compulsory subject at the secondary level, and English for Academic Purposes is also a compulsory subject in the first two years of most courses administered by the Department of English of the Eduardo Mondlane University (UEM). The Bantu languages are taught only at the UEM. Since 1993 the National Institute for Education Development has been carrying out a bilingual project, which involves using a Bantu language as a medium of instruction in the initial years of primary schooling and gradually making the transition to Portuguese. Even though Portuguese is the national and official language, cultural policy is working towards the valorization of Mozambican indigenous languages and their increased inclusion in the educational process. This move does not, however, deny the fact that Mozambican Portuguese is becoming a language in its own right and that several Mozambican novelists and short-story writers have put Mozambique on the map of Portuguese literature, similar to what has happened to English in India or English in South Africa.

EDUCATIONAL SYSTEM—OVERVIEW

School age Mozambicans (ages 5 through 24 years) make up more than 50 percent of the country's total population. Although primary education is compulsory and free, the national educational system is not yet capable of absorbing all who should be attending primary education (grades one through seven). The government is making concerted efforts to rehabilitate and expand the educational infrastructures and to train staff with a view to responding to the needs and challenges in education.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

About 150,000 students attend night classes, technical and professional schools, adult education programs, and private education. There are about 50,000 pupils in primary and secondary private schools (about 2 percent of the number who are studying in the public sector). Approximately 800,000 students attend Higher Education institutions, and of these about two-thirds attend the Eduardo Mondlane University in Maputo. There are 36 teaching weeks in the school calendar. The medium of instruction is Portuguese, and Portuguese is also taught as a subject. Education in Mozambique is under the jurisdiction of the National Education System (*Sistema Nacional de Educação* or SNE).

PREPRIMARY & PRIMARY EDUCATION

General Survey: Preprimary and primary education is taught in three stages: a preprimary *creche,* for ages 1 to 5, and *Jardim Infantil,* for ages 5 and 6; a lower primary level (EP1), for ages 7 to 11, from grades 1 to 5, with approximately 2,180,334 students in 1997; and a higher primary level (EP2), for ages 12 and 13, consisting of grades 6 and 7, with approximately 199,126 students in 1997. While this policy can often not be enforced due to financial and other constraints, both EP1 and EP2 are compulsory. The EP1 pupils are mainly rural; most EP2 students are semi-rural, studying mainly in district seats.

Curriculum—Examinations: Eight subjects are taught in EP1 and EP2 (grades 1 through 7). Portuguese is taught for 12 hours per week in grade 1; 11 hours per week in grade 2; 10 hours per week in grades 3 and 4; 9 hours per week in grade 5; 6 hours per week in grade 6; and 5 hours per week in grade 7. Mathematics is taught for 6 hours per week in grades 1 through 5 and for 5 hours per week in grades 6 and 7. Natural sciences is taught for 2 hours per week in grades 3 and 4 and for 3 hours per week in grade 5. Biology is taught for 3 hours per week in grade 6 and for 4 hours per week in grade 7. Geography is taught for 2 hours per week in grade 5 and for 3 hours per week in grades 6 and 7. History is taught for 2 hours per week in grades 4 and 5 and for 3 hours per week in grades 6 and 7. Aesthetics and working education is taught for 2 hours per week in grade 1; 3 hours per week in grades 2 through 5; and 4 hours per week in grades 6 and 7. Physical education is taught for 2 hours per week in grades 1 through 6 and for 3 hours per week in grade 7.

At the end of EP2, students have three options: to proceed to secondary education; to proceed to an elementary technical/vocational education; or to enter basic technical/professional education from which they can move on to middle elementary technical and vocational education. At this stage students also have the option of choosing vocational schools in education.

Repeaters & Dropouts: According to the Ministry of Education, the average pupil-teacher ratio in primary education is 50:1; the dropout and repetition rates are in the region of 20 percent. The quality of education is further aggravated by overcrowded classrooms, insufficient quantities of schoolbooks and teaching materials, and the inadequate professional training of teachers. Their poor living conditions and lack of access to sources that would help them deal with the issues facing the country before they are asked to take responsibility for their students' educations are also problems. Other reasons for the high dropout rate are problems with the official language, migration of families, and poverty of families.

Although public primary education is free and compulsory, less than 50 percent of school-age children attend classes. Because of financial and other constraints, the government has been unable to enforce this policy. Even though the minimum working age is 18-years-old and children younger than 15 are not permitted to work, children not in school frequently are employed in the agricultural and casual labor sectors, increasingly in construction jobs and in the informal labor sector. Often children younger than 15 work alongside their parents or independently in seasonal harvests or commercial plantations where they are normally compensated with school supplies and books rather than money.

SECONDARY EDUCATION

General Survey: Secondary education (ESG) is taught in two cycles: ESG1 and ESG2. The first cycle (ESG1) lasts for 3 years and is for those aged 14 to 16, or grades 8 to 10; it had approximately 58,048 students in 1997. The second cycle (ESG2) lasts 2 years and is for those aged 17 and 18, or grades 11 and 12; it had approximately 7,037 students in 1997. There are only 82 public secondary schools nationwide, of which only 18 offer classes through grade 12. The medium of instruction is Portuguese, and both Portuguese and English are compulsory school subjects.

Curriculum-Examinations: Eleven subjects are taught in ESG1 and ESG2. Portuguese is taught for 5 hours per week in grades 8 through 10 and for 4 hours per week in grades 11 and 12. English is taught for 3 hours per week in grades 8 through 10 and for 3 to 5 hours per week in grades 11 and 12. Mathematics is taught for 5 hours per week in grades 8 through 12. Biology is taught for 3 hours per week in grades 8 through 10 and for 4 hours per week in grades 11 and 12. Physics is taught for 3 hours per week in grades 8 through 10 and for 4 hours per week in grades 11 and 12. History is taught for 2 hours per week in grades 8 through 10 and for 4 hours per week in grades 11 and 12. Geography is taught for 2 hours per week in grades 8 through 10 and for 4 hours per week in grades 11 and 12. Chemistry is taught for 3 hours per week in grades 8 and 10 and for 4 hours per week in grades 11 and 12. Drawing is taught for 2 hours per week in grades 8 through 10 and for 3 hours per week in grades 11 and 12. Physical education is taught for 2 hours per week in grades 8 through 12. French is taught for 4 hours per week in Grades 11 and 12.

At the end of ESG1 students have the following options: to enter ESG2, the pre-university, academic education cycle; to proceed to teacher training; or to proceed to the adult pre-university cycle from which they will be able to proceed to Higher Education institutions. ESG1 students attend school in provincial capitals and major provincial districts, and ESG2 students can only do their schooling in certain provincial capitals.

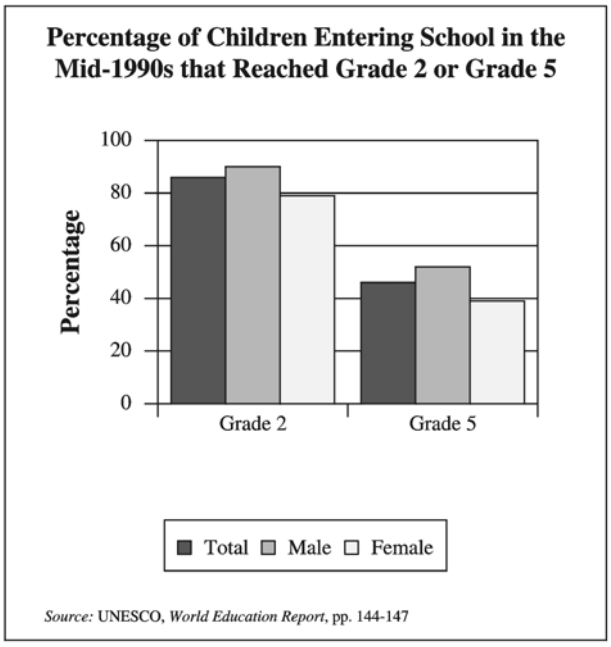
HIGHER EDUCATION

Types of Higher Education Institutions: Public & Private: Eduardo Mondlane University (UEM) is a public institution based in Maputo. Under the new Africanization policy of the Portuguese education authorities, general studies were offered from the early 1960s on. Later the faculty of general studies was designated as a university and, in 1970, a faculty of economics was added.

Thus, the UEM was created in 1962 under the name *Estudos Gerais.* Later it was designated the University of Lourenço Marques; in 1976 it received its current name. The UEM enrolls 3,712 students, almost one-third of the nation's college students, and is provided with 23 percent of the government's education budget, along with 39 percent of the contributions to the nation's education system from outside donors.

The Pedagogical University (UP) is also a public institution based in Maputo, created in 1986. It has established branches in the cities of Beira and Nampula. The Pedagogical University is particularly involved in the pre-service training of teachers for secondary education. The Higher Institute of International Relations (ISRI) is the third public institution that was created in 1986. It, too, is based in Maputo. There are three private institutions of higher education. The first is the Higher Polytechnic University Institute (ISPU), created in 1996. It is based in Maputo and has branches in the town of Quelimane. The second private institution is the Catholic University of Mozambique (UCM), which was founded in 1997 and is located in Beira. The third private higher education institution, also in Maputo, is the Higher Institute for Science and Technology of Mozambique (ISCTEM). It was founded in 1997 and offers both full-time and part-time study up to the master's degree level. In February 2001 it opened a new campus in the center of Maputo. The Mussa Bin Bique University is to be set up in the town of Angoche in the Nampula Province in northern Mozambique, just south of Cabo Delgado, and will primarily be a cultural center for the teaching of Arabic.

Courses, Semesters, & Diplomas: Higher education encompasses the 19 to 24 years age group and is designed to take 6 years, or 12 semesters, of study. Those who have completed the adult education cycle also have access to higher education. Depending on the combination of courses taken in school, those receiving an education at Eduardo Mondlane University can be divided into three groups that take a certain combination of courses: Group A's general subjects include Portuguese, English, French, history, and geography; university courses to which access is available include linguistics, Portuguese, law, history, French, diplomacy, English, geography, psychology, pedagogy, and economics. Specific subjects for Group A are English, biology, and mathematics. Group B's general subjects include Portuguese, English, mathematics, chemistry, physics, and biology; university courses to which access is available include geology, agronomy, medicine, veterinary science, biology, chemistry/biology, and physical education. Specific subjects for Group B are geography and biology. Group C's general subjects include Portuguese, English, mathematics/physics, drawing, and chemistry; university courses to which access is available include engineering, architecture, physics and chemical sciences, mathematics, and physics. There are no specific subjects in this group.



English and Portuguese are compulsory subjects administered at the UEM. English is a compulsory subject in the first two years of most courses, administered by the Department of English. French is an optional subject (either French or English) in the social sciences course at the UEM, and it may be reintroduced at the Faculty of Arts. The Bantu languages Emakhuwa and Xichangana are taught at the UEM in linguistics (four semesters) and history (one semester) degree courses.

NONFORMAL EDUCATION

Adult Education: Students who are 15 years or older who have not been through the usual system of education can be accommodated in the adult literacy program *(Ensiono Primáro de Adultos Alfabetização),* which also has two levels. As is the case with students completing EP2, students who have completed the second level of adult literacy education may proceed to an elementary technical vocational education or to enter basic technical professional education from where they can move on to middle elementary technical and vocational education. At this stage students also have the option of choosing vocational schools in education. Or they may proceed to adult secondary education. From here they have the options offered to traditional ESG2 students.

Adult students who have completed the first two levels of adult literacy education have an option not avail-

able to traditional students. They may join the accelerated pre-university cycle *(Ensino Pré-Universitário Iceleradó).* This form of education has its roots in the Mozambican liberation struggle when, due to the brain drain and the lack of education of the majority of the people, the maximum access to education had to be provided in the shortest possible time. Accelerated Training for Workers (*Centros de Formação Acelerada para Trabalhadores* or CFATs) is the Mozambican government's attempt to move beyond basic literacy training to a place where adults could advance their educational potential and as soon as possible make a contribution towards meeting the needs of the emerging nation. In the Centers, academic attainment is raised to the equivalent of grade four in primary schooling. The next step is to raise the level of academic achievement to the equivalent of grade six of primary schooling. Each step can be completed in a fraction of the time, often six months. After completing the accelerated pre-university cycle, adult students may proceed to the higher education level and to possible teacher training courses.

Distance Education: As is the case in most African countries, large land areas, long distances between cities, and the remoteness of large numbers of the population make it necessary for many people to obtain education, especially higher education, through distance education. In distance education there is, thus, not always a clear distinction between nonformal and formal education. In Mozambique the difficult state of distance education is exacerbated by the extreme poverty of the country's population, the high illiteracy rate, and the devastation caused by years of political strife, first internal and then because of being drawn into the political struggles taking place in the then Rhodesia and South Africa. In the early 1980s, the government successfully trained 1,200 unqualified primary school teachers in attempting to cope with the return of the country's nationals from neighboring states. The Ministry of Education then expanded the service to provide education to the wider community. This expansion led to the founding of the *Instituto de Aperteiçoamento de Professores* or IAP, which took over the responsibility for distance education from the National Institute for Development of Education (INED). INED had, until then, been responsible for introducing new teaching methodologies, including distance education. Funded by the Government of Mozambique and sponsored by the World Bank, the IAP is to provide a nationwide service and support the Ministry of Education in its efforts to collaborate with neighboring countries. It is hoped that despite language differences, regional cooperation will accelerate the development of distance education in the country, bringing in new ideas, the exchange of information, and workshops and seminars that will add to the professional skills of Mozambique's educators.

Through printed course material and through radio, IAP offers a full range of secondary school subjects and the teaching of social sciences, mathematics, and Portuguese. Other institutions involved in distance teaching are the *Departamento de Ensino à Distância,* which uses printed course material, radio and face-to-face tuition to raise the academic level of primary teachers and to improve their teaching skills and the *Instituto de Communicaçao Social* which through the medium of radio, a journal called *O Campo,* and television, makes nonformal education available to peasant farmers and other people living in rural areas.

Global Access: By the end of 1999, all African countries except Eritrea, Somalia, and Libya had local Internet access, with South Africa leading the number of Internet Service Providers and the number of computers connected to the Internet. There is, however, much concern that the English language does not only dominate the global information infrastructure but also that its content almost exclusively targets the needs of users in the United States and the United Kingdom. A 1999 survey of the United Nations Economic Commission for Africa has shown that Africa generates only 0.4 percent of global content. If the South African contribution is excluded, the figure is merely 0.02 percent. As there are so few African content developers, there is a growing realization that African academic and research institutions and governments need to make a real effort to rectify the imbalance.

They need not only to publish the academic research done on the African continent, which is presently only available in the sponsoring institutions, but also to develop materials that will allow African and other users to access indigenous languages on the Internet. There is much valuable work being done at the Universidade Eduardo Mondlane, especially in the areas of language development and language policy, as well as in education. This is a country whose very structure has been destroyed but whose people nevertheless have, time and again, found the will to create a new reality. This new reality could benefit the global discussion in these fields and could enhance the perception in Mozambique that its highest public academic institution has the capacity to produce and publish the information and the research done by its faculty and students. Similarly, while the foreign languages (English, Portuguese, French) spoken in Africa are well-represented on the Internet, little has been undertaken to advance African indigenous languages through this medium. There is no reason why a country like Mozambique whose people speak various Bantu languages, several of which are official and national languages in neighboring countries, should not publish language materials produced in at least some of these languages. Yet, the poverty that puts education beyond the reach of most of the

people of Mozambique means that access to the Internet is far beyond the feasible reality available to those who belong to the 80 percent of the world's population that has never heard a dial tone, let alone seen a computer.

TEACHING PROFESSION

Training & Qualifications: In 1975, to combat the teacher shortage caused by the leaving of qualified teachers after independence, 10 Primary School Teacher Training Centers (PSTTCs) were created, one in each province. In the course of the years, the content of the training courses was adapted to meet the developing needs of education. On leaving the Center, the new teachers are authorized to teach EP1 (grades 1 through 5). The duration of the course is three years. The Ministry of Education plans to increase the entrance level to grade 10 (from grade 7) and to shorten the time of training to 2 years. In 1978 a Teachers' Training and Education School (TTES) began to function in Maputo. Here teachers for EP2 are trained. To be qualified to teach EP2 (grades 6 and 7), a teacher needs to pass grade 10 and receive three years of training. The Teachers' Upgrading Institute (IAP) is also undertaking teacher training and in-service training, as is the Pedagogical University that specializes in pre-service training of secondary education teachers. The Ministry of Education intends to arrange the Integrated Pedagogical Zones and start in-service training programs by means of radio, lessons, and in-service materials.

SUMMARY

As is the case in many African countries, Mozambique's economic structures have been disrupted by the effects of neo-colonialism, famine, war, irreversible environmental damage, and more recently, the impact of the AIDS virus and the devastation caused by floods in 1999. This has contributed to the dislocation of millions of people and has had an effect especially on women and children and on education. The situation has been exacerbated by the international debt which, because of exorbitant interest rates, keeps growing. Thus, despite its demonstrated commitment to education, Mozambique is forced to pay more than twice the amount to service the debt than it does on education and health care. Cancellation of the international debt, not merely a moratorium on debt repayments, is vital if Mozambique is ever to have even the slightest possibility of finding its feet educationally. Despite several hundred years of colonization and debilitating wars (both internally, and as a result of foreign interference), the FRELIMO government in Mozambique has devoted a large part of its energies to education. Despite the chaos left by five centuries of humiliation and exploitation, the Mozambican people and the Mozambican government have made tremendous efforts to build a new nation. There is an urgent need for international organizations, NGOs, and non-profit organizations to provide practical and financial support that has no strings attached with regard to imposing on Mozambique the philosophical option it chooses to educate its citizens. There is an equally urgent need for the international community to take co-responsibility for a country which, beginning from the times of the slave trade and continuing with the modern export of cash crops that (at the expense of much needed food crops) are grown for consumption in the developed world, has contributed so much to the prosperity and affluence of certain parts of the world yet has suffered so much in return.

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—Karin I. Paasche

MYANMAR

BASIC DATA

Official Country Name: Union of Myanmar

Region:	Southeast Asia
Population:	41,734,853
Language(s):	Burmese
Literacy Rate:	83.1%
Number of Primary Schools:	35,752
Compulsory Schooling:	5 years
Public Expenditure on Education:	1.2%
Educational Enrollment:	Primary: 5,413,752 Secondary: 1,752,510 Higher: 245,317
Educational Enrollment Rate:	Primary: 121% Secondary: 30% Higher: 5%
Teachers:	Secondary: 106,515 Higher: 5,730
Student-Teacher Ratio:	Primary: 46:1 Secondary: 16:1
Female Enrollment Rate:	Secondary: 30% Higher: 7%

HISTORY & BACKGROUND

The Union of Myanmar, formerly known as Burma, is the largest nation in mainland Southeast Asia. With a territory of 262,000 square miles and a population of approximately 50 million people, it is located between the two most populous nations in the world—China and India.

Myanmar's society and culture have been greatly influenced by China and India. As an independent nation since January 1948, Myanmar has been passing through various military rules and a series of democratization movements. Its education system, as is the case in other Buddhist countries in Southeast Asia, is based on the model of rural monasteries where the *Sayadaws* (abbots) teach the basic three Rs, as well as handicrafts, to people of all ages.

A fascinating, longtime continuity of monastic learning and modern education makes Myanmar one of the most literate countries in the region. With an approximately 80 percent literacy rate, Myanmar, despite many militaristically created setbacks, rightfully claims to be an educational leader among many economically disadvantaged Third World countries.

Myanmar has been an active partner in the UNESCO-led movement of ''Education for All,'' known as *EFA2000.* Education in Myanmar (then Burma) until 1948 was colonial, widely criticized by the leaders of independence movement. The Education Reconstruction Committee Report of 1947 included a wide array of school reforms such as bilingual curricula, vocational training, and health education. During the 1948-1962 post-independence period, the government of Burma announced a statement of educational policy that included free education in state schools; the use of Burmese as a medium of instruction while allowing English at the college level; and the creation of new textbooks that highlighted the spirit of nationalism.

Under military rule (1962-1988) the Burmese educational system became highly centralized. General Ne Win's Government used the schools as a tool of political indoctrination. While the military rulers emphasized science and technology, school and college curricula were controlled and teachers were not able to teach in a free atmosphere. Once an economically as well as educationally leading country in South East Asia, Burma was granted a status of ''Least Developed Country'' by the United Nations in 1987. In 1989 Burma adopted a nationalistic new name, Myanmar.

Finally, during 1988-2000, known as a period of ''democratization under the military control,'' the educational system in Myanmar has remained chaotic. In the first free, multiparty elections, Ms. Aung San Suu Kyi's party won a decisive victory, but the Military refused to give up its authority. Ms. Kyi, a highly popular, democratic leader was held under house arrest. Numerous students and teachers who led the democratization movement were silenced or jailed, and many colleges and universities were periodically shut down.

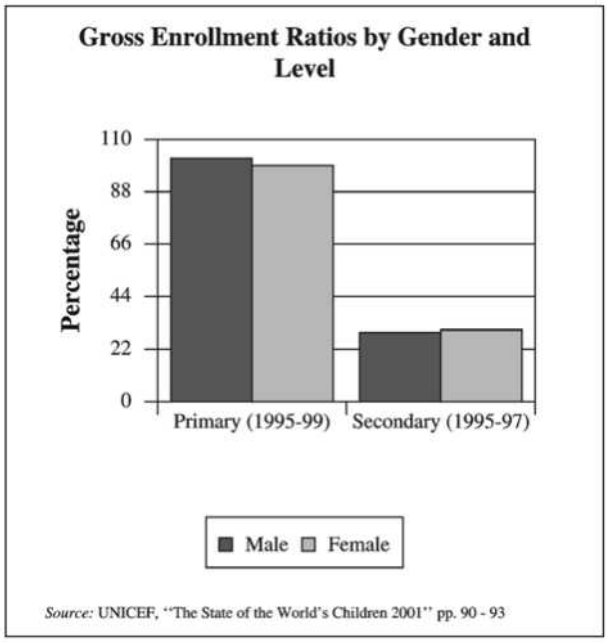
EDUCATIONAL SYSTEM—OVERVIEW

Despite a traditionally high rate of literacy and importance of learning in Myanmar, its educational system is in a state of underdevelopment and uncertainty. Although enrollment in primary schools is very high, the completion rate lags behind. Reports indicate that only one third of all primary school children finish the first five years. Many students drop out due to poverty, lack of support, and poor health. While school attendance is high in urban areas and among male students, village schools in a vastly rural-agrarian country are handicapped by poor attendance, especially among the female students.

Myanmar's educational system has been suffering from a proportionately declining budget. While there has been a sizable increase in the number of schools, colleges, universities, and teachers during the last five years, the percentage of total education expenditure declined from 4.65 percent in 1995 to 2.52 percent in 1999. While

the total budget rose from approximately 7,000 to l,000 million kyats (approximately 6.5 kyats equal US$1.00), the proportionate decline implies that the present military rule does not give high priority to education, even though it does declare its commitment to EF2000 *Education For All by Year 2000.*

For several years Myanmar has also been actively participating in many world agencies such as UNDP (United Nations Development Project), UNESCO (United Nations Economic, Social, and Cultural Organization), and UNICEF (United Nations Children's Emergency Fund). Even in this area of support by NGOs (nongovernmental organizations), as in the above allocation by the Government' Ministry of Education budget, there is a slight proportionate decline. While the UNDP allocation of $3.9 million for primary education in Myanmar rose to $5.9 million in four years (1994-1998), it fell from 14 percent to 12 percent, proportionately.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

Administration, Finance, & Educational Research

Recent changes and developments in the educational system in Myanmar, as in the case of other less developed countries, are described, explained, and projected in many divergent ways. Depending on the source of the description and assessment of changes in Myanmar's schools and colleges, there are widely varying pictures. The government-generated reports declare steady progress and lofty goals at all levels of education.

There are seven departments and many specially formed committees in charge of setting goals and employing appropriate strategies to achieve EFA (Education for All) and specific numerical targets. For instance, the Department of Basic Education is in charge of the primary, middle, and high school levels. The Department of Higher Education is responsible for colleges and universities. There are separate departments for technical, agricultural, and vocational education and official bodies for administering examinations, training teachers, and conducting educational research. There are various committees for formal and nonformal education at national and regional levels; these bodies have reported that more and more children have been completing primary and secondary education and that the degree programs have shortened their masters degree program from three to two years. It is also proposed that undergraduate programs be reduced from four to three years and that a semester system that continuously monitors the student's progress be introduced in place of the present system, which heavily relies on rote leaning and extremely competitive end-of-year final examinations.

The Medium of Instruction: Before 1991 all textbooks for basic education were in Burmese. Even in higher education, English was de-emphasized as a language of the Colonizers. Such nationalistic sentiments seemed to be replaced by more realistic objectives of mastering English as a universal language and being more compatible with scientific and technical education.

It is reported that all subjects except the Myanmar language and literature are taught in English at the high school and college levels. The texts and examinations, too, are written in English. There is some concern though, among Myanmar's leaders, that the English language may generate more liberal ways of thinking, as in the United States and Great Britain, and may create an atmosphere of democratic and egalitarian ways of thinking and acting.

Teaching Profession

The critics of Myanmar's militarism point to the severe shortage of adequately trained teachers, especially to teach English and sciences, as many seek overseas careers because of relatively low salaries and lack of freedom. Myanmar's leaders seem to favor the Japanese system of education, which places heavy stress on discipline, more so than the Western European and American systems. Many university students have been leaving Myanmar to seek admission to other universities in the region or to Europe and the United States, as numerous campuses have been closed or affected by student demonstrations and government repression.

Two developments in recent years include an increase in the enrollment of computer literacy and an increase in the enrollment in the government-sponsored

University of Distance Education. Several hundred schools and colleges have been teaching computer education, especially during evenings and through short programs. Almost 50 percent of all university students were affiliated with the University of Distance Education, which attracts elderly students and would-be teachers.

Tuition Classes: In Myanmar and in many developing countries that call themselves ''Socialistic,'' the government heavily favors the rich through a parallel system of private tutoring called *kyu-shin.* Many students call in teachers to coach them at their homes in the format of small groups of friends and relatives. These private classes are costly and have been contributing to the general deterioration of government schools. Such a system also creates inequality of opportunity for students who need private classes but cannot afford them.

The most popular tuition classes cater to the needs of students in the final year of high school as a ''guarantee'' for college entrance after the stiff and highly competitive tests. The tutors often guide their students through specially prepared expensive guidebooks and more or less personalized guidance. English and science are among the most sought-out subjects in order to get better jobs or entry to overseas universities.

Ethnic Diversity: Myanmar's population includes many ethnic minorities, some of which (such as Mon) have been deprived of equality in the use of their own language. For example, at one point, the shutting down of 120 Mon schools attended by 6,000 students was discussed. Another discriminatory practice involves the Citizenship Law of 1982. Thousands of Chinese and Indian students face the problem of college admission in general and entrance to the programs of technology and medicine in particular.

SUMMARY

In spite of its pro-educational cultural tradition and several recent success stories, Myanmar still faces many unresolved issues. While the international agencies, as well as local volunteers, have been trying to improve the quality and expand the scope of education at various levels, Myanmar's repressive military leadership offsets these efforts.

The democratically inclined leader, Ms. Kyi, is still not allowed to lead, despite her winning a Nobel Peace Prize 10 years ago. Myanmar's schools and colleges need to get closer to their long overdue prospects of democratization, openness, and equality among students and teachers.

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—Ashakant Nimbark

N

NAMIBIA

BASIC DATA

Official Country Name:	Republic of Namibia
Region:	Africa
Population:	1,771,327
Language(s):	English, Afrikaansion, German, Oshivambo, Herero, Nama
Literacy Rate:	38%
Academic Year:	January-November
Compulsory Schooling:	10 years
Public Expenditure on Education:	9.1%
Educational Enrollment:	Primary: 400,325 Secondary: 115,237 Higher: 11,344
Educational Enrollment Rate:	Primary: 131% Secondary: 61% Higher: 8%
Female Enrollment Rate:	Primary: 132% Secondary: 66% Higher: 10%

HISTORY & BACKGROUND

On the southwestern coast of Africa, bordering the south Atlantic Ocean and lapped by the cold waves of the Benguela ocean current, lies the Republic of Namibia. Formerly known as South-West Africa, and before that as German Southwest Africa, it gained independence on March 21, 1990, at which time it adopted the name Namibia. The Namib Desert (from which the country gets its name), one of the planet's oldest deserts, runs along almost the entire coastline, except for the northernmost part, the Kaoko Veld, which presents a somewhat more gentle climate than the desert regions.

The Skeleton Coast, which stretches along the northern parts of the Namibian coastline, is one of the earth's most inhospitable places. It has treacherous shorelines with coastal fogs and cold sea breezes caused by the icy Benguela current. These shorelines became the graveyard of numerous ships and mariners. The impenetrability of the area may have been one of the reasons the people of this part of the world were spared the excesses of the Atlantic slave trade that raged along the West African coast.

Namibia—bordered to the north by Angola, to the south by South Africa, and to the east by Botswana—is a land of many contrasts, ranging from the desert regions of the coast to the wildlife-rich areas of the Etosha Pan game reserve and the Caprivi Strip (a narrow strip of land that extends eastward from Namibia and borders Angola, Zambia, Zimbabwe, and Botswana). The large Kunene and Okavango Rivers border Namibia to the north; the Kwando River cuts through the Caprivi Strip; the Zambezi River flows along the northeastern border; and the Orange River forms Namibia's southern border. Otherwise Namibia is a dry land where droughts often occur. The extremes in landscape, temperature, and climate provide the background for the country's history and for the national and cultural character of its people.

Namibia is home to some of the most ancient nations on earth, the !Kung (the ''!'' indicates a click sound), members of the Khoisan people, whom the white people called Bushmen and Hottentots, speak what are known as the ''click languages'' of Africa. While there are few members of the original Bushmen still alive today, except in the far northern parts of Namibia and in the Kalahari

Desert in South Africa, these ancient hunter-gatherers are famous for their lifelike art painted and carved on the desert rock. The traditional education of these people is largely part of their oral tradition, and much is lost in antiquity. What is known, however, is that there were strict codes of honesty, so much so that even in times of dire necessity, no Bushman would use the water another had stored in ostrich eggshells and buried in the desert sand. They were skillful in fashioning tools from wood and stone; clothing from animal hides; musical instruments from wood, catgut, and ostrich quills; and bows and arrows. From an early age, young men learned to hunt, killing prey with poisoned arrows. The rock paintings they left indicate that for the Bushmen the hunt not only fulfilled their need for food, but also for a sacred ritual. In modern times many Bushmen have become laborers on farms. Their traditional skills were used by the South African Defense Force during the late twentieth century to track down the whereabouts of the opposition in Namibia's struggle for independence.

By about 1000 A.D., the indigenous Bushmen and Hottentot peoples of southern Africa gave way to various migrating Bantu-speaking peoples who today make their home in Namibia. Large numbers of Herero and Ovambo people moved southwards to Namibia and, by the 1800s, the Damara, Herero, and Ovambo were the largest ethnic groups in the country.

Beginning in the mid-1800s, German settlers, missionaries, and soldiers began arriving in what is today Namibia. They settled mainly in the coastal regions. In 1884 Otto von Bismarck, the German ''Iron Chancellor'' who had declared ''My map of Africa lies in Europe,'' convened the Berlin Conference at which the European powers, in search of new markets and coveting the riches of Africa, gerrymandered the continent, dividing it up between them with no regard to existing ethnic and national boundaries. Together with Togo, Kamerun (which with Togo was split between Britain and France after World War I and is today known as Cameroon), German East Africa (after World War I, Tanganyika, known since independence as Tanzania, was mandated to Britain, and Ruanda-Urundi to Belgium), and German Southwest Africa (known today as Namibia) became German property.

In 1915, during World War I, South Africa allied with the British and took over South-West Africa. South Africa wanted to annex the country but was prevented from doing so in 1920 by the League of Nations, which gave South Africa a mandate to manage Namibia's government and affairs. In 1945, after World War II, the United Nations, which replaced the League of Nations, requested that South-West Africa be placed under United Nations trusteeship. When South Africa refused, a long period of often-acrimonious negotiations and eventually guerrilla warfare, led by the South-West Africa People's Organization (SWAPO), ensued. On March 21, 1990, Namibia, under the leadership of SWAPO's Sam Nujoma, became independent. A strategically important area, the deep sea port of Walfish Bay (later known as Walvis Bay) on the coast of South-West Africa, remained under South African control until 1994 when it was turned over to Namibia.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Education in pre-colonial Namibia was an integral part of everyday life rather than a specialist activity carried out in a particular venue with a set curriculum. All the adults in the community were involved in the education of the young as knowledge, skills, values, and the understanding of roles was transmitted by means of conversations, imitation, stories, games, songs, and ritual ceremonies.

In 1909 the German authorities introduced organized education for the white population; however, little changed for the indigenous population who were not yet seen as being necessary for the country's economic development, so were not provided with any education. Like the German authorities, the missionaries did not wish to risk giving the indigenous population an education that might result in the development of ideas of democracy and equality. However, in order to establish Christian communities, the African people at least had to be taught to read and write. Primary schools were founded in small, scattered communities around the country from the late nineteenth century onwards.

In 1921, under the South African mandate, education for whites in Namibia between the ages of 7 and 17 became compulsory. The government until 1940 built only two primary schools for Africans, both in the central region of the country. In the northern part of Namibia, where the majority of the African population lived, no state schools were built. After 1945 changes in educational policy were gradually introduced. Putting ''native education'' on a sound basis was seen as a key to a positive relationship between the races.

In 1949 the Eiselen Commission was set up in South Africa. Its report in 1951 and the Bantu Education Act of 1953 formed the basis of education both in South Africa and later in Namibia. As the economy required an increasing number of literate people, state education for Africans was increased. However, as H.F. Verwoerd, South Africa's leading architect of apartheid, declared, education would always be separate, unequal, and designed to let Africans develop exclusively within their own communities. Christian National Education, the underlying philosophy of the apartheid system of education,

was geared to ensure that all nations would guard their own identity by educating their children in the mother tongue and fostering in them a strong national and cultural identity. Because of what they perceived to be their racial superiority, whites considered themselves the trustees of black education, and therefore the ones to enforce the policies of Christian National Education.

In 1958 the Van Zyl Commission introduced the system of Christian National, apartheid-based education into Namibia. Black education was to be expanded so that by 1988, approximately 80 percent of black children would have a basic four-year primary school education. However, only 20 percent were to go on to higher primary level. Thus, only one secondary school would be provided for each ethnic group. Education was taken out of the hands of the missionaries who could not be trusted to transmit apartheid ideology correctly. Initially education was administered along racial lines with a different system for white, black, and ''coloured'' (people of mixed racial descent, usually black and white) students. Eleven separate education authorities were set up in 1980, one for whites, one for ''coloureds,'' and nine for different African ethnic groups. German language schools were also supported, with the high school in Windhoek administering the German *Abitur* school-leaving and university entrance examinations.

During this period before independence in 1990, education for whites was compulsory and paid for by tax. Black people paid directly for their education in the form of fees. In 1981 the expenditure per black pupil was 232 South African Rand, for ''coloureds,'' it was 300 South African Rand, and for whites it was 1,210 South African Rand. One in three black pupils who attended primary school did not complete their first year of schooling. Of those who reached their final year of primary education, less than 30 percent went on to secondary school. Poverty, large classes, and poorly qualified teachers all contributed to the high dropout rate. Teacher training during this period was totally inadequate. Only 200 students availed themselves of the facilities offered by the only teacher training college in Namibia, which was situated in Windhoek. Hundreds of black students could not gain entrance to colleges, and those who did complete their education were pressured by the government to transmit apartheid policies, of which the communities increasingly disapproved. Textbooks proposed a Eurocentric and fundamentalist Calvinist Christian view of whites as the carriers of civilization and blacks as warlike, ungrateful, and culturally inferior. History books ignored the rich African background, which was still being transmitted orally to children of the different African nations living in the then South-West Africa. A teacher-centered rote learning, with the teacher transmitting knowledge and the students not questioning, as well as obedience, were the pillars of classroom education.

Towards the end of primary school, African children and their white counterparts were taught in their mother tongue. Secondary education was in English or, more usually, in Afrikaans. In practice, however, even primary education was in Afrikaans as classroom material in the Namibian languages had not been sufficiently developed. In South Africa as in Namibia, the high dropout rate and the use of Afrikaans, which by 1981 had become the main medium of instruction in junior secondary schools, caused increasing hostility amongst students.

Resistance & Independence: After 1971, when the International Court of Justice in The Hague confirmed South Africa's occupation of Namibia illegal, strikes and mass expulsions of pupils became a regular occurrence. School boycotts, which in Ovamboland in the north were particularly marked by militancy, became the order of the day, especially after 1976 when events in Soweto, South Africa, inspired widespread student strikes in Namibia. Students considered ringleaders were expelled, and teachers and students who boycotted school were arrested and taken in for questioning by the authorities. A number of alternative schools, calling themselves ''schools of resistance,'' opened during the 1980s. By 1988 there were 10 of these schools. All used English as the language of instruction and several introduced curriculums from Botswana, Lesotho, and Swaziland. Although the police and the army harassed the staff and students of these schools, they were not closed down. These schools were involved in political education and taught history from an Afrocentric perspective. However, because the teachers were themselves products of the apartheid education system and used teaching methods and administered examinations they themselves had learned, traditional didactic forms of education continued.

In order to counter the effects of the liberation struggle, the South African Defense Forces (SADF) began their ''hearts and minds'' campaign, which was aimed at gaining control of the local population through improving quality of life. SADF personnel took over positions in hospitals and schools. However, this policy backfired because of the accompanying dependence on military structures. Violence against teachers and pupils became widespread, resulting in the flight of many Namibians into neighboring Angola, Zambia, and Botswana. By the mid-1980s, more than 70,000 Namibians, numerous of them school age, were in exile. Many of these young people were intent on gaining an education and went to schools in Cuba and East Germany. Others were sent to other African countries for education. The majority remained in SWAPO refugee camps in Angola and Zambia.

Two of the refugee camps, the SWAPO health and education centers at Nyango in Zambia and Cuanza Sul in Angola, were particularly important in providing education to Namibian refugees. With English as the language of instruction, these centers emphasized literacy and a non-South African version of history. They also reinforced the ideological and practical motivations of the fight for independence, and prepared young freedom fighters to make contact with people back home and educate them in the ideology of the struggle. The weaknesses inherent in the education offered stemmed from the fact that, on the one hand, SWAPO enforced its theme of ''no questions'' throughout the liberation struggle, and, on the other hand, it was intent on obtaining international support for its liberation struggle and thus had to match its rhetoric to the ideology of benefactors. Unlike the ZANU camps in Zimbabwe's liberation struggle, where discussion and democratic dialogue were paramount to political education, teachers in SWAPO camps replicated the authoritarian attitudes of the colonial system.

When the SWAPO government took office in March 1990, the 11 separate ethnic education departments were merged into one. By 1994 to 1995, the South African Cape syllabus was replaced by the Cambridge Local International GCSE. English became the medium of instruction for junior secondary schools in 1991, and black access to education was addressed, with a new generation of students needing education for a future of democracy and equality of opportunity, where tolerance and understanding were key issues. Often the efficiency of the bureaucratic structures, rather than the relevance of education and the transformation of educational structures, was stressed. Some areas that needed to be addressed were the underqualification and lack of accountability of teachers; poor discipline in schools; inadequate textbooks, classroom equipment, and facilities, especially in rural areas; and the need to motivate and educate the general public to support SWAPO's vision for educational reform.

During Namibia's political struggles of the 1970s and 1980s, other countries hosted Namibian refugees. Namibia has since become a first asylum country. Its policy of continuing to permit asylum-seekers to enter the country has resulted in more than 8,000 refugees and asylum seekers residing at the Osire camp. Ninety percent of the refugees are from Angola, with the rest from the Democratic Republic of the Congo, Burundi, Rwanda, Tanzania, and other African countries. Schools have been established at the Osire refugee camp, but resource constraints make meaningful education problematic.

EDUCATIONAL SYSTEM—OVERVIEW

At independence in March 1990, a new teaching and learning paradigm had to be developed that would dismantle the previous regime's policy of segregation and inequality of access and that would reflect the new government's priorities of equity, access, quality, and democracy in education. The National Institution for Education and Development (NIED), one of the branches of the Ministry of Education, Culture, Youth, and Sport, was entrusted with the task of reforming and developing the curriculum, integrating the national language policy with English as the official language. The goal of the new education plan was that all Namibians would acquire basic literacy and numeracy skills and a basic understanding of natural phenomena within a few years. Increased funds were provided for adult and nonformal education, and there were increased educational opportunities for girls. While racial segregation was prohibited, the establishment of private schools, including Afrikaans or German medium schools that appealed mainly to whites, were tolerated by the new government. A new university, the University of Namibia, raised the level of the country's education, and much attention was paid to in-service teacher training as many teachers were ignorant of curriculum and syllabus development, having based their teaching on textbook content. Teachers were encouraged to participate in a democratic education system where both they and their students were creative and proactive.

From 1991 to 1993 the first learners, those in junior secondary schools, were phased into the new system. Senior secondary schools followed in 1994 and 1995. The implementation of the language policy and the phasing in of a new subject per grade per year was followed by upper primary schools from 1993 to 1999. Thus, mathematics was reformed and implemented in grade four in 1993, and it was taught in English from that year on in grades five to seven. Year after year other core and noncore subjects followed. From 1996 to 1999, the NIED, recognizing that lower primary reform was the foundation of schooling, phased in the new curriculum on a per grade per year basis, which included all subjects. In order to involve the parents and provide for their constitutional rights, all syllabi and materials for the first three grades were provided not only in English, but also in nine of the Namibian African languages, as well as German and Afrikaans. External examinations were set on the curriculum for junior secondary schools annually beginning in 1993 and for senior secondary schools beginning in 1995.

Language of Instruction: In the early twenty-first century in independent Namibia, 13 languages were officially recognized. While many belong to similar language families, they are distinct from one another, and retaining their use is the object of much work in the education department. The main languages are 10 national languages of African origin, spoken by the major ethnic

groups, along with three languages of European origin (English, Afrikaans, and German).

The indigenous languages of African origin are spoken by an overwhelming majority of Namibians, many of whom can communicate in at least two indigenous tongues as well as English or Afrikaans. The African languages can be broken into two groups, Bantu and Khoe. Among the Bantu languages are those that can be grouped into the Sotho and Nguni language families: Oshikwanyama, Oshindonga, Rukwangali (the dominant language of the five related languages of the Kavango who live in the area of the Okavango River in the north of Namibia), Otjiherero (spoken by the Herero and Ovahimba), Rugciriku, Thimbukushu, Silozi (the language of the Caprivian people who inhabit the eastern end of the Caprivi Strip), and Setswana (a language spoken also by citizens of Botswana and South Africa). The two Khoesan languages recognized in the formal educational system of Namibia are Khoekhoegowab (formerly known as Nama/Damara) and San (also known as Bushman or Ju/'Hoan—the language of the largest Bushman group).

Although it is difficult and costly to have such a multitude of languages, it is important to the Namibian people to retain their cultural diversity, and educating the citizens of the nation is seen as the most important investment the government can make. Thus, in primary schools the national languages are used from grades one to three, and English is the language of instruction beyond grade seven. The Namibian education system encourages schools to offer at least two languages as subjects and to organize extracurricular language activities. Private schools are permitted to use any language throughout the primary cycle.

After independence in 1990, English, spoken only by about 7.0 percent and the mother tongue of only 0.8 percent of the population, became the national language. From 1884 to 1914, when then South-West Africa was colonized by the Germans, German was the official language. About 32 percent of the population spoke German by the year 2000, an important business language. After 1914, when South-West Africa became a South African Trusteeship, Afrikaans became the main official language and the language of instruction from the fourth grade upwards. In 2001 Afrikaans is the common language of most of the population and of about 60 percent of the white population.

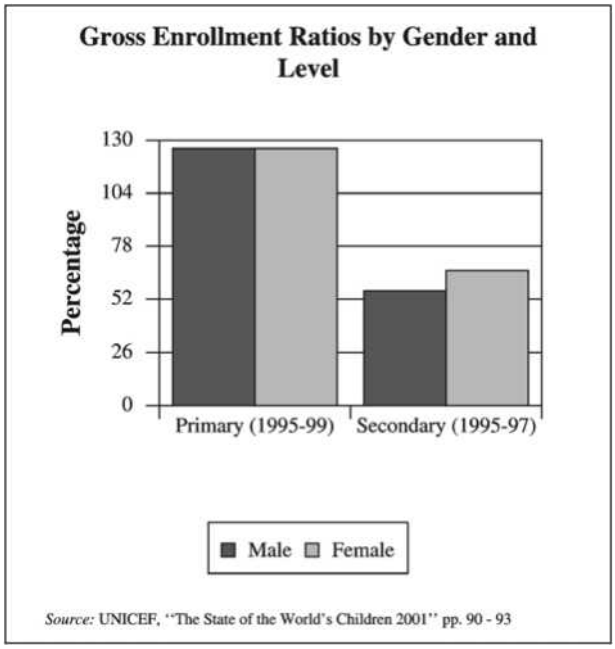
The choice to make English the official language was based on international criteria such as unity, acceptability, familiarity, feasibility, science and technology, Pan-Africanism, wider communication, and the United Nations. National criteria, such as ease of learning, cultural authenticity, and the empowerment of the underprivileged, were not really considered, nor was the possibility of choosing a language such as Kiswahili, which is spoken by far more Africans on the African continent and can be more easily learned by Bantu-speaking Namibians than any of the languages of European origin. Consequently, even though most Namibians will never make use of the international contacts their official language gives to them, and even though it is virtually nonexistent in many areas, English, the sole medium of communication in all the country's executive legislative and judiciary bodies, is increasingly replacing the Namibian languages in education. Even though Namibia's SWAPO-government is committed to a policy of ''Education for All,'' most international donors, such as the World Bank and the Norwegian government, are not interested in supporting indigenous languages and make their contributions dependant on the use of English in schools. Given this pressure, and despite the findings of recent research that learning in the home language actually creates better competence in another language, Namibian parents often think that learning a local language takes time away from the international language.

This development is of great concern to educators. It indicates that, as the value system of the dominant group is being adopted, there is a corresponding deterioration in the self-esteem of the various speech communities that increasingly regard their community, language, and culture as inferior. It is ironic that in the apartheid system imposed by the South African government, the development of African languages and the publishing of books in these languages received much greater priority than in the present government, which prioritizes the official language to the detriment of the national languages. In the San or Bushman language groups, this issue is intensified. Before independence these groups were given little or no education. Whatever education was available was transmitted in Afrikaans. Today these groups are marginalized by black Namibians and their culture and languages are under threat. There are, however, attempts to develop educational programs geared to the culture of these learners in which teachers travel with children who must go hunting with their parents.

PREPRIMARY & PRIMARY EDUCATION

The guiding motto in Namibia's education system is ''Education for All.'' Children three to six years of age attend nursery schools, day care centers, crèches, and preprimary schools, where available, mainly in the urban areas. In the rural areas, children of preschool age continue in the traditional way, remaining close to the mother.

The Constitution of Namibia guarantees that primary education in Namibia is free and compulsory until completion of primary school or age 16. Students pay for



higher education. Between 60 and 70 percent of the children in formal education in Namibia are at the primary level. Formal primary education in Namibia consists of seven years (grades 1 through 7); three years of junior secondary school (grades 8 through 10); and two years of senior secondary school (grades 11 through 12).

Namibian children attend school year-round, with breaks in May, September, and December through January. Most schools board students in hostels and provide all meals. Expensive school boarding fees prohibit the attendance of the poorer members of the population. Relatively few students have books in Namibia. According to the Ministry of Education, in 1994, of 1,553 schools only 262 had book collections, let alone libraries. In the densely populated north, many schools have neither books nor electricity. These schools are often known as ''tree schools,'' with classes held in the shade of the village trees because there are no communal buildings.

SECONDARY EDUCATION

Slightly more than 25 percent of the school-going population is at the secondary level. In 1991 a new junior secondary curriculum was introduced throughout the country that unified the 11 separate educational authorities and introduced English as the common medium of instruction. About 20 percent of weekly class time is devoted to pre-vocational subjects. The syllabus thus prepares students either for higher education or the workforce. In grades 11 to 12 in senior secondary schools, pupils are prepared for the International General Certificate of Secondary Education (IGCSE) of the Cambridge Examinations Syndicate. Subjects examined for the IGCSE are agriculture, commerce, technology, domestic science and health education, natural sciences and mathematics, and humanities. Physical education, religious and moral education, and guidance are compulsory subjects in all schools, but they are not tested through the IGCSE.

In Namibia, literacy is defined as referring to those who, age 15 or older, can read and write. According to this definition, 38 percent of the total population is literate: 45 percent of males and 31 percent of females.

As in many African countries, HIV/AIDS affects the lives of countless numbers of children and therefore also education practices. Namibia has one of the highest HIV/AIDS infection rates in the world. Since 1999, between 20 and 26 percent of all people between the ages of 15 and 49 live with the disease. The spread of this disease is bound to continue to affect education as children are often left in dire poverty, either as orphans or with a single parent.

HIGHER EDUCATION

Prior to 1979, higher education in Namibia was only available to students who were able to go to South Africa or other countries abroad. In 1980 the Academy for Tertiary Education was established by the South African government, and classes in teacher training and secretarial courses started. In 1985 another academy, consisting of a university component (the present University of Namibia), a Technikon, and a College for Out of School Training (COST), was established. Not long after independence, Namibia's president, Sam Nujoma, established a special commission on higher education. Local and international scholars analyzed and made recommendations concerning Namibia's higher educational needs. The Academy for Tertiary Education was dissolved, and its three components were transformed into two independent higher education institutions, a university and a polytechnic. In 1992 the University of Namibia (UNAM) was established in Windhoek, and in 1994 the Technikon Namibia and COST merged to become the Polytechnic of Namibia.

The University of Namibia's motto is ''Education to Serve Development.'' The first class of students arrived in early 1993. As of the early 2000s, it had a second campus, the northern campus at Oshakati. UNAM offers bachelor's and master's degrees, as well as diplomas in the faculties of agriculture and natural resources, economics and management services, education, humanities and social sciences, law, medical and health sciences, and science. It has also set up a center for visual and performing arts, a human rights documentation center, an interactive multimedia-services center, a justice-training center,

and a language center. The university's library contains a fairly well-developed archive and houses the documents of the United Nations Institute for Namibia (UNIN), including the key documents that decided the country's language policy, the Tjitendero Collection, and publications by UNAM or UNAM staff members.

General admission to the University of Namibia is based on an evaluation scale that adds together the points obtained for the subjects passed either for the IGCSE, or for equivalent examinations. English is a prerequisite for admission. In order to accommodate students over the age of 25 who have not been educated in the post-independence education system, the university has a mature age entry scheme that grants admission to students who successfully complete the mature age entry test.

In 1993 the university set up a Center for External Studies. This center incorporated the earlier Department of Distance Education and created the Department of Continuing Education. The Department of Distance Education provides opportunities for off-campus students to take degrees and diplomas as external students. The Department of Continuing Education offers primarily short non-qualification courses meeting the immediate needs of various groups in the community. Since 1995 the Center for External Studies has been phasing out the previous primary teacher education certificates and diplomas and replacing these with external degrees. Distance learning programs offered by the university include the degrees of bachelor's of science, nursing (advanced practice), bachelor's of education, diploma in education, African languages, and bachelor's of business administration.

In 1994 the Namibian Public Service Commission sanctioned the creation of the Namibian College of Open Learning (NAMCOL) within the Ministry of Basic Education and Culture. Based in Katutura, NAMCOL now offers all the Continuing and Distance Education programs formerly run by the Directorate of Distance Education and Educational Broadcasting. Its main role is to enroll Namibians who have been unable to gain admission in the formal school system. NAMCOL has several face-to-face centers. Subjects offered vary depending upon the availability of tutors and the size of the enrollment. In these centers grade 12 IGCSE subjects are replacing the standard 10 National Senior Certificate subjects once administered under the South African regime. NAMCOL also offers several grade 12 IGCSE subjects through distance education. The third major program offered by NAMCOL is the Certificate in Education for Development, designed to meet the staff development needs of district literacy organizers, agricultural and health extension workers, and community development workers in various ministries and NGOs. The certificate includes three modules: contextual studies, adult learning, and managing projects and practicum. In 1997 a total of 16,463 learners enrolled with the college, and in 1998 the number increased to 17,730.

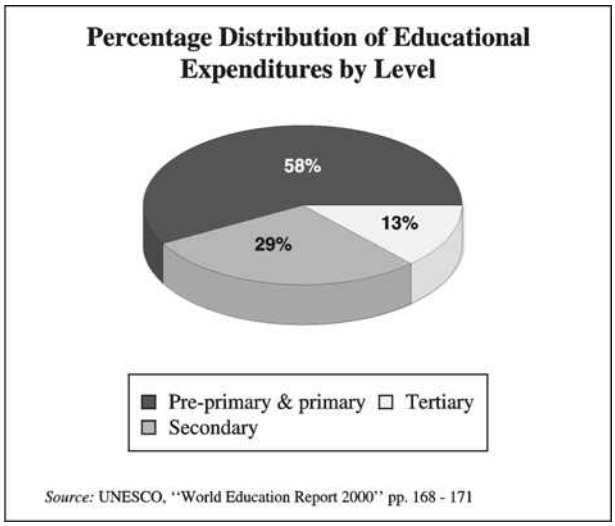
According to a report by the Commission on Higher Education, the Polytechnic of Namibia is regarded as being as important as the University of Namibia. It provides an education for those members of the community who need more advanced technical skills. The polytechnic, established in 1994, became an autonomous institution in 1996. It links with all other major educational institutions and cooperates with the Namibian College of Distance Education to offer technical subjects throughout the country. It also works closely with the University of Namibia, with technical and vocational institutions, with public schools, and with local industries. In 1996 the polytechnic established its own Distance Education Center to cater to external students following polytechnic courses. The polytechnic offers instruction in technical education and teacher training; accounting, business, and information systems; graphic arts, printing, and design; library studies; management and administration; hotel and catering; engineering; and applied science. The following schools are part of the Polytechnic of Namibia: business and management; communication, legal, media and secretarial studies, engineering and information technology; and natural resources and tourism.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

At the beginning of the twenty-first century, the Namibian Constitution enumerated children's rights, including those of education and health. In order to improve literacy, which is 80 percent at present, the government allocates 31 percent of the national budget to education and an additional 15 to 20 percent towards health. However, due to outmoded policies and laws, and an untrained teacher workforce, there is inadequate attention to child welfare. Consequently many children, especially those belonging to the San group, do not attend school, and it is difficult for the government to offer basic protections to children below the age of 14 (the minimum age for employment), who live and work on family and commercial farms and in the informal sector. The 1991 census estimated that of the 13,800 children under 15 years of age in the labor force, 41 percent were working as unpaid laborers. Approximately 2 percent of farm workers, mainly from the San ethnic group, were children.

NONFORMAL EDUCATION

As in most African countries, large land areas, long distances between cities, and the remoteness of large numbers of the population make it necessary for many people to obtain higher education through distance edu-



cation. In distance education there is, thus, not always a clear distinction between nonformal and formal education in these countries. While Namibian education was under the jurisdiction of the South African authorities, distance education was undertaken primarily by the University of South Africa (UNISA) in Pretoria. Recognized internationally as a pioneer in distance education, as well as for the quality of its education, UNISA conferred bachelors, masters, and doctoral degrees in most fields. University faculty corresponded with students by mail, occasionally by telephone, and, whenever possible, through annual meetings in designated areas. In 1981, at the height of the political struggle when large numbers of Namibians fled across the border into Angola or Zambia, international assistance given to host countries to deal with refugees was used to establish the Namibian Extension Unit. This unit provided distance education to adults deprived of the opportunity of a formal education in their own country. Literacy skills and basic education courses designed for primary and junior secondary education refugees were offered mainly through printed correspondence texts and audiocassettes.

After 1990, when refugees began returning home, the Namibia Extension Unit was reorganized to provide traditional formal education by means of distance education. Sponsored by the United Nations Fund for Namibia, the Ford Foundation, OXFAM (UK), and the Swedish International Development Agency, the unit now provides practical skills in literacy and basic education, as well as professional education and training for adults who have at least four years of primary education. Instruction is via printed correspondence texts and audiocassettes. Others involved in distance teaching are the University of Namibia; the distance education program for teachers implemented under the former Department of National Education, which focuses mainly on primary teacher training, postsecondary university level courses, and university level diplomas for police science and public administration; and the Department of National Education Distance Education College.

As access to televisions, videos, films, and computers is beyond the reach of many in the developing world, educational technology transfer becomes problematic. Consequently, most developing countries start with radio, tape recorders, telephone, filmstrips, and slide transparencies—media that is less costly to install and maintain than television, films, and computers. Namibia is no exception. During the 1990s the Commonwealth of Learning instituted a number of pilot projects in different African countries designed to provide teleconferencing support services to students involved in distance education. One such project was to link the Namibian Distance Education College, based in Windhoek, with regional teacher resource centers spread across the country. The main objectives of the college are the in-service training and certification of primary and secondary school teachers; the training and certification of nurses, community health and nutrition counselors, agriculture extension agents, and organizers of adult and nonformal education programs; English courses; and the training of vocational and technical trainers. The college is examining ways to best use Namibia's relatively well-developed telecommunications infrastructure and, in cooperation with the Namibian Broadcasting Corporation, is developing Interactive Radio Instruction (IRI), a program that has proved effective in teaching English to teachers and in primary schools in Lesotho, Zimbabwe, Kenya, Swaziland, and Belize.

In 1980 several African countries mainly comprising the so-called front-line states—countries most economically dependant on South Africa and most affected by the political struggle there (Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe)—joined together to form the Southern African Development Coordination Conference (SADCC). In 1992 they were joined by Namibia. In 1994 South Africa became the eleventh member of the organization, which was renamed the Southern African Development Community (SADC). The role of the organization was to encourage economic independence for its members through the improvement of national and intercountry communication infrastructures, as well as the growth of intercountry trade and cultural ties, including the coordination and development of education. By organizing joint training facilities and training sessions, the Southern African Transport and Communications Commission (SATCC), one arm of the SADCC, promoted cooperation in human resource development. SATCC also promoted cooperation among the telecommunications administrations of the region via the Pan African Telecommunications

(Panaftel) microwave network and satellite links, international gateway exchanges, and earth stations. These projects undertaken by Penaftel are vital for the furthering of distance education, teleconferencing, and eventual Internet access in Namibia and the region as a whole.

By the end of 1999, all African countries except Eritrea, Somalia, and Libya had local Internet access, with South Africa leading in the number of Internet Service Providers (ISPs) and the number of computers connected to the Internet. In the other countries, Internet access is limited to the capital cities. In Namibia, however, some Points of Presence (POPs) have been established in locations outside the capital city. While Internet access presents African academic and research institutions with access to libraries and research institutions worldwide, there is growing concern that there is very little African content available on the Internet. The global information infrastructure is dominated not only by the English language, but its content almost exclusively targets the needs of users in the United States and the United Kingdom. A 1999 survey of the United Nations Economic Commission for Africa (UNECA) has shown that Africa generates only 0.4 percent of global content. If the South African contribution is excluded, the figure is merely 0.02 percent. While a great deal of research has been done on the African continent, this is unfortunately only available in the sponsoring institutions. Foreign languages spoken in Africa (English, Portuguese, and French) are well represented on the Internet, but little has been done to advance African indigenous languages through this medium.

As of the early 2000s, the University of Namibia's Human Rights and Documentation Center, which has as its central mission the creating and cultivating of human rights and democracy in Namibia, has a searchable database that gives access to the work done at conferences and workshops. The National Archives of Namibia also provide access to a number of searchable databases. While still rather limited in scope, there is great potential.

TEACHING PROFESSION

The changing needs of an independent Namibia require that all teachers be appropriately qualified. For several years the Swedish International Development Agency, the United Nations Development Program (UNDP), UNESCO, and UNICEF have been working on pre-service teacher training programs. In 1993 the Basic Education Teacher Diploma (BETD) introduced a uniform three-year pre-service teacher education program for primary and junior secondary teachers. This program prepares teachers for basic education in grades 1 through 10. The concept of learner-centered education is emphasized and graduates have a broad competence to teach in grades 1 through 7, or grades 5 through 10 and, with a specialization in lower primary education or specific subject areas, in either the upper primary or junior primary phases.

A four-year program leads to the Senior Secondary Teachers' Certificate. The Technical and Vocational Education Instructor Certificate prepares teachers for instruction in pre-vocational skills and at vocational and technical institutions. In the period from 1993 to 1998, the number of teacher educators increased more than 20 percent. A number of teacher educators have gone through master's degree programs outside Namibia, and more than 30 percent have participated in postgraduate staff development courses organized by the Teacher Education Reform Project (TERP) administered by Sweden's Umeå University.

In-service training has become a priority in Namibia, to meet not only the country's need for better qualified teachers, but to enable teachers to respond creatively to the many new demands made on them. Through in-service training, teachers are helped to make the transition from rote learning techniques to learner-centered teaching methods, to participate in curriculum design initiatives, and to become nationally accredited. The In-Service Training and Assistance for Namibian Teachers project (INSTANT), supported by IBIS, a Danish donor, helps teachers improve subject mastery in the physical sciences and mathematics.

Apart from the National Institute for Education Development in Okahandja, four educational institutions serve student teachers in Namibia. The largest of these is the Ongwediva College of Education in northwestern Namibia, which accommodates about 900 student teachers and which offers the Basic Education Teacher Diploma. The other educational institutions are the Windhoek College of Education, the Rundu College of Education, and the Caprivi College of Education in Katima Mulilo.

SUMMARY

''Education for All'' has been the watchword for the people of Namibia since independence in March 1990, and the country has made remarkable strides in moving towards a goal of universal literacy. This progress has been all the more remarkable as it has been furthered through the medium of English, a foreign language to all but 0.8 percent of the population. International involvement and international aid have done much to make this development possible. It is, however, precisely this development that threatens all that Namibians hoped to gain through independence. African thinkers, writers, and philosophers, such as Julius Nyerere and Ngugi wa Thiongo, have pointed out that traditional African education had none of the formal characteristics associated with a west-

ern-style education, but that this was an indication that the education of African children, which was extremely important in their society, was more relevant to the society of which the child was a member than western education is. Both have warned that abandoning the traditional language for the language of the economically or militarily dominant group, and not generating standards in the language of the people's choice, may seem expedient, but will ultimately lead to even greater marginalization, exploitation, and even annihilation of all that has been important in the culture, development, identity, and struggle of the African people. Paulo Freire points out that this process of cultural invasion, which persuades the ones being controlled that they are inferior and that in order to prosper they need to adopt the norms and values of those whose superiority is evident in their commercial and technological dominance, leads to dependency and a destruction of a people's creativity and self-expression. By adopting the British IGCSE curriculum and the use of University of Cambridge Local Examination Syndicate for the validation of its examinations, secondary and higher education in particular has taken on the British educational structure, logic, and framework. Whereas learning African Namibian history was once essential in the education of the people in their struggle for liberation from South African domination, Namibian history has now been relegated to a small part of an optional subject within the curriculum. By ignoring African culture, languages, ideas, and values, the population, which has paid such a high price for its political liberation, may be forced into a narrow mold of technically skilled competitiveness designed for a western-dominated capitalist market system.

Namibia's struggle for independence has been characterized by an amazing striving for self-fulfillment and freedom from foreign domination—and an equally astounding compromise of its own cultural identity in favor of an uncritical incorporation of donor organization and donor nation expectations, many of whom stand to benefit greatly from an educated labor force dependant on foreign technology. Anthropologists, linguists, and educators have argued that few, if any, countries have ever achieved high levels of economic and cultural development where a large number of citizens were compelled to communicate and study through the medium of a second or third language. In Namibia ''international'' is defined as referring to the Anglophone world that has its basis in Britain and the United States. The need for transnational communication is also defined in terms of Europe and the United States, never in terms of Asia or the African continent. There is no way of going back on decisions that have already been made and implemented, and perhaps the new road to personal and national freedom does not necessarily involve a total rejection of all that has been. However, if the motto ''Education for All'' is to be truly relevant to every citizen of Namibia, African philosophy, languages, culture, and values need to be given a central place in the education system.

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—Karin I. Paasche

NAURU

BASIC DATA

Official Country Name:	Republic of Nauru
Region:	Oceania
Population:	11,845
Language(s):	Nauruan, English
Literacy Rate:	NA

An island in the central Pacific Ocean, Nauru is part of the British Commonwealth. The educational system there is based closely on the British model. Roman Catholic missionaries operate several parochial preprimary, primary, and secondary schools in Nauru, and during the 1990s, the Catholic church and the Nauruan government began working together in an effort to standardize the primary educational curriculum.

Education is free and mandatory for children aged 6 to 15. Preprimary education consists of both preschool

and preparatory school. Enrollment rates in preprimary institutions grew from 62.7 percent in 1991 to 75.4 percent in 1998. Primary education lasts for six years and culminates in a national examination, successful completion of which is necessary for a students to be awarded the Nauru Primary Certificate. The student-teacher ratio is roughly 24:1. Secondary education is divided into two components: the first four years are compulsory, while the additional two years are optional. Students seeking higher education quite often do so in Australia.

In 1998, Nauru spent 10.72 percent of its national budget on education, one-third of which was earmarked to provide scholarships to students seeking higher degrees abroad. The primary language of instruction is English, although many teachers speak Nauruan in the classroom. In the mid-1990s some teachers began receiving training in English as a Second Language (ESL).

Efforts to offer vocational and technical education faltered in the late 1990s due to a lack of equipment and qualified teachers. Teacher shortages throughout the island prompted education officials to look into the creation of a teacher training institute, which is scheduled to be completed early in the twenty-first century.

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—AnnaMarie L. Sheldon

NEPAL

BASIC DATA

Official Country Name:	Kingdom of Nepal
Region:	East & South Asia
Population:	24,702,119
Language(s):	Nepali
Literacy Rate:	27.5%
Number of Primary Schools:	22,218
Compulsory Schooling:	5 years
Public Expenditure on Education:	3.2%
Educational Enrollment:	Primary: 3,447,607 Secondary: 1,121,335 Higher: 105,694
Educational Enrollment Rate:	Primary: 113% Secondary: 42% Higher: 5%
Teachers:	Primary: 89,378 Secondary: 36,127
Student-Teacher Ratio:	Primary: 39:1
Female Enrollment Rate:	Primary: 96% Secondary: 33%

HISTORY & BACKGROUND

Nepal is a small landlocked South Asian country of 140,800 square kilometers located between China and Himalayan ranges in the north, and India and the plains of the river Ganges in the south. The country contains 8 of the world's 10 highest peaks with 85 percent of the country being mountainous. The country is organized into 5 development regions consisting of 14 *anchals* (zones) with 75 districts and 3,995 village development committees (VDCs). Nepal is the only official Hindu country in the world with more than 90 percent of its population following the Hindu religion. In the year 2000, Nepal was a densely populated country with a population of about 25 million people with 41 percent 14 years or younger. The population growth rate was 2.3 percent with a life expectancy of about 58 years. Nepal continues to be among the poorest countries in the world with nearly half of its population living under the poverty line. More than 80 percent of the population is engaged in agriculture that accounts for 41 percent of the Gross Domestic Product (GDP). Only 17 percent of the country is arable; therefore, the majority of the rural people are engaged in subsistence farming or below subsistence farming. In 1999, Nepal had an outstanding debt of close to 3 billion U.S. dollars in foreign loans.

The modern history of Nepal can be traced to the eighteenth century when the Gurkha Shah family assumed power and established its capital in Kathmandu. In the nineteenth century, the Ranas, who were ministers to the kings, assumed real power, and the Shahs became puppet rulers. In 1860, the British government assumed a guiding rule in Nepal and heavily recruited the famous Gurkha units into the British army that assisted the British in suppressing Indian revolts (1857-1959), World War I (1914-1918), and World War II (1939-1945).

The Rana-British autocracy ended in 1951, when Maharaja Mohan Shamsher Rana was removed from

power and the Nepali Congress Party (NCP) formed a government headed by Matrika Prasad Koirala. However, the political parties, in the 1950s, were not very effective, and King Mahendra, crowned in 1955, seized complete control of the government in 1960. He declared a new constitution in 1962 that banned political parties and allowed monarchy through a nonparty system of *panchayats* (village councils). In the 1970s, after Mahendra's death, his son, Birendra Bir Bikram, became the king who initially continued with repression of the democratic movement. However, he finally gave way, which led to the 1980 referendum and then the new constitution with the adoption of the multiparty system in 1990. In 1991, Girija Prasad Koirala became the first elected Prime Minister with the titular chief of state being the King. The 1990s witnessed problems in the parliamentary democratization of the nation: political instability, several governmental topples and changes, governmental corruption allegations, public demonstrations, coalition formations, and frequent elections. Since March 2000, Girija Prasad Koirala of NCP has once again become the Prime Minister.

In the eighteenth and nineteenth century, Sanskrit was the main field of teaching and learning. *Pradhan Pathshala* (Sanskrit primary schools) were established in Dang, Dingla, Janakpur, and Kathmandu. Graduates from these schools used to travel to universities at Darbhanga and Kashi in India to complete further studies in *Uttar Madhyama* (Intermediate), *Shastri* (Bachelor), and *Acharaya* (Master) levels.

Under the Rana-British rule, between 1846 and 1951, access to education was confined to the higher castes and wealthier economic stratum of the population; the Ranas were opposed to giving education to the masses. They chose to educate their own children through English tutors. In 1854, Rana Jung Bahadur opened the Durbar School in Kathmandu to serve the needs of the Rana family and other Nepalese elite. This preference established the supremacy of the English education over the traditional Sanskrit-based education, a trend that has since continued. The School Leaving Certificate (SLC or grade 10) examination for Durbar School used to be conducted by the University of Calcutta, India until 1934 when the Nepal SLC examination board was founded. In the early 1950s, the average literacy rate was 5 percent. Literacy among males was 10 percent, while female literacy was 1 percent. Only 1 child out of 100 children attended school.

Since the democratization of Nepal, the country is committed to universal education and is slowly moving toward achieving that goal. In 1990, Nepal launched a massive literacy campaign targeting 8 million people between the ages of 6 and 45 years of age. Since then education in grades 1-10 is also being offered ''tuition free'' throughout the country.

Constitutional & Legal Foundations

Nepal is a parliamentary democracy, with the head of the government being the Prime Minister and the nominal chief of state being the King. The legislative branch of the government consists of a bicameral Parliament. The lower branch of the Parliament is the House of Representatives that has 205 seats with members elected by popular vote to serve 5-year terms. The upper branch of the Parliament is the National Council that has 60 seats of which 35 are appointed by the House of Representatives, 10 by the King, and 15 are elected by an electoral college with a 6-year term with one-third being elected every 2 years. The Supreme Court heads the judicial branch of the Government, with the chief justice being appointed by the monarch upon the recommendation of the Constitutional Council.

Nepal is a signatory to the policy of Education for All (in 1990 at Jomtien, Thailand) and the Convention of the Rights of the Child (in 1991 at New Delhi, India) and is committed to free and universal education. Since 1951, the government has constituted education commissions at periodic intervals to develop basic policy guidelines. Subsequently, the cabinet decisions and parliament acts have included these policy guidelines into five-year national plans. The Eighth Five-Year Plan concluded in June 1997. In the Ninth Five-Year Plan (1997-2002), since the country continued to struggle with poverty, the primary national development objectives are focused on poverty alleviation and the chosen strategy for accomplishing these objectives is through education. The Ninth Five-Year Plan describes educational priorities that include improving school facilities, enhancing teacher training, and expanding secondary, vocational, and technical institutions. The Ninth Five-Year Plan also emphasizes enhancement of the quality of general education, female participation in education, and access to education for disabled and socially disadvantaged communities. The Ninth Five-Year Plan envisages a growth of the net primary school enrollment to 90 percent by the end of its period in 2002 and 100 percent by the end of the Twelfth Five-Year Plan in 2017.

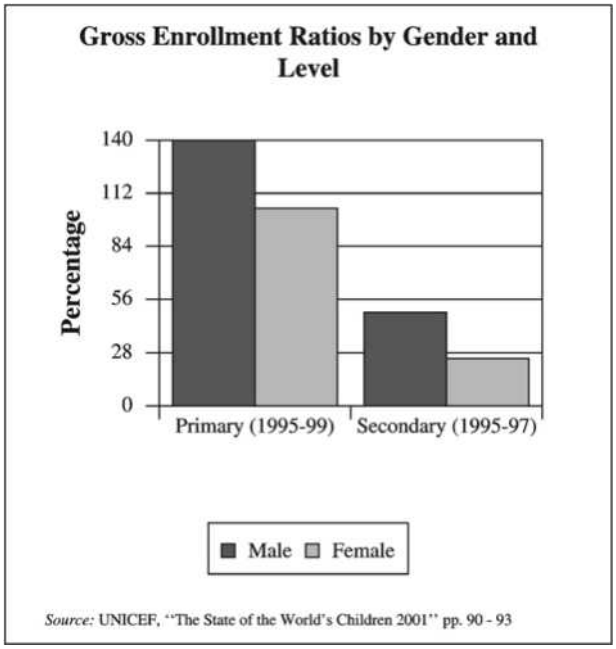
Educational System—Overview

Since 1951, the country established an education system with free primary education to all children. In 2000, while the education was not compulsory throughout Nepal, the country was committed to providing free universal education from grades 1-10. Under the Ninth Five-Year Plan, compulsory primary education was im-

plemented in five districts of Chitwan, Ilam, Surkhet, Syangja, and Kanchanpur with the policy of extending free compulsory primary education all over the country gradually.

Despite these strong commitments, in 2000, various estimates of literacy in Nepal placed the rates between 23 and 41 percent of the adult population with a large gap between male and female rates. The Central Bureau of Statistics has been collecting literacy statistics since the first census in 1952-1954. For the censuses in 1952-1954, 1961, and 1971, literacy was defined as the ability to read and write in any language. For the census in 1981, the definition was expanded as the ability to read and write in any language with understanding. For the census in 1991, the definition was further expanded to add performance of simple arithmetic calculations. However, no functional testing was done in collecting the data that is estimated to be inflated by 10 to 25 percent. In 1996, the literacy rates in the eastern development region were 54.20 percent for males and 29.57 percent for females; in the central region, 50.19 percent for males and 20.75 percent for females; in the western region, 58.24 percent for males and 32.82 percent for females; in the mid-west region, 46.94 percent for males and 17.60 percent for females; and in the far west region, 48.98 percent for males and 14.85 percent for females. These statistics point at the dismal situation of female literacy rates in Nepal, which are among the lowest in the world. The literacy rates also vary according to ethnic grouping. The economically advantaged high caste ethnic groups like Marwari, Kayastha, Brahmin, Thakali, and Newari have literacy rates between 60 and 95 percent. While lower castes such as Dhobhi, Dusadh, and Chamar have rates below 25 percent.

Primary education (grades one to five) typically begins at the age of 6 years and lasts until the age of 10 years. The second official level of education is the lower secondary level, which comprises grades 6-8 (three years). The secondary level is comprised of grades 9 and 10 (two years). The School Leaving Certificate (SLC) examinations are held nationally at the end of grade 10. Since 1992, the higher secondary level of grades 11 and 12 has also been initiated primarily through private schools. The academic year typically starts in *Srawan* (July-August) when the government's financial year starts. The Nepali calendar year is based on Bikrami Samwat (BS), which is different from the English calendar. For example the year 2001 A.D. was 2057 BS until March 2001 and then changed to 2058 BS in mid March. There is some pressure to start the school year in *Baisakh* (April-May) to allow the tenth grade students to have one complete year before their SLC examinations. Education in grades 1-10 is free in Nepal and available to all. In 1996, the school system in Nepal had an overall enrollment of over 4 million students of which 77 percent were primary students, 17 percent were lower secondary students, and 6 percent were secondary students. The language of instruction in public schools is in Nepali, which is the mother tongue of slightly over one-half of the population.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

Nepal has a dualistic system of schools with both public and private schools. Education in private schools is expensive and typically affordable only by the elite. Most private schools have English as the language of instruction, and many also utilize computers in the curricula. In 1995, there were 3,077 private primary schools, 2,417 private lower secondary schools, 1,370 private secondary schools, 332 private higher secondary schools, and 132 private tertiary schools. At the lower secondary and secondary levels the numbers were proportional to the public schools.

PREPRIMARY & PRIMARY EDUCATION

Until 1992, there was no official preprimary level of schooling and the very few private nursery schools that existed were mainly in the urban areas. Under the Eighth Five-Year Plan (1992-1997), Ministry of Education introduced a total of 781 *Shishu Kakshyas* (nurseries) in 40 districts. The Ninth Five-Year Plan has a lofty goal to increase the number of *Shishu Kakshyas* to 10,000 by the end of 2002.

Primary education typically starts in the first grade with the minimum age of entry being six years. Completion of primary level ordinarily requires five years of schooling. However, entry at minimum age and five of

years of schooling are not mandatory requirements to complete primary school. Children who could not attend primary school at the age of six years can enter into the third grade through completion of a nine-month course of a nonformal primary education program, popularly known as *Shiksha Sadan* or OSP (out-of-school program). The Nepalese government has formulated this plan under the ''Basic and Primary Education Project'' (BPEP) and given it the top priority in its Education Policy as a means to reach girls and other disadvantaged children. In 1996, there were a total of 21,473 primary schools with an enrollment of over 3 million primary students and 82,645 primary school teachers. In 2000, the enrollment in grade one was almost universal for boys, but only 84 percent girls were enrolled. The enrollment starts to decline in later years of primary school, many repeat each grade, and the completion rates of primary school remain dismal. Almost 63 percent of the students enrolled in first grade drop out during primary education. Only about 37 percent complete their primary education between the ages of 5 and 13 years. Only 10 percent of children who are enrolled in first grade are expected to complete primary school without repeating any grade. The reasons for high dropout and repetition rates include the workload of household chores, particularly on girls; irregularity of school functioning; poverty; physical distance; low perceived relevance of education to daily work and social lives; caste and ethnic discrimination; neglect of mother tongue for many communities; and under-aged children, particularly in the first grade.

SECONDARY EDUCATION

The second official level of education is the lower secondary level that typically begins at age 10 in the sixth grade and lasts through the eighth grade. Earlier, between 1951 and 1971, this was known as the middle level and consisted of sixth and seventh grades. The National Education Commission in 1992 defined the objective of the lower secondary level as ''preparing morally and ethically upright citizens possessed of an appropriate level of knowledge in subject matters such as Nepali language, mathematics, and science.'' In 1996, the total number of lower secondary schools in Nepal was 5,041 with 726,300 students and 16,821 teachers. In 1996, only 26 percent of all children aged 11-13 were enrolled at the lower secondary level with the enrollment of girls being a little less than 19 percent. In 1996, the promotion rates at this level were fairly good with over three-fourths being promoted to next level each year. Repetition rates were below 20 percent at all the three grade levels and dropout rates were below 12 percent.

Until 1992, the secondary level, comprised of the grades 9 and 10, was the final level of schooling in Nepal. The secondary school enrollment in 1996 was 290,143 with 2,654 schools and 14,585 teachers. At the end of grade 10, a national level SLC examination is conducted by the Higher Secondary Education Board (HSEB) based at Sano Thimi. The net enrollment rate in secondary school in 1996 was a little over 17 percent. This implied that among all 14- and 15-year-old children only about one-sixth enjoyed the privilege of education.

Since 1992, Nepal has started the higher secondary school education system consisting of the grades eleventh and twelfth. The Higher Secondary Education Board (HSEB) conducts the national examinations. The higher secondary level is available in specialized areas such as science, management, humanities, and education. The system is based on the system prevalent in India and is popularly known as the ten-plus-two system. In 2000, there were 657 higher secondary education institutions, a large number of which were based in relatively affluent urban areas and were managed by the private sector. The National Education Commission (NEC) had recommended the opening of such institutions in remote and rural areas and focusing on five areas of general, professional, technical, polytechnic, and Sanskrit education. However, these recommendations remained largely elusive as late as 2001. In 2000, there were 42,000 students enrolled at the plus-two level.

In the 1950s, vocational training was introduced in the lower secondary classes, and it was described as prevocational education. At the secondary level, almost 25 percent of the curriculum consisted of vocational training. In addition, a vocational branch was also introduced to facilitate secondary school graduates to directly enter into the job market after SLC. The vocational subjects included agriculture, agronomy, horticulture, poultry, animal husbandry, dairy science, fishery, industrial electrical installation, furniture and metal work, building construction, and bamboo work. In the early 1980s, vocational education in secondary schools began to be curtailed and secondary schools were no longer viewed as terminal institutions for vocational training. In 2000, vocational instruction through secondary schools was treated as one subject with a weight of about 14 percent and minimal emphasis on skill acquisition.

Since the 1980s, the government has established technical schools in different regions of the country. Initially there were seven such technical schools, six in the public sector and one in the private sector. The courses offered at these schools were at the lower secondary (those who have completed grade one through five and are above 15 years of age) and secondary levels (those who have completed seventh grade and are over 15 years of age). The courses offered were for three years duration, followed by one year of on-the-job training. The six public sector schools were: a mechanical training center

at Kathmandu that focused on general mechanics, electrician, and sanitary fitting; a technical school at Jumia that focused on building construction, health, and agriculture; and a *uttarpani* technical school at Dhankuta that focused on agriculture. There was also a technical school at Jiri that focused on agriculture, building construction, and health; a technical school at Lahan that focused on agriculture and building construction; and a technical school at Sano Thimi that focused on motor mechanics, general mechanics, general fitting, agriculture, cutting, and tailoring.

Since 1990s, the technical education at the secondary level became the responsibility of the Council for Technical Education and Vocational Training (CTEVT). International assistance further strengthened the infrastructure in nine technical schools and a tenth grade SLC diploma was required to enroll in these schools. In 1998, stipends were being paid at seven of these schools that ranged between NR 300 and 475 per month. In addition, the CTEVT also has trade schools and 118 private technical training institutes. The trade schools offer courses of as short as one year, and as long as two and a half years. The trade and affiliated technical schools also conduct skill-oriented short-term training courses and these last between two and eight weeks. Besides the Ministry of Education and NGOs, other ministries such as labor, women and social welfare, industries, tourism, communications, and water resources also provide vocational training in related sectors.

HIGHER EDUCATION

Prior to the ten-plus-two (or the higher secondary education) system, students would continue their studies at the Proficiency Certificate Level (PCL) at the Tribhuvan University in Nepal and its affiliated colleges after passing the SLC examination. The PCL program is still being run in 2001, but is slated to be phased out because all students were going through the ten-plus-two system of post secondary education.

The first institution of higher education to be established in Nepal was the Tribhuvan Chandra Intermediate College (later renamed Tri-Chandra College) in 1918. The Rana Prime Minister, Chandra Shamsher, was opposed to higher education and saw it as a threat to monarchy. Nonetheless, he yielded to the growing pressure from Nepalese people in the formation of this college and remarked at its inauguration, ''With the opening of this college, I have hacked my own leg.'' The establishment of Tri-Chandra College paved way for higher education in Nepal. Gradually more colleges were built. Two of the reputable colleges were Nepal National College, also known as Shanker Dev Campus, in Kathmandu and Thakur Ram College in Birgunj.

Tribhuvan University was Nepal's first university and was established in 1959. The Queen mother, Kanti Rajyalaxmi Devi Shah, was the first Chancellor of the university. The Academic Council is the supreme academic body of the university and the Board of Studies designs the curricula. Initially, postgraduate courses were offered in some humanities and social sciences and were based on the curricula of Patna University in India that also conducted examinations until 1962. In 1991, only 1.73 percent of the population had acquired a bachelor's degree of which only 0.44 percent were women and 1.29 percent were men.

On December 11, 1991, Kathmandu University was established as a private university. In 1993, the School of Management was established at its campus in collaboration with the Indian Institute of Management in Calcutta (IIMC) and the first batch of Master of Business Administration (MBA) students were enrolled. The school of Engineering and School of Science opened in 1994 and offered several undergraduate programs. The School of Education and Arts was established in 1996. In 1997, the Master of Philosophy (M.Phil) and Doctor of Philosophy (Ph.D.) were launched.

In the late 1980s and 1990s, Mahendra Sanskrit University, Purbanchal University, Siddhartha University, and Pokhra University were also established. Many of these are private ventures. In 1998, Tribhuvan University was the largest university with 150,000 students and 62 constituent and 132 affiliated campuses. The costs of tertiary education are very low at Tribhuvan University, while they are very high at the private Kathmandu University.

The Bachelor's level of university education after grade 12 is a three-year duration with yearly examinations. The Bachelor's Degree courses in technical institutes like Engineering and Medicine take four years to complete. The Master's Degree follows the Bachelor's Degree and takes two years with yearly examinations. In the technical arena, only the Institute of Science and Technology and, in some selected fields, the Institute of Engineering offers Master's level programs. The university education also includes a Doctor of Philosophy degree in some disciplines and subject areas.

At the tertiary level, in the 1960s, all programs of vocational education were brought under the umbrella of Tribhuvan University and five technical institutes were formed. They initially offered programs at the PCL level. These institutes were: the Institute of Engineering that focused on civil engineering related training such as road building, drafting, surveying, electrical engineering related training, and mechanical engineering related training; the Institute of Medicine that focused on Ayurvedic related training, nursing, and laboratory technician courses;

the Institute of Agriculture and Animal Science; the Institute of Forestry; and the Institute of Applied Science and Technology. The Institute of Applied Science and Technology has since been turned into a research center. The other four institutes that started their programs at certificate level now offer Diploma (Bachelor of Technology) and Degree (Master of Technology) and are gradually moving toward autonomous status.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

In 2001, the Ministry of Education and Sports (previously known as Ministry of Education and Culture) was the governmental division looking after the education sector. A Minister of the Cabinet Rank heads the Ministry. On April 11, 2000, the Minister was Tarani Dutta Chataut. In the Ministry, the Department of Education (DOE) at Keshar Mahal, headed by a Director General, formulates the medium term and annual policies, plans, objectives, and targets in the education sector. Public or government-aided schools are managed by School Management Committees (SMCs), according to education regulations of the DOE. The composition of SMCs, academic content, textbooks, and examination systems are uniform throughout the country. The primary source of revenue for schools is governmental grants, which are based on the number of the students in each school.

The teachers, including the headmasters, are appointed by the DOE. The District Education Committee (DEC), which is nominated by DOE, nominates the SMCs. The government District Education Office, within the DEC, is headed by a District Education Officer. This is the most influential unit and designates tasks for each school to implement. Each of the 75 districts has a District Education Officer. The DEC sets the school calendar, provides teacher salaries, organizes teachers training programs, carries out inspections, and audits the school accounts. The autonomy of teachers in changing the educational procedures is often cited as a reason for limited operation of the schools, low academic quality, lack of accountability, and lack of local participation. The technical and vocational schools of the CTEVT are also managed on a similar basis by SMCs.

The universities are managed by Senate Council consisting of the Chancellor, Pro-Chancellor, Rector, Registrar, and senate members representing various academic, economic, political, private, social, and student groups. The university senate is the apex body and is responsible for making policy decisions. The University Grants Commission (UGC) assists the government in managing the fiscal aspects and funding policies. The UGC also coordinates and disburses financial grants to the universities.

From 1975-1990, Nepal spent about 10 percent of its annual budget on education and raised it to 13 percent in the Eighth Five-Year Plan during 1992-1997. As a percentage of the Gross Domestic Product (GDP), this spending ranged between 1.3 percent and 2.0 percent between 1975 and 1990. The government, in its Eighth Five-Year Plan, spent 2.6 percent of its GDP on education. In 1997, the foreign aid in the education sector accounted for 52 percent of the total budget. The large amount of financial dependence on foreign donors undermines self-sustenance, increases foreign debt with heavy interest repayments, and also leads to pursuance of donor-driven agendas. A report prepared for the Ministry by the Danish University in 2000 found that 71 percent of the suggestions from the donor agencies were ratified by the government, as opposed to only 31 percent of the suggestions by the Parliamentarians.

In 1995, per capita expenditure by the government on primary education in public schools was NR 970.30, which was about half of what was being spent in private schools. Further the household expenditure on education for a child attending was NR 362.16, while the expenditure on education for a private school was NR 4,699.08. The disproportionate expenditures partly account for differences in the quality of private and public education.

The major portion of government expenditure for school education is spent on teacher and staff salaries and fringe benefits. A study done by Center for Educational Research, Innovation, and Development (CERID) in 1996 found that in public primary schools the expenditure on teacher and staff salaries was 86 percent, as compared to 63 percent in private primary schools. Likewise, in public secondary schools this expenditure on salaries was 76 percent in public sector, while only 52 percent in the private sector.

Two major problems facing the financing of the educational system in Nepal are inadequate resources and low administrative efficiency. Inadequate resources affect the physical facilities, teachers, and equipment. The physical infrastructure in the schools is often inadequate. Communities are mainly responsible for building the physical facilities that are often in dilapidated conditions due to a deficiency of funds. The government provides the salary of teachers. There is a scarcity of trained teachers and the cost of continuing teacher training is also primarily the responsibility of the government. Therefore, upgrading the skills of the teachers is a constant struggle. The teaching-learning materials are usually deficient. The government also tries to provide materials for science education in secondary schools, but often these are not adequate. The government has made a commitment to provide education up to grade 10 without tuition fees. This has forced many schools to charge students ''non-

tuition'' fees to sustain their programs; this nullifies the government's intention to provide free education. The government also supports higher education, and the student's fees are minimal. This adds to the burden on governmental resources. Tribhuvan University was able to generate only 9 percent of its budget from outside resources and depended on the government for the large bulk of its funding.

The apex institution for conducting educational research in Nepal is the Center for Educational Research, Innovation, and Development (CERID), which is affiliated with Tribhuvan University. CERID is headed by an Executive director and has completed several educational research projects, including collaborations with several foreign institutions.

NONFORMAL EDUCATION

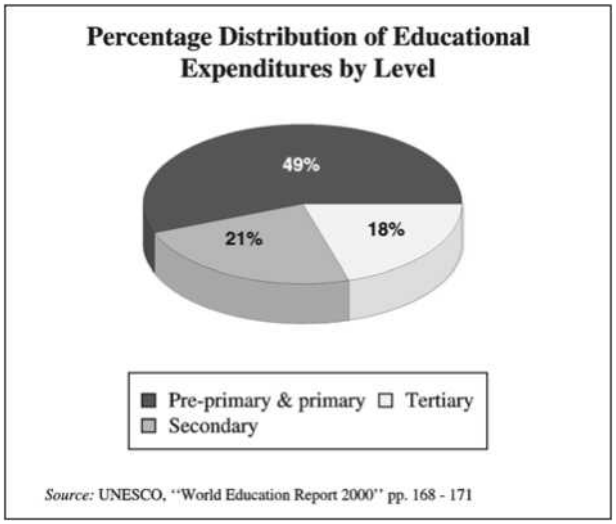
Nonformal education in Nepal began in 1951 when activities for literacy enhancement began as part of the national development. These efforts were regularized in the First Five-Year Plan (1956-1961). With the increasing foreign aid through international organizations and subsequent mushrooming of the nongovernmental organizations (NGOs) between the 1970s and 1990s, the nonformal education movement has picked up momentum. In 1997, there were about 6,000 registered NGOs that were working in the area of education.

In 1974, CERID launched a community-based education program, ''Education for Rural Development,'' in Lahachauk. The program tested and compared the efficacy of a uni-message literacy program with multi-message functional literacy programs. This pilot project paved the way for the national functional literacy program in 1978, which was funded by the Ministry of Education.

In 1981, in the four districts of the Seti *anchal*, the Chelibeti program focusing on the education of female children was developed. The Ministry of Education launched the Primary Education Project (PEP) in 1984 with a loan from World Bank. By 1987, this program included nonformal education components such as *Shiksha Sadan* (out-of-school programs), women's education programs, adult education programs, school environment improvement programs, and a community reading center.

Between 1991 and 1996, the United States Agency for International Development (USAID) assisted CERID in training and supporting literacy providers through higher education institutions in United States. In addition, USAID funded World Education/Nepal project aimed at improving women's literacy.

In 1990, at the governmental level, the National Education Commission was formed to strengthen the nonformal education sector. Subsequently, the National Non-Formal Education Council was also formed.



Distance education in Nepal employs a radio broadcast approach and is used mainly to support teacher-training activities. The Institute of Education affiliated to Tribhuvan University started a distance-learning program in 1976. This was discontinued in 1980 and replaced with the Radio Education Teacher Training (RETT) Project that offers a basic teacher training primary education certificate/diploma course in Nepali language. In 1998, there were 1,800 students enrolled in this course.

TEACHING PROFESSION

In 1996 there were a total of 114,051 teachers in the public sector; 82,645 were primary level teachers, 16,281 were lower secondary level teachers, and 14,585 were secondary level teachers. The teachers at the primary level must complete proficiency certificate level (PCL) in education, and a two-year program offered from Tribhuvan University or its equivalent. The courses taught include English language education, Nepali language education, mathematics education, science education, health and physical education, population education, history education, geography education, economics education, political science education, and vocational education. Teachers at the lower secondary and secondary level must complete a Bachelor of Education (B.Ed.), which is a three-year program with one additional year of practical training. The program covers, in addition to the subjects of PCL, educational management, primary education, nonformal education, educational technology, early childhood education, special education, educational planning, and curriculum evaluation. For administrative positions, completion of a Master of Education (M.Ed.) is usually required. The National Center for Education Development (NCED) provides in-service training for primary school teachers through its nine primary training centers. Some private teacher training centers affiliated

to NCED conduct pre-service teacher training. The salaries for teachers in the public primary schools in 2000 were between NR 4,000 to 6,000 per month, and for secondary teachers, between NR 5,000 to 10,000 per month.

Several groups and unions of teachers have emerged over the past few decades. These groups have held close alliance with political parties. Two major teachers associations are the National Teachers Organization (NTO), affiliated with Communist Party of Nepal/United Marxist-Leninist (CPN/UNL), and the Nepal Teachers Association (NTA), affiliated with Nepali Congress Party (NCP). In addition there are smaller associations affiliated with the Rashtriya Prajatantra Party (RPP) and the Nepal Sadbhavna Party (NSP).

SUMMARY

Education is vital to human development, and Nepal recognizes this fact and is committed to making education universal. Despite the fact that substantial progress has been made in this direction, much still remains to be done. The country is still caught in the vicious cycle of poverty, lethargy of illiteracy, and tradition. Three-fifths of the country is still illiterate, with three-fourths of women being illiterate. In the 1990s, the country clearly moved toward democratization; however, the unstable governments and tenuous leadership have not yet yielded clear benefits for the masses. The education system is plagued by a lack of financial support, deficiency of trained human resources, inadequate physical infrastructure, and managerial inefficiency. As a consequence, the country is heavily dependent on foreign aid. Self-reliance in the education sector seems to be elusive with more than half of the funding coming from foreign donors. The international influence continues to shape the priorities for the country, while at the same time increasing the burden of debt. Efforts to broaden taxation, making the revenue administration more effective and efficient, and increasing taxation on private school incomes might be some measures that could be taken to boost local funding of education.

Universal access to literacy and primary education is emphasized in policy statements and political manifestos. However, the literacy and primary education efforts are confronted with barriers such as poverty, dropouts, burden of work on children, irregularity of school operation, physical distance to schools, low perceived importance of education by masses, caste and ethnic discriminations, centralized curricula, differential dialects and languages, and failure of local planning. The curricula are centralized with governmental control that does not allow teachers and local communities to take ownership of education. Political will and sustained efforts at addressing the barriers will assist in achieving this goal.

The secondary education system suffers from poor net enrollment ratios, lack of infrastructure, inadequate equipment, poor quality of education, lack of trained teachers, and financial constraints. The higher secondary level in Nepal is in its infancy stages and is completely in private hands for its implementation. Therefore it is confined mainly in the urban areas and to the sections of population that can afford it. More efforts are needed to extend its reach into remote and rural areas.

Finally, the philosophical direction of Nepalese education is being shaped rather blindly on borrowed models primarily from the West. Nepal has failed to build on its rich heritage of Sanskrit-based education that emphasized the importance of experiential learning. The experiential learning concepts have somehow been lost and education from books that emphasize rote memorization has gained eminence. The situation has been further compounded by blind emphasis on the English education system and failure to incorporate problem-based, analytical approaches inherent in the Western models. As a result, the quality of education has left much to be desired. There is vast scope for improving the quality, a challenge that Nepalese educators and planners must accept.

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—Manoj Sharma

NETHERLANDS

BASIC DATA

Official Country Name:	Kingdom of the Netherlands
Region:	Europe
Population:	15,892,237
Language(s):	Dutch
Literacy Rate:	99%
Number of Primary Schools:	7,287
Compulsory Schooling:	13 years
Public Expenditure on Education:	5.1%
Libraries:	1,130
Educational Enrollment:	Primary: 1,230,987 Secondary: 1,415,712 Higher: 468,970
Educational Enrollment Rate:	Primary: 108% Secondary: 137% Higher: 47%
Teachers:	Primary: 84,900 Secondary: 69,000
Student-Teacher Ratio:	Primary: 15:1
Female Enrollment Rate:	Primary: 107% Secondary: 134% Higher: 46%

HISTORY & BACKGROUND

The Netherlands is located in northwestern Europe, between the North Sea to the north and west, Germany on the east, and Belgium to the south. Land area includes only about 13,255 square miles, and with a population of 15.5 million, it is one of the most densely populated countries in the world. Although indigenous Dutch are most likely a combination of Frisians, Saxons and Franks, immigrants from many other cultures have settled in the Netherlands for centuries. Twentieth century immigrants from former Dutch colonies, mainly Indonesia, Molucca and Suriname, make up a majority of ethnic minorities. In 1996, more than 16 percent of the Dutch population was non-indigenous. The largest minority population groups came from the Dutch Indies (more than 300,000), Surinam (282,000), Turkey (272,000), Morocco (225,000), the Antilles (94,000), and other Mediterranean countries (164,000).

Freedom of religion is guaranteed by the Dutch Constitution, church and state are separate, and there is no state religion. The Dutch population in 1997 was generally divided among Roman Catholics (32 percent), Protestants (22 percent), and the non-religious (39 percent). Almost 8 percent of the population belonged to other religious groups. Among those, 2.5 percent of the population was Muslim and.5 percent Buddhist.

In 1999, approximately 40 percent of the Dutch population was under twenty-nine years of age, making it not a particularly young country but nonetheless known for its counterculture youth. Dutch is the language of the country and of instruction, but in the province of Friesland, Frisian is also an official language and taught in the schools. Due to its history of occupation, geographic location, and tourism interests, many people in the Netherlands are fluent in a few languages. Three-quarters of the Dutch speak a second language, and 44 percent speak two foreign languages. The most common foreign languages spoken regularly in the Netherlands are English, French and German.

Historical Evolution: The Netherlands has a long history of educational reform. In the fourteenth century, the Brethren of the Common Life was founded to bring to-

gether laymen and religious men. The Brethren eventually set up schools that some of the most important humanists from northern Europe attended. The most well known was Desiderius Erasmus, a great scholar and liberal educator.

The first piece of educational legislation in the Netherlands, the Elementary Education Act, was passed in 1801. Before the Kingdom of the Netherlands was founded in 1813, education was the responsibility of mainly private religious institutions, and guilds supplied vocational training. In the Constitution of the New Kingdom, education was declared the responsibility of the state to ensure that citizens unable to afford expensive private schools had an opportunity to receive a basic education free of charge. This was the beginning of Dutch public schools. Later the Constitution of 1848 restored the right of private organizations to found schools, but without financial help from the state. During the nineteenth and early twentieth centuries, elementary schools were divided into government-funded public schools and privately-funded private schools.

The unequal treatment of public and private education led to the ''schools dispute,'' a political battle to achieve complete equality under the law for both types of schools. Catholics and Protestants wanted their own schools but with equal state funding. The Liberals also wanted their freedom of education guaranteed by the Constitution to receive equal financial treatment. Dutch taxpayers were already contributing to the costs of funding state education. Most active church members felt they should not have to pay for private (''confessional'') education at their own expense in addition to helping to pay for state (''profane'') schools. Ultimately this led to the political emancipation struggle, often referred to as the ''school funding controversy.'' This was finally resolved with the 1917 Constitution, in what is known as the ''Pacification of 1917,'' establishing equal funding for state and private schools. After 1917, the principle of financial equality was extended to secondary and higher education. There are now nearly twice as many private schools as public schools.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Constitutional Provisions: One of the key features of the Dutch education system is freedom of education, guaranteed under Article 23 of the Constitution. Freedom of education includes the freedom to found schools, to organize the teaching in schools, and to determine the principles on which the schools are based. This means that different groups in society have the right to found schools on the basis of their own religious, ideological or educational beliefs. Schools in the Netherlands, therefore, differ markedly from each other due to their differences in religion or educational philosophy.

Laws Affecting Education: Numerous Acts of Parliament govern education in the Netherlands. Some of the most important and recent acts are the Primary Education Act of 1998, the Expertise Centers Act, the Secondary Education Act, the Adult and Vocational Education Act, the Higher Education and Research Act, the Recognized Educational Institutions Act, the Student Finance Act, the Study Costs Allowances Act, the Compulsory Education Act of 1969, the National Education Support Activities (Subsidies) Act, and the Education Participation Act of 1992.

Educational Philosophies: Freedom of choice is central to Dutch life and education, as well as the spirit of humanism. The Netherlands has long been a country of tolerance of diversity in religion, education, and social life. Strong groups of liberals, socialists and conservatives have always co-existed, but the prevailing atmosphere has been progressive in terms of education, culture and society.

EDUCATIONAL SYSTEM—OVERVIEW

Compulsory Education: The first legislation making education compulsory was passed in 1900. It prescribed six years of compulsory education (between the ages of six and twelve). The Act was repeatedly amended and eventually replaced by the Compulsory Education Act of 1969, which required children to attend school full time between the ages of six and sixteen. In 1985, the Primary Education Act required compulsory schooling to begin at five years of age. For example, if a child reaches the age of five in March, he or she must start school on April first of the same year. In practice, however, most children in the Netherlands go to school from the age of four. This additional year is especially important for children whose native language is not Dutch.

Full-time education is compulsory up to and including the child's sixteenth year. For example, if a student turns sixteen in February, he or she must complete that school year. In 1971, the Compulsory Education Act was extended to include an additional year of part-time compulsory education two days a week. This may be combined with practical training or employment. Children aged twelve and over may be punished for not attending school. For pupils aged fourteen and over who are experiencing problems with full-time education, a special program can be devised combining general education with some form of light work.

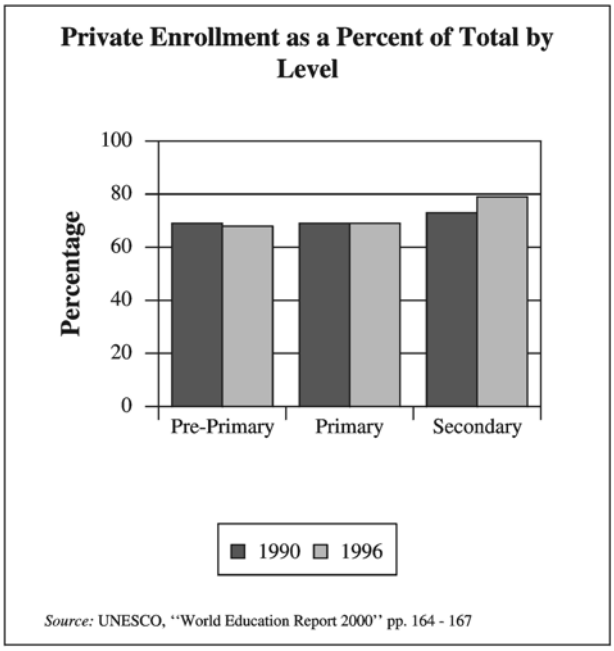
Academic Year: In primary, special, and secondary schools, the school year runs the entire year, from August

1 to July 31. However, primary and special schools have a six week summer holiday and secondary schools have seven weeks. These holidays are staggered across three regions of the country to make vacation traffic and tourism more manageable. All schools have a holiday at Christmas and at the beginning of May (Queen's Birthday and Liberation Day). In addition, there are autumn and spring holidays. The school year contains at least two hundred days between August and June. Schools run Monday through Friday, but Wednesday afternoon is generally free. The minimum number of hours taught a year is 880 (children aged seven), one thousand (age ten) and 1,067 at the lower secondary level.

Language of Instruction: Dutch is the official language of instruction throughout the country. In areas where Frisian or another living local dialect is spoken as well as Dutch, this language can be used as the language of instruction in schools alongside Dutch. In primary schools, pupils from ethnic minorities may receive lessons in their home language and culture, such as Turkish or Arabic, but these are given after regular school hours. In higher, adult, and vocational education, legally classes and examinations must be in Dutch. Exceptions include courses in foreign languages or courses taught by non-Dutch visiting lecturers. In addition, if the native language of the student requires it, an exception can be given. In a number of primary schools close to the border, some experimental teaching is being done in French and German, the languages of the neighboring countries.

Examination & Assessment: Teachers continuously assess students throughout the primary and secondary school years. When children are in their final year of primary school, parents must select secondary schools for them. They are assisted by the head teacher who uses the students' achievement records, and in many cases, results from national tests designed to help guide secondary school choice. Some 70 percent of all Dutch primary schools use tests for primary school leavers developed by the National Institute for Educational Measurement (CITO). These tests assess pupils' level of attainment at the end of primary schooling. Progression depends on student achievement, and students may be required to repeat a year. Secondary students who fail a year twice must transfer to a less demanding type of education.

Public & Private Schools: There are two main categories of schools: publicly run and privately run. Public schools are nondenominational and open to all children. Private schools can be denominational or nondenominational. The former include Roman Catholic and Protestant schools and schools founded by other religious groups. Private nondenominational schools are based on ideological or educational principles. Almost 65 percent of all pupils attend privately run schools. The Constitution requires equal financial support of public and private schools, but private schools must satisfy certain conditions in order to qualify for funding. Some publicly run schools are also based on specific educational principles. The Netherlands has a relatively large number of Montessori, Steiner, and Jena Plan schools, both public and private. The freedom to organize teaching means that public and private schools are free to determine content and methods of teaching. However, this freedom is limited by the qualitative standards set by the Ministry of Education, Culture and Science. The standards state which subjects should be studied, the attainment targets or national examination syllabi to be used, as well as the number of teaching periods per year, and the required qualifications for teachers.



Source: UNESCO, ''World Education Report 2000'' pp. 164 - 167

Curriculum Development: The Ministry of Education determines the overall curriculum and details of compulsory subjects. Schools devise their own curricular plan, teaching methods, and they select teaching materials. Compulsory areas of learning at the primary level include sensory coordination and physical exercise, Dutch, mathematics, English, humanities and sciences, expressive activities, social and life skills, and health education. The compulsory core curriculum for the first three years of all secondary education programs consists of core primary subjects and a second modern language, information technology (IT), economics, technology, and arts.

Parental Involvement: There is an extensive amount of parental involvement in Dutch schools. The Ministry

of Education, Culture and Science publishes guides for parents to primary and secondary education with information about the education system and the rights and obligations of parents. Schools are required to produce a prospectus to inform parents about the school's curriculum and results achieved. Every school must also have a participation council and a complaints committee. The participation council includes representatives of both parents and staff; they discuss matters such as facilities, resource allocation, pupils' rights and obligations, textbooks, holiday dates, and parental involvement in school activities. In addition, many schools also have a separate parents' council or committee.

PREPRIMARY & PRIMARY EDUCATION

Children often attend day care centers or playgroups up until the age of four. The 1994 Social Welfare Act, under the jurisdiction of the Ministry of Health, Welfare and Sport, covers childcare standards and facilities. The 1999-2002 welfare policy called ''Towards Social Quality'' coordinates childcare with local youth programs and education policy. In 1996, approximately 10,800 children attended day nurseries, approximately 198,600 children participated in established playgroups, and approximately 25,200 children aged four to twelve attended out-of-school centers.

Primary Education: Primary schools in the Netherlands are designed for children from four to twelve years of age. In 1997, there were over seven thousand primary schools in the Netherlands, attended by over 1.6 million children. Roughly one-third of these children attend publicly run schools while two-thirds go to private schools. The aim of primary education is to promote the development of children's emotions, intellect and creativity and the acquisition of adequate social, cultural and physical skills. The curriculum includes: sensory coordination and physical exercise; Dutch; arithmetic and mathematics; English (in the last two years); expressive activities such as language, music, drawing, handicrafts, play and movement; self-reliance such as road safety and healthy living; social sciences such as geography, history, biology, social structures, and political studies; and religious and ideological movements. Attainment targets have been formulated indicating the basic minimum that schools are required by law to teach their pupils in each area of the curriculum. However, schools have considerable freedom in the choice of course books and materials, and they can also add their own emphases to the curriculum.

Special Education: Children in need of special care and attention can attend special schools. Like mainstream schools, these may be either publicly or privately run. In 1997 there was a total of almost one thousand institutions providing special education, including schools for physically disabled children, for the partially hearing and visually impaired, and for children with learning and behavioral difficulties. However, under the ''Going to School Together'' policy, children with learning and behavioral difficulties are integrated into mainstream schools as much as possible. Children who require special provision because of their disability are given a personal budget, which parents may spend at either a special or a mainstream school.

Improvements in Quality: The Netherlands is undergoing measures to improve the quality of primary education by tailoring instruction to the individual needs and abilities of the students. Developing intermediate attainment targets and teaching guidelines, introducing student monitoring systems, evaluating the quality of textbooks, improving the training and supervision of teachers, and reducing class size are the most important among these goals. Initially, the focus will be on improving the teaching of arithmetic and Dutch and on identifying and resolving problems at the earliest stage possible.

The use of information and communication technology (ICT) is essential for the general improvement in teaching and adaptability to individual student needs. Substantial investment in ICT has already been made and will continue in Dutch schools. The action plan ''Investing in Progress'' outlines many opportunities to improve education quality through the use of computers and for providing a good educational network between schools with access to the Internet. It supports an integrated approach of funding in-service training for teachers at the same time as funding courseware development and hardware. The goal is to have one computer for every three students.

SECONDARY EDUCATION

The main goals in secondary education are interrelated: to encourage broad, personal development and social education of all students; to create active, independent learners; and to recognize and make use of individual differences between students. There have been a number of curricular reforms in secondary education based on these goals.

Secondary education is intended for students aged twelve and over. It is divided into prevocational education (VBO), junior general secondary education (MAVO), senior general secondary education (HAVO), and pre-university education (VWO). In 1999, VBO and MAVO were combined to create prevocational secondary education, VMBO. However, the new VMBO is being gradually phased in and both systems co-existed in 2001.

In the 1999-2000 school year, there were 861,485 pupils attending 635 public or private secondary schools. In the past, the different kinds of secondary courses were provided in separate schools, but by the end of the 20th century, many of these schools had been merged, creating broad-based combined schools. This has given students a choice in programs within the same school. Some schools are still independent, however, and many of these only have one kind of education program, such as pre-university education with Latin and Greek.

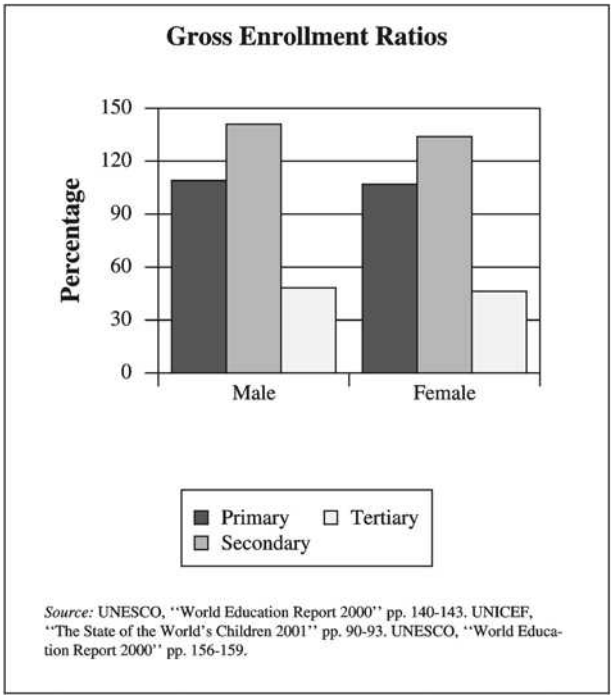
Prevocational Education: Prevocational education (VBO) lasts four years and prepares students for secondary vocational education (senior secondary vocational education and apprenticeships). There are fifteen departments within VBO: building techniques, metalworking, electrical engineering, motor mechanics, fitting techniques, catering, printing technology, caring occupations, beauty care and hairdressing, fashion and clothing, retailing, clerical work, commerce, agriculture and the natural environment, and food technology. However, not every VBO school offers all of these courses. Some VBO schools have a separate department for individualized education (IVBO) to teach students who need extra help at their own speed.

Junior General Secondary Education: Like VBO, junior general secondary education (MAVO) lasts for four years. However, unlike the more vocationally oriented VBO, MAVO provides a more general education. Like VBO, MAVO prepares pupils for senior secondary vocational education (MBO) and apprenticeships.

Senior General Secondary Education: Senior general secondary education (HAVO) lasts five years and prepares students to enter higher professional education. However, many of these students go on to either pre-university education (VWO) or MBO.

Pre-university education: Pre-university education (VWO) lasts six years and prepares students for university studies. However, some of these students prefer to enroll in higher professional education courses. There are three types of VWO schools: the *atheneum* (where Latin is sometimes offered as an optional subject), the *gymnasium* (where Greek and Latin are compulsory) and the *lyceum* (where Latin and Greek are optional).

Special Secondary Education: Schools for special secondary education (VSO) are created for children with physical disabilities, impaired hearing or vision, or chronic illnesses. Children with learning and/or behavioral difficulties also frequently attend VSO schools. Special secondary schools work in conjunction with MAVO, VBO or IVBO schools to put together courses based on students' individual needs to improve their chances of graduating from school or going on to vocational training.



Source: UNESCO, ''World Education Report 2000'' pp. 140-143. UNICEF, ''The State of the World's Children 2001'' pp. 90-93. UNESCO, ''World Education Report 2000'' pp. 156-159.

Basic Secondary Education: In August 1993, the Ministry of Education, Culture and Science introduced basic secondary education and a new core curriculum. Basic secondary education replaced the first three years of VBO, MAVO, HAVO, and VWO with a compulsory core curriculum of fifteen subjects: Dutch, English, German or French, history and politics, geography, economics, physical education, mathematics, physics and chemistry, biology, self-sufficiency (social and life skills), IT studies, technology, and two creative subjects. Each school chooses their creative subjects from these possibilities: drawing, handicrafts, textile crafts, photography, film/audiovisual studies, music, drama, or dance.

At the end of the basic secondary education period, pupils are assessed to see if they have acquired the knowledge, understanding, and skills defined in the attainment targets. Students need to take at least one final national test for each subject. Schools can vary the tests according to different learning styles and abilities of their pupils, and they may include additional school-specific examination questions. There are also cross-disciplinary general attainment targets relating to social issues and skills that are assessed at the end of basic secondary education.

Reforms in Secondary Education: Prevocational secondary education (VMBO) was introduced on August 1,

1999 as part of the secondary education reforms. The ''learning pathways'' of VMBO will eventually replace VBO and MAVO courses, although they both existed in 2001. The goal of the learning pathways is to provide a sounder basis for the next stage of vocational training, secondary vocational education (SBO) the new name for senior secondary vocational education (MBO).

After completing basic secondary education, students spend the second stage of their courses preparing for the school-leaving examinations for the program they have selected. These are both internal examinations given by the school and national examinations administered under government supervision. The system for selecting examination subjects was also changed in 1999. The VMBO, replacing VBO and MAVO, is made up of engineering and technology, economics, agriculture and care, and welfare. Students choose among three learning pathways: theoretical (MAVO), vocational (available at two levels), or combined theoretical and vocational. A fixed combination of examination subjects is specified for each pathway. In addition, a new kind of practical training was created to prepare students to enter the labor market directly if they do not qualify for completing VBO or MAVO.

Four set subject combinations were also introduced in 1998 for the second stage of HAVO/VWO. Students now choose among set combinations of: science and technology, science and health care, economics and society, or culture and society. Each combination includes an optional component for students to take subjects outside of their set combination or non-examination subjects chosen by the school, such as religious education. The reforms have been created to improve the transition from secondary to higher education by emphasizing independent learning.

Information & Communication Technology: The ''Investing in Progress'' action plan integrates information and communication technology (ICT) into the basic secondary education core curriculum to support independent learning and to support the teaching of modern languages and Dutch. Information and communication technology is also being used to update VBO, HAVO and VWO curricula to reflect the use of computers in trade, industry, research, and higher education.

HIGHER EDUCATION

More than one-third of all Dutch men and women between twenty and twenty-four years of age pursue higher education degrees. Annually, more than 375,000 students attend higher education programs. There are three types of higher education in the Netherlands. Higher professional education (HBO) is taught at *hogescholen,* university higher education is taught at universities (WO), and higher distance education is taught at The Open University (OU). Different admission requirements exist in *hogescholen* and universities, whereas The Open University has no admission requirements other than students must be at least eighteen years of age. The Open University is a state institution, but there are public and private *hogescholen* and universities, both funded equally by the Dutch government. To retain this funding, they must meet set standards of educational quality, and public and private degrees must be equivalent.

Higher Professional Education: In 1997 there were 59 *hogescholen* or HBO institutions with 259,000 students. HBO institutions provide theoretical instruction and practical training for more demanding and professional occupations than those studied through vocational education. Some of the types of training and programs available are: educational theory, language and culture, behavior and society, social welfare, art, science, health care, agriculture and natural environment, economics, and engineering and technology. All HBO programs include an important practical training element, and most programs require professional placement outside of the *hogescholen.* Courses usually last four years.

The government and industry are working together to attract more students to technical HBO programs. They are also experimenting with dual training and combining learning and working in new ways. Since many students of ethnic minorities and lower income groups are entering HBOs with MBO diplomas, more is being done to prepare MBO students for HBO programs. HBO and MBO institutions are working together to condense course requirements and facilitate enrollment by minority students.

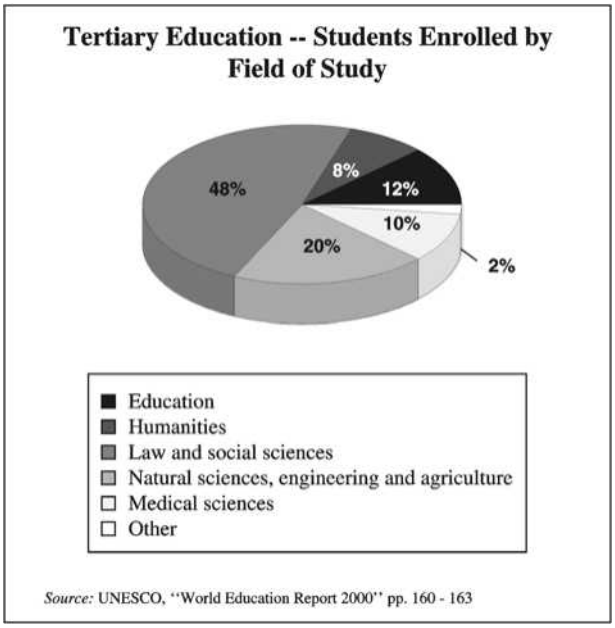
University Education: There are thirteen universities in the Netherlands with 169,000 students attending in 1997. Universities combine scientific research with academics that distinguishes them from higher professional education. Increasingly, however, graduates of universities compete with HBO graduates in the professional world.

Three Dutch universities focus on technology: Delft University of Technology, Eindhoven University of Technology, and the University of Twente. There is one agricultural university, Wageningen Agricultural University, whereas the University of Utrecht and the University of Leiden offer more general courses. Other universities are gradually known for either progressive teaching techniques or specific areas of study: The University of Amsterdam, University of Groningen, University of Maastricht, Erasmus University at Rotterdam, Free Uni-

versity of Amsterdam, University of Tilburg, and the University of Nijmegen.

Most courses at the universities last four years. However, some professions require longer initial periods of training. Doctors, pharmacists, veterinary surgeons, and dentists require six years of initial study; philosophers in a particular discipline, some engineers, and some agricultural scientists require five years of initial study. After completing the initial degree, students in all areas may continue studying towards a specialization, for research, or for a doctoral degree.

Universities are experimenting with new ways of combining working and learning, and they are attempting to make university programs more adaptable and practical. They are also examining and making changes to their administrative structure. To this end, the government allocated a substantial amount of money from 1996-1998 to fund projects to improve teaching and the quality and practicability of courses. One goal was to redesign courses to make it easier for students to complete programs within the desired time frame.



Admission to Higher Education: Students who have senior general secondary education (HAVO) diplomas or senior secondary vocational education (MBO) diplomas are eligible for admission to HBO institutions. Students are eligible to enter a university if they hold VWO certificates or HBO *propaedeutic* certificates which are conferred at the end of the first year of HBO courses. In some cases there are additional requirements of specific courses that must be completed at the secondary education level to be admitted to the university. Exceptions exist for applicants aged twenty-one or older who do not possess the required VWO or HBO qualifications. These applicants may be admitted to university courses if they pass a viva voce entrance examination.

For medicine, dentistry, and veterinary science, the government imposes a *numerus fixus* (quota) to restrict the number of first-year students admitted to the programs each year. In these cases, from 1972-1999, students have been admitted through a weighted lottery draw with a higher average VWO examination grade generally giving applicants a better chance of obtaining a place. This system was debated for years, and in 1999, the Minister of Education, Culture and Science accepted a new system which will guarantee students with high examination grades and grade point averages admission to medical studies. Interestingly, the Netherlands is undergoing a shortage of doctors, and the maximum number of medical students accepted will be increased from 2001-2004. There is some discussion of eliminating the *numerus fixus* system entirely.

Degree System: University graduates may use one of the following academic titles: *ingenieur, doctorandus,* or *meester,* depending on the type of degree (*ingenieur* for more technical degrees, *meester* for law, *doctorandus* for the rest). After further study towards a doctorate and completing a thesis, graduates may use the title ''doctor.''

Beginning in 2002, the Netherlands will introduce a *Bama* or Anglo-Saxon degree system where graduates may use the title of ''bachelor'' or ''master'' in addition to the Dutch *doctorandus.* This will be done to adapt the Dutch university system to a single European system that will be used in twenty-nine European Union countries. Students who choose the new degree system will be required to study for at least three years for a bachelor degree and at least an additional year for a master's degree, so there will be some curricular changes as well. HBO institutions will be allowed to offer master's programs, but most likely, the government will not fund these.

Accreditation: In addition to adopting the degree system of the European Union, the Netherlands will also initiate an accreditation system in 2002 to certify all universities and higher professional education programs. Educational institutions will need to reapply for accreditation every five years. This will make international recognition of higher education programs easier, and it will enable students to compare the quality of Dutch programs to other European programs.

Student Finance: Most higher education courses last four years during which all students are entitled to a basic grant. In September 1997, the basic grant was set at NLG 125 a month for students living at home and NLG 425 for students living away from home. In addition, students

may take out loans of up to NLG 372.92 a month. Depending on parental income, students can apply for a supplementary grant of up to NLG 395.53 a month if living at home or up to NLG 430.53 a month if living away from home. If students need more time to complete their courses, they may take out loans for three more years. If students are in courses that require more than four years of initial study, they are eligible for loans for a longer period.

Grants are awarded to students depending upon performance according to a ''loan then grant'' principle. Initially students receive grants as loans, which are converted to non-repayable grants if they meet the performance criteria. To keep grants non-repayable the first year of study, students must obtain 50 percent of the available credits (21 out of 42). Similar criteria exist for the second, third and fourth years of study, and all loans eventually become non-repayable if the student graduates within four years. Students are allowed six years to complete a four-year course, but they must finance themselves during the additional two years. In 2002, the time allowed to finish a degree will be increased to ten years. Student loans must be repaid within fifteen years of graduation, but only if the borrower can afford to do so. Those on low incomes do not need to pay back much, and any outstanding debt is cancelled at the end of fifteen years.

Foreign Students & Students Abroad: As in all areas of education in the Netherlands, internationalization of higher education is a priority. To that end, the government promotes international exchanges of teachers and students. In 1998-1999, almost 27 percent of higher education graduates had had experience abroad. Six thousand of these higher education students studied on scholarships, and the United Kingdom was the most popular country for foreign study. During the same year, seven thousand foreign students studied in the Netherlands. Most of these students came from other European Union countries.

As of the 2003 academic year, Dutch students will be able to enroll in foreign universities and retain their student grant or loan. They will not need to be enrolled in a Dutch university at the same time. This is part of the ''Education without Frontiers'' policy created to make education finance more flexible for Dutch students. Students will need to verify that the foreign institution and program is of equivalent quality to their Dutch university program. Initially programs in other European Union countries will be eligible, but eventually programs in the United States, Australia and Canada and other countries should be eligible.

In addition to studying abroad, a unique international cooperative effort began in January 2001, when the education ministers of the Netherlands and Flanders signed a treaty to create the Transnational University Limburg. The University of Maastricht and the Limburg University Center in Flanders will combine their teaching and academic research programs in the new university. Dutch or Flemish students will receive dual degrees that are recognized in their respective countries, but the new university will be structured according to the *Bama* bachelor/master system.

ADMINISTRATION, FINANCE & EDUCATIONAL RESEARCH

Ministry/Department of Education: The Ministry of Education, Culture and Science is headed by the Minister of Education, Culture and Science, and there are two state secretaries or junior ministers, each with specific areas of responsibility. The Education Council is the only national advisory body that advises the government on educational policy and legislation.

Since the 1990s, there has been increased emphasis on greater autonomy and decentralization. Many governmental powers have been passed down to the local level. For public schools, the individual municipality and elected school board is responsible for implementing legislation and for policy-making. For private denominational or nondenominational schools, the national umbrella organization of the church or foundation that established the school is responsible for implementing regulations and for policy-making.

Central government concentrates on broad policy-making and encouraging quality education. Educational institutions need to conform to policies and performance standards stated by the Minister of Education, Culture and Science, but they are generally allowed to allocate their finances as they see fit. The Educational Inspectorate supervises the Dutch educational system for the Minister, verifying that schools are conforming to regulations and policies. Individual education inspectors visit schools on an annual basis.

Universities and higher education institutions have umbrella organizations, management boards or executive boards, and they are given a large amount of autonomy by the central government.

Primary and secondary schools are assisted by a large group of support institutions, providing advice on educational theory, teaching methods, and materials. Four of these support organizations are the School Advisory Services, National Educational Advisory Centers, the National Institute for Curriculum Development, and the National Institute for Educational Measurement.

Educational Research: Dutch academic research is extremely well developed with several hundred research

institutes and laboratories in the country. Although most research is university related, joint research with industries and contract research accounts for over 25 percent of research at Dutch universities. Natural and engineering science research in the Netherlands is among the ten most productive (in terms of publications) and the most influential (in terms of citations) in the world. Dutch researchers produce 2.45 percent of all scientific publications worldwide. About 75 percent of these publications come from Dutch universities, 20 percent from public or semi-public organizations, and 5 percent come from trade and industry. The Dutch government funds 38 percent of the research, whereas trade and industry funds almost 49 percent. Much of the university research is privately funded. As in other aspects of Dutch higher education, there is an increasing amount of international collaboration in research with foreign scientists on publications, especially with scientists from other countries in the European Union.

NONFORMAL EDUCATION

Adult Education: Adult education provides a foundation for vocational and secondary education courses and to help adults become productive, participating members of society. Courses are offered in broad basic education and adult general secondary education (VAVO) to give adults a second chance to obtain MAVO, HAVO or VWO qualifications. Dutch as a second language courses are designed to bring language skills of non-native speakers to an acceptable level. Newcomers to the Netherlands are required legally to attend a social integration program at a Regional Training Center, to receive not only Dutch language lessons but also training to help them cope with the Dutch way of life. In 1998-1999, there were 203,800 adults enrolled in adult education courses.

Open University: The Open University in Heerlen is a public institution offering open higher education distance learning courses for people aged eighteen and over. No certificates are required for admission, and all course work can be individually paced. Courses are offered in law, social sciences, arts subjects, economics, management and administrative science, engineering sciences and natural sciences. The courses are taught as separate modules, creating flexibility for students who can combine them to create their own program of study. It is also possible to study for a complete HBO or university degree through the Open University. Study centers throughout the Netherlands help provide assistance and advice for students. The Open University also works with other higher education institutions on developing joint teaching materials and new methods of teaching.

TEACHING PROFESSION

Training & Qualifications: Primary school teachers are qualified to teach all subjects, but they specialize in one subject area. Teachers complete a four-year teacher-training degree at an HBO institution. Secondary teachers specialize in one subject area and are qualified to teach the lower years of VMBO, HAVO and VWO. Teachers who complete a one-year postgraduate course at a university or a three-year part time program at an HBO are qualified to teach at all levels of secondary education. ICT training is emphasized, especially with primary school teachers. In 2000, the eventual goal is to use ICT for 50 percent of teaching time, and teacher-training institutions need to build this expertise.

Between 2001 and 2004, the Netherlands will need approximately 8,500 new primary school teachers a year, 5,500 secondary school teachers, and from 2,500-3,500 vocational and adult education instructors. There is a teacher shortage in the Netherlands, and not enough teachers are being trained to keep up with demand. Steps are being taken to bring ex-teachers back to the profession and to recruit new teachers from college graduates in other fields. The teacher shortage is most pronounced in the large cities of Amsterdam, Rotterdam, the Hague and Utrecht.

The government understands that it needs to make the teaching profession more attractive by offering competitive working conditions and salaries, making time and money available for in-service training, and to lighten teacher load by increasing support staff. Teachers want more time for innovation and student counseling. In addition, more efforts towards decentralizing working conditions in primary education are needed. The ''Professions in Education Act'' will be sent to Parliament at the end of 2001, outlining necessary reforms in the teaching profession in the hopes of curbing the national teacher shortage.

SUMMARY

The Netherlands has a long tradition of educational reform and progressive educational philosophy. This tradition continues into the twenty-first century with innovative approaches to teaching and uses of technology. Despite problems of limited space, population growth, and an influx of refugees and immigrants, the Netherlands continues to make education accessible to close to 100 percent of its population. As student bodies and needs have changed, the educational system has tried to change with them. The latest government policy stresses quality and variety of education and the need to individualize and customize education at all levels to reach students most effectively. There is some concern, however,

that as non-native populations grow, educational institutions are becoming increasingly segregated, especially in the larger urban areas. The admirable qualities of freedom of education and freedom of choice, and the increasing desire for autonomy, unfortunately make self-segregation unavoidable. In order to maintain equal educational opportunities for all, the Dutch will need to do more to combat educational disadvantages among ethnic minorities. Although much has already been done, statistics show little improvement in educational attainment by minorities. If the Dutch are able to discover new methods of reaching this population group effectively, they will be able to make great advancements not only educationally but socially as well.

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—Michèle Moragné e Silva

NETHERLANDS ANTILLES

BASIC DATA

Official Country Name:	Netherlands Antilles
Region:	Puerto Rico & Lesser Antilles
Population:	210,134
Language(s):	Dutch, Papiamento, English, Spanish
Literacy Rate:	98%

The Netherlands Antilles consists of two groups of islands in the Caribbean Sea. The first group of islands is Curacao and Bonaire, and the second group of islands are St. Maarten, St. Eustatius, and Saba. The island of St. Maarten is shared with France. The land area is approximately 960 sq. km. with a coastline of more than 364 km. (World Factbook 2000). The 210,000 people of the islands are approximately 85 percent Creoles of mixed African, Dutch, and Spanish descent.

The major industry of Netherlands Antilles is tourism, followed by petroleum transshipment and offshore banking.The Netherlands Antilles is part of the Kingdom of the Netherlands, but in 1954 they were granted autonomy in their internal self-government. The islands are a parliamentary democracy consisting of the executive branch that includes a queen, a prime minister, and a cabinet. The legislative branch consists of 22 seats with members elected by popular vote for four-year terms. The Joint High Court of Justice comprises the judicial branch of their government (World Factbook 2000).

The basic structure of the school system consists of primary school for ages 4 to 12, secondary for ages 12 to 16, or pre-university studies for ages 12 to 18 (IAU 1995-1996). The secondary track is further broken down into either a general secondary stream or a technical and vocational stream. About 38 percent of the population have graduated from the secondary level, and another 32 percent have finished their primary schooling; this has produced a population with a literacy rate of about 94 percent.

There is only one university in the Netherlands Antilles. The Universiteit van de Nederlandse Antilles provides higher education degrees in the study of law, social sciences and economics, and engineering including architecture, civil, mechanical and electrical.

Primary school teachers are trained at a teacher training college in Curacao. The training consists of two years of theoretical and practical work and one year of practice in the educational system.

Currently there are educational reforms underway in the Netherlands Antilles that were started in 2000. The main features of the reforms are:

1) grouping the students into three main age groups: 4-8, 8-12, and 12-15
2) integration of kindergarten and primary education
3) incorporating in the first two years of secondary education foundation-based education
4) development of a system of education that is more in tune with the technological developments and educational theories from the Netherlands and around the world

(International Bureau of Education).

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—Deanna Edens

NEW CALEDONIA

BASIC DATA

Official Country Name:	New Caledonia
Region:	Oceania
Population:	201,816
Language(s):	French, Melanesian-Polynesian
Literacy Rate:	91%

New Caledonia was a part of France from 1946 until the late 1990s, when the nation passed the Noumea Accord. This legislation stipulates that New Caledonia, a group of islands in the southern Pacific ocean, will gradually begin operating more independently between 2000 and 2010, at which time France will retain governmental authority only in areas of currency, defense, public order, justice, and foreign affairs. Despite this new status, New Caledonia's education system remains closely modeled after the French system, and the primary language of instruction at all levels is French.

Education is free and compulsory for children between the ages of 6 and 16. Primary education lasts for five years. Secondary education is broken up into two cycles, the first of which is a four-year program that begins at age 11. The additional three-year program, commonly known as upper secondary, is optional; however, successful completion of it is required of students wishing to pursue higher education. New Caledonia operates five institutions of higher education, including a branch of the *Université française du Pacifique.* Many students seeking university degrees attend universities in France. The New Caledonia Educational Authority for Primary, Secondary, and Higher Education, based in Noumea, is a decentralized government department that oversees the educational system in New Caledonia. Both public and parochial schools are accountable to this entity.

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—AnnaMarie L. Sheldon

NEW ZEALAND

BASIC DATA

Official Country Name:	New Zealand
Region:	Oceania
Population:	3,819,762
Language(s):	English, Maori
Literacy Rate:	99%
Academic Year:	March-November
Number of Primary Schools:	2,296
Compulsory Schooling:	10 years
Public Expenditure on Education:	7.3%
Foreign Students in National Universities:	6,415
Educational Enrollment:	Primary: 357,569 Secondary: 433,347 Higher: 169,656
Educational Enrollment Rate:	Primary: 99% Secondary: 114% Higher: 63%
Teachers:	Primary: 19,523 Secondary: 28,548 Higher: 10,833
Student-Teacher Ratio:	Primary: 18:1 Secondary: 16:1
Female Enrollment Rate:	Primary: 99% Secondary: 117% Higher: 73%

HISTORY & BACKGROUND

New Zealand is a European settler democracy in which the indigenous people comprises about 15 percent of the population. The education system is almost entirely English instructed and British derived. By the standards of the colonial civilization the education system has achieved some outstanding results in terms of the general level of education and the attainments of the educated elites who have included Nobel prize winners, innumerable eminent researchers and professors, and notable cultural and scientific savants among their ranks.

As New Zealand enters the postcolonial age in a globalized economy, this rather traditional educational structure has come under both cultural and financial strain. It may require substantial renovation before it can serve the nation into the twenty-first century as well as it did for most of the twentieth.

The territory of New Zealand comprises three major islands—South Island, North Island and Stewart Island in descending size—and a number of smaller islands that stretch across the Southwest Pacific Ocean and 1,600 kilometers from north to south. The land mass is 268,000 square kilometers, which is 10 percent larger than the United Kingdom. It was formed geologically by a part of Gondwanaland breaking off and relocating at the collision fault of the Australian and Pacific tectonic plates. It is temperate, wet, and windy; much of its land is very fertile alluvial washed down from several of its volcanic and mountainous regions.

New Zealand was first settled by Polynesian maritime explorers, now known as Maori, about 1,000 years ago. They created a tribal based society of hunters, farmers, and fishermen. They knew some of the territory as Aotearoa.

Europeans started to visit the islands in the seventeenth century but only established regular contact in the late eighteenth century. By the early nineteenth century, Europeans were scattered throughout the islands as traders, whalers, sealers, miners, missionaries, and escapees from Britain's convict settlements nearby. They came to know the land by the term the Dutch had given it: New Zealand.

Conflict continued between the Europeans and Maori and within each community. It got worse with the rapid spread of European military technology. The British used the resulting threat of ''anarchy'' to advance their political and imperial control.

In 1840 the colony of New Zealand was established under the British Crown. At first it was briefly administered from Sydney, then it became a colony in its own right. Many of the Maori tribal chiefs acceded to this under the 1840 Treaty of Waitangi, which gave Britain sovereignty in exchange for the protection of certain Maori rights. The meaning of the terms of the Treaty signed in English and European-concocted, written Maori are still in dispute.

After 1840, European colonization, dominated by the British, and Scots among them, proceeded rapidly and a great deal of Maori land was relinquished under circumstances that varied from sale to annexation under force. Maori often resisted and were crushed, occasionally in organized warfare. The Maori population also declined both relatively and absolutely under the impact of disease and dispossession. It fell from perhaps 100,000 people in the early nineteenth century—against 2,000 Europeans—to 30,000 people by the onset of the twentieth century and remained concentrated in traditional *marae,* or villages.

The Europeans developed a colonial economy based on pastoral industry, particularly wool, and then mining, especially gold in the South Island. In the early twentieth century, European New Zealanders had probably the highest standard of living in the world based on exporting these primary products to Britain, to whom they had a strong political and emotional attachment. They also developed a democratic colonial state, which introduced female suffrage for the first time in the world in 1893. This state was used to regulate industry and develop an egalitarian social system. After 1935, this was extended by the Labor Party government to create the world's first and arguably most extensive welfare state. This included a very extensive system of education.

From the 1920s onwards the Maori moved into the European economy and its urban centers, until by the 1980s more than 80 percent of them were living in urban settlements. During the same time Polynesians from other Pacific countries migrated to New Zealand in increasing numbers. Since the 1980s many Asians have also moved to New Zealand, particularly in the first half of the 1990s, although the numbers have dropped off since then as a result of tighter restrictions and economic recession.

In 1973 the United Kingdom, still easily New Zealand's largest market, joined the European Community and under its common agricultural policy phased out privileged New Zealand access to the British market. The New Zealand economy has been in frequent recession and almost continuous relative decline since then but has tried to adjust to this by deregulating its economy. This philosophy of liberalization has been the main point of political contention during that time and has impacted education policies. In 2000 the GDP was slightly more than NZ$100 billion, or NZ$27,000 (US$13,700) per capita.

The population of New Zealand in 2001 is about 3.8 million people. Of these about 15 percent are classified

as Maori, about 5 percent as other Pacific Islanders, and about 5 percent as Asian. Most of the rest are of British descent, with a few Dutch and Croatians. New Zealand has an active immigration policy but also a strong flow of emigration. During recent years about 70,000 people have left the country annually, about half directly to Australia with which New Zealand has agreements that permit a free flow of people. At the end of 2000, some 450,000 New Zealanders lived permanently in Australia. This outflow has been matched in most years by a larger flow of immigrants coming from the United Kingdom, South Africa, and various Asian and Pacific Island countries.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The constitutional and legal foundation of New Zealand is based on a number of documents and practices. These include: the British Act of Annexation; the Treaty of Waitangi, which limited and defined it; the granting of representative government in the 1850s; the Declaration of Dominion status in 1907; the ratification of the Statute of Westminster on 1946; the Bill of Rights; and a series of acts dealing with constitutional powers and procedures, including acts passed by the Labor Party in office that have reiterated and possibly expanded the Crown's obligations under the Treaty of Waitangi. Taken together these form the basis of the New Zealand Constitution. These procedures are best described in the New Zealand Cabinet Manual.

The practice of the New Zealand Constitution in 2001 is dominated by the powers of the New Zealand Parliament in the capital Wellington. The system is essentially using the Westminster model, which comprises one House of Representatives (since 1950) elected every three years (since 1996) under a system of Mixed Member Proportional (MMP) representational voting. Maori have six separate seats. New Zealand is a functioning democracy with freedom of speech, assembly and organization, and universal adult suffrage. Literacy is almost universal among the European population (often called *pakeha,* the Maori term for stranger) and among most Maori groups.

Under the MMP system, which is modeled partly on the German system, a party gets seats in the 120-member Parliament in proportion to its popular vote. The liberalization of the welfare and interventionist state started under the Labor government, 1984-1990, and was continued under the following Nationals government, 1990-1999. In the November 1999 election the Labor Party won a plurality of seats that enabled it to form a social democratic type government in coalition with the more Left Wing Alliance and with occasional support from the Greens. As of 2001, the Prime Minister was Helen Clark (Labor) and the Education Ministers were Trevor Mallard and Steve Maharey (Associate Minister for Tertiary Education).

The administration of education in New Zealand is based on the Westminster system and is mostly by way of an elected Minister controlling a permanent bureaucracy according to the policies of the government of the day. These are in turn constrained by the established procedures of the system that may only change at some risk to its continuing efficiency.

In the New Zealand system the Parliament makes the law, provides the money, and expects accountability through ministers that it—or more realistically the majority of its members acting as the government—appoints. The Minister for education sets the policy direction and administers policy through agencies of the state. These include the Ministry of Education, which gives policy advice, implements policy, develops curriculum statements, allocates resources, and monitors effectiveness. The New Zealand Qualifications Authority administers qualifications and provides assurance about qualifications quality, overseas the examinations system and develops the National Qualification Framework. The Teachers Registration Board register teachers. The Education Review Board evaluates the performance of individual schools and reports publicly.

As in other areas, education policy is heavily influenced by the policy of the party in power. During the 1999 election campaign the Labor Party and its allies made a number of commitments to the education sector and its clients. The most important was the pledge to direct more resources to education workers, a key component of the Labor and Left constituency.

Tertiary education policy was particularly important for the 1999 election because of the number of tertiary students and their hostility to the policy under which they had to repay loans which they took from the state during their period of study. These averaged NZ$11,000 but were sometimes much more substantial and attracted interest at commercial rates while they were repaid. In 2000 the total student debt, counted as a state asset, was worth NZ$3.5 billion from 274,891 student-loan borrowers with debts ranging from NZ$6,000 to NZ$60,000. This was estimated to rise from NZ$4 billion in 2001 to NZ$15.5 billion in 2015. This provided some incentive to leave the country and the jurisdiction of loan recovery for debtors. In 2001 it was estimated that the student debt owed by graduates who had left New Zealand totaled NZ$175 million, a 30 percent increase in one year.

Although the previous Labor government had introduced the initial policy, Labor Opposition policy was de-

signed to reform it, partly to win student votes. Its policy was both a ''progressive'' critique of existing policy and an ambit claim for the industry.

Some of the points outlined in the Labor policy are:

1. The importance of higher, or tertiary, education and research
2. The importance of investing in the enhancement of knowledge
3. The importance of higher education as related to New Zealand's economy
4. The importance of collaboration between tertiary institutions to better form a ''knowledge based society''
5. The establishment of the Tertiary Education Advisory Commission (TEAC)
6. The ways in which Labor will continue funding for students and institutions
7. The importance of new technology
8. The necessity of examining and retooling current student loan practices
9. The need to increase Maori participation in higher education
10. The importance of equal access for all other groups to higher education
11. The need to increase the foreign student population in tertiary institutions

The Labor document accurately summarizes the political and social ambitions of the present New Zealand government with respect to the tertiary education system. It promised more tertiary places, more equitably accessed, more commercially oriented but more cheaply funded.

THE EDUCATIONAL SYSTEM—OVERVIEW

The education system of New Zealand was introduced by the British colonial authorities during the colonial period and remains essentially the same as that in the United Kingdom. It is based on universal primary and secondary education to the age of 15 and a more diverse system after that point involving the later years of secondary school. Universities were more elite institutions but are now much more widely accessible since their expansion in the last decade that involved increasing student numbers in existing universities and redesignating other tertiary institutions. They are supplemented by polytechnics and a range of vocational institutions. But it has been extensively modified by the sovereign New Zealand state. In particular, the education system has had to make special provision for the indigenous Maori population.

Maori Education: While most Maori students remain within the mainstream education system, there is now a strong demand for Maori language education. This growth has been stimulated by the revival of *te reo Maori* (the Maori language). The programs developed to preserve their language have given Maori the opportunity to design the kind of education they want, and one that meets the needs of both adults and children.

The revival began with the establishment of *köhanga reo* (Maori language early childhood centers) and continued with *kura kaupapa Maori* (Maori medium schools). Growing numbers of Maori students are also enrolled in bilingual and Maori language immersion classes in mainstream schools. Maori achievement has increased across the New Zealand education system in recent years, but it has not kept pace with that of other groups.

Statistics on the Maori population provide a valuable insight into the demographic, social, and economic characteristics of the country's first people. As New Zealand's indigenous ethnic group and a population undergoing considerable change in recent years, information on the status of Maori people is of great interest to the public and to policy-makers. Comparisons with non-Maori show differences in population structure, living arrangements, crime, life expectancy, educational achievement, employment patterns, and income levels. These differences, in particular some of the socioeconomic disparities between Maori and non-Maori, have led to policies that seek to address the disadvantages faced by Maori. Economic restructuring, welfare reforms, treaty settlements, economic development initiatives, and bicultural policies have all had significant effects on the demographic, social, and economic situation of Maori people.

Recent decades have seen rapid growth in the size of the Maori population. From less than 8 percent of the New Zealand population in 1956, the Maori ethnic group grew to 15 percent at the 1996 census. By the middle of this century the Maori ethnic group is projected to almost double in size to almost 1 million people and make up 22 percent of the total population. Among the factors contributing to this growth have been historically higher rates of fertility, a greater concentration of people in the reproductive age groups compared to the non-Maori population, and a growing willingness to identify as Maori. The Maori population has a young age structure and although it is expected to age over the next half century, it should remain relatively young compared to the non-Maori population.

Another distinguishing feature of the Maori population is its geographic distribution. From being a predominantly rural population prior to World War II, Maori are now almost as highly urbanized as non-Maori. Nevertheless, the importance of traditional *iwi* locations is reflect-

ed in their greater concentration in the Northland, Waikato, Bay of Plenty, and Gisborne regions. Recent years have also seen increasing migration back to rural areas. The ethnic population distribution among the two main communities comprises European preponderance in the south that gets progressively more diluted as one moves north, until Maori dominate in Northland.

Patterns of family formation and the types of families and households in which Maori live differ from others, but trends in family formation for the Maori population reflect wider social trends among the population as a whole: Maori are less likely to marry and more likely to live in a de facto relationship than in the past, tend to have fewer children, and are more likely to live in sole-parent families than previously. At the same time, however, the living arrangements of Maori also reflect the traditional importance of the *whanau,* or extended family. Maori are considerably more likely than non-Maori to live in extended families, in households occupied by more than one family and in large households. Socioeconomic circumstances may possibly also be a factor encouraging shared living arrangements.

Education is an area in which there have been some significant initiatives in recent years to improve outcomes for Maori. Both participation and attainment by Maori in education have improved over the past decade, but disparities between Maori and non-Maori remain. Maori are more likely to attend early childhood education than in the past, with the growth of köhanga reo providing a major impetus in this area. They are also more likely than in the past to stay at school beyond the compulsory leaving age and more likely to leave with qualifications. There has also been considerable growth in the number of Maori enrolled in tertiary education and, consequently, an increase in the proportion of Maori with postschool qualifications. However, these changes have occurred within a context of increasing educational participation and attainment amongst the population as a whole, with the result that further improvements for Maori are needed if disparities in educational outcomes are to be reduced.

Educational outcomes have a major impact on employment opportunities. Historically Maori, by comparison with non-Maori, have had higher rates of unemployment and a greater concentration in lower skilled manual occupations in secondary industries. The economic changes since the early 1980s have had a significant effect on Maori employment with major job losses in sectors in which Maori were highly represented. Employment for both Maori men and Maori women fell markedly between 1986 and 1991. Subsequent recovery saw employment for Maori women reach higher levels in 1996 than a decade earlier, but Maori men remained less likely to be employed than in 1986. Unemployment rates for Maori mirrored this trend, rising markedly between 1986 and 1991 and falling between 1991 and 1996. Despite this fall, Maori were almost three times as likely as non-Maori to be unemployed in 1996. Job losses in traditional sectors of employment for Maori have been offset to some extent by new opportunities in other sectors. This is reflected in a fall in the proportion of Maori working in manufacturing industries and increases in service industries such as wholesaling, retailing, restaurants and hotels, as well as business and financial services. Occupational distribution has also changed, with a fall in the proportion employed as plant and machine operators and assemblers and an increase in the proportion employed as service and sales workers.

There has recently been some dispute about this interpretation of the figures. Some researchers have argued that ethnicity has not been a major determinant of income distribution. This has been hotly contested, however, and most academic research and government policy is based on the opposite interpretation.

Maori on average receive lower incomes than non-Maori. Median incomes for Maori fell as a proportion of non-Maori incomes between 1986 and 1991 and then increased again by 1996 but did not regain the level of a decade earlier. In part, the difference between Maori and non-Maori incomes reflects the greater concentration of Maori in low-paid occupations. However, comparisons within occupational groups show that Maori receive lower median incomes than non-Maori with similar occupations. Maori also receive lower median incomes than non-Maori with similar levels of education. The education system has an important role to play if these issues are to be adequately addressed.

Maori Teachers: An evaluation of Maori teacher supply initiatives was completed and a review of the current Maori and Maori medium teacher supply initiatives is underway. During the year 2000, TeachNZ scholarships, designed to attract increased numbers of Maori and Maori medium teachers, were awarded to 165 recipients.

***Kura Kaupapa Maori* & Other Secondary Education:** Maori medium education in schools is rapidly expanding. In 1990 there were six officially designated *kura kaupapa Maori* catering for 190 students. In 1999 there were 59 kura kaupapa Maori. In 1999, a total of 396 schools other than kura kaupapa Maori were offering some form of Maori medium education. Maori enrollments at the senior secondary school level have been steadily increasing over the last 10 years. In the tertiary sector in 1999, Maori were most likely to be enrolled in polytechnics, whereas non-Maori were most likely to be enrolled in university. A total of 27,837 Maori were enrolled in a formal program of tertiary education. Maori made up 9 percent of

university students, 11.9 percent of college of education students, and 12.6 percent of all tertiary students.

There are three *wänanga Maori* (tertiary establishments): *Te Wänanga o Aotearoa* (Te Awamutu); *Te Wänanga o Raukawa* (Otaki); and *Te Whare Wänanga a Awanuiarangi* (Whakatane). All are state funded. In 1999 there were 1,735 Maori students enrolled at *wänanga* and 148 non-Maori. Government and *iwi* will assess the future development and growth of *wänanga* as a viable option for Maori participation in the tertiary sector.

Maori Language Education Resources: The government supports targeting funds to increase teacher training in the Maori language and to increase the supply of learning resources for Maori medium education. The Maori Language Education Plan (MLEP) is the education-focused part of the government's Maori Language Strategy. There are five key areas in the MLEP designed to support Maori language education. These focus on raising the capacity of education providers to deliver high quality Maori language education. This will be done through the adequate and appropriate provision of resources for both mainstream and Maori medium schools, including the provision of skilled teachers, sufficient teaching and learning material, and new assessment tools.

Labor Education Policy in 1999: Once again, Labor represented and is now implementing the Left orthodox critique of the education system as it was evolving in the more liberal environment of the 1990s.

Labor policy for the 1999 election on schools said: Labor sees quality education as a basic right, which must be available to all children. If New Zealanders are better educated, the whole society will benefit, both socially and economically. National's market approach has meant some schools find it hard to attract quality teachers. Priority will be given to ensuring that all schools are staffed by quality teachers.

Labor will therefore improve preservice training and require ongoing professional development of teachers. It will also retain advisory and training services on a central basis, move to universal registration for all teaching staff in schools or early childhood education, and establish a staffing working party to develop a long-term staffing formula that gives proper consideration to schools' workload issues.

Labor argued that schools were increasingly being divided into winners and losers, with poorer communities being disadvantaged by that. Gaps were also widening between the achievement levels of school students. To offset this Labor would end bulk funding and reallocate the extra funds to schools through base grant, operational, and targeted funding increases. It would also introduce an annual inflation adjustment of operations grant funding, work with boards and staff organizations to develop a scheme to provide incentives for teachers to be seconded to ''hard to staff'' schools, and host a *Hui Taumata* to bring together Maori educators and community leaders to plan for long-term progress in Maori education.

Labor argued that there was a need to build capacity in technology and school buildings for the future. To achieve this Labor will ensure that teachers are trained in the use of information technology and will investigate bulk-buying options for hardware, software, and networking systems.

In particular Labor argued it would pursue a policy of ''Closing the gaps.'' Whereas Labor determinedly pursued the Maori vote, and got it in 1999, it was widely assumed this referred to lifting Maori achievements to the same level as non-Maori. This was to become a controversial issue in late 2000.

When the coalition government came into power in December 1999, there were over 1 million people, 30 percent of the population, enrolled in the New Zealand education system. The number of students enrolled in formal education, grew from 1997 to 1999. In July 1997 there were 163,925 children in early childhood education, 712,276 students in the schools, and 252,034 in postsecondary education for a total of 1,128,235. In July 1998 there were 171,198 children in early childhood education, 724,579 students in the schools, and 256,123 in postsecondary education for a total of 1,151,900. In July 1999 there were 171,576 children in early childhood education, 727,396 students in the schools, and 253,043 in postsecondary education for a total of 1,152,051.

Types of Schooling:

Compulsory Schooling: At early levels, school attendance is considered compulsory. Primary schools represent the first level of compulsory schooling. They cater to children from the age of five years (Year 0) to the end of their sixth year of schooling (Standard 4). Children in their seventh and eighth years of schooling (Forms 1 and 2) may either be in a separate intermediate school or part of a primary, secondary, or composite/area school. Secondary schools usually provide for students from Year 9 (Form 3) until the end of Year 13 (Form 7). Area schools that are usually based in rural areas combine primary, intermediate, and secondary schooling at one location.

Choices in Schooling: State schools are coeducational at the primary and intermediate level, but some offer single-sex education at the secondary level. Some offer special programs for adult students or run community education classes. Although most students attend state-

funded schools, there are a number of other choices for parents and students. Integrated schools are schools that were previously private and have now been integrated into the state system. They follow the state curriculum requirements but incorporate their own special character (generally a philosophical or religious belief) into the school program. Integrated schools receive the same government funding for each student as state schools, but the buildings and land are privately owned so the school meets the costs of property development and maintenance from attendance dues.

Kura kaupapa Maori (Maori medium schools) are state schools where teaching is in *te reo Maori* (the Maori language) and is based on Maori culture and values. The curriculum is the same as at other state schools, but was developed to build on the success of *köhanga reo* (Maori language early childhood centers) in preserving and increasing the use of *te reo Maori.* One of the key goals is to produce students who are competent in both Maori and English.

Independent (or private) schools are governed by their own independent boards but are required to meet certain standards in order to be registered. Independent schools may be either coeducational or single sex. They charge fees, but also receive some funding from the government based on the percentage of the average total cost of state schooling. Boarding schools may either be independent or part of a state-funded school; both charge boarding fees.

Te Kura-a-Tuhi (the Correspondence School) is funded by the Ministry of Education. It is a national distance-learning school administered by an elected board of trustees, composed of parents, community, and school representatives. Full-time students are enrolled for a variety of reasons, including distance from other schools, a wide range of special needs, medical and psychological problems, itinerancy, and suspension from other schools. The total school roll at 1 July 1999 was 19,278.

Home-based schooling is for parents who want to educate their children at home. They can do so provided they maintain a standard of education equivalent to that of a registered school. They need to get approval from the Ministry of Education and are given an annual grant to help with the cost of learning materials. Home-schooling parents may purchase teaching services from the correspondence school.

The Curriculum: New Zealand Curriculum Framework: A program of reform of the curriculum is continuing and The New Zealand Curriculum Framework provides the basis for programs in schools. It sets out the principles that underpin and give direction to all teaching and learning in New Zealand schools as well as the essential skills to be developed at each stage. It also outlines the policy direction for assessment at school and national levels. The New Zealand Curriculum Framework is the foundation policy statement covering teaching, learning, and assessment for all students in all New Zealand schools.

The Principles: The Framework establishes and identifies the principles for all learning and teaching programs in New Zealand schools. The principles are based on the premise that the individual student is at the center of all teaching and learning.

The Essential Learning Areas: The Framework identifies seven essential learning areas. These are broad, recognizable categories of knowledge and understanding. They constitute a balanced curriculum within which the essential skills, attitudes, and values are developed. The Framework defines eight groups of essential skills. All students need to develop these skills to enable them to reach their full potential and take a full part in society. Students will develop the essential skills through a range of learning experiences across the whole curriculum. It outlines some of the attitudes and values that are an integral part of the school curriculum. The school curriculum will encourage positive attitudes towards learning. It will help students to develop and clarify their own attitudes, values, and beliefs while respecting those of others.

The Framework sets out the policies and procedures for assessment in all New Zealand schools. The national curriculum statements provide clear learning outcomes against which students' progress can be measured. The purpose of assessment is to assist with planning the next step of learning for students, reporting to parents, and planning for the most effective use of resources.

National Qualifications at Secondary Schools: Under the present system, secondary school students may take the national examinations as outlined below. From 2001, all New Zealand students at year 11 (Form 5) will work towards a National Certificate of Educational Achievement (NCEA) in place of School Certificate. In 2002 and 2003, levels 2 (Form 6) and 3 (Form 7) will be phased in to replace sixth form and university bursaries. NCEA will include a wider range of subjects and skills not previously examined under the School Certificate, university bursaries, and scholarship qualifications. It will also allow for recognition of a broader range of student achievements.

School Certificate: This examination is taken by most students at the end of three years of secondary education (fifth Form or Year 11). Except for part-time students, each candidate's course of study must include English, although the student is not required to sit the examination

in that subject. A student may enter the examination in a number of subjects (up to six) and is credited with a grade in each subject. There are five grades: A, B, C, D, and E.

Sixth Form Certificate: This certificate is awarded on a single-subject basis to Sixth Form (Year 12) students who have satisfactorily completed a course of one year in one or more subjects. Most students take five or six subjects. All candidates must study a course of English, although, as with the School Certificate, they do not have to take it as a Sixth Form Certificate subject. Grades are awarded on a 1 to 9 scale, grade 1 being the highest. Candidates are assessed internally but grade allocations are moderated externally.

Higher School Certificate: The higher School Certificate is awarded to students who have satisfactorily completed five years of full-time secondary schooling beginning at Form 3. At least three subjects must be studied at a level above Sixth Form Certificate. It is a course completion qualification and grades or marks are not awarded.

University Entrance, Bursary, & Scholarship Examinations: Entrance to university is achieved by gaining a Higher School Certificate with three C grades or better. B bursaries are awarded if the total marks are between 250 and 299, and an A bursary is awarded if the total marks are 300 or more. Scholarships are awarded for high performance in individual subjects and there are also top scholar awards. Small cash payments are made to those gaining bursaries and scholarships.

Between 1980 and 1998, the highest attainment of secondary school leavers improved considerably. In 1980, some 33 percent received no formal qualification, 23 percent got a school certificate, 13 percent a sixth form certificate, 16 percent university entrance, and 15 percent a seventh form award. In 1998: 18 percent got no formal qualification, 16 percent a school certificate, 23 percent sixth form certificate, 13 percent higher school certificate, 9 percent university entrance, and 20 percent a university bursary.

PREPRIMARY & PRIMARY EDUCATION

In July 1998, of children attending early childhood education, 40 percent were in licensed childcare centers, 9.5 percent in playcenters, 6.9 percent in Te Köhanga, 9.9 percent in ECDU funded playgroups, 5 percent in home-based childcare, 1.7 percent in ECDU funded Pacific Islands Language Nests, and 26.9 percent in kindergartens. Descriptions of these preprimary and primary education programs follow:

Early Childhood, Primary, & Secondary Education: Early childhood education is not compulsory. It is available to children under 6 years of age through a wide range of services. Many services are administered by voluntary agencies with government assistance. The Education Act of 1989 provides for free education in state schools between the ages of 5 and 19, and attendance is compulsory between 6 and 16 years. The majority of children start formal schooling at the age of five.

The main providers of early childhood education are kindergartens, playcenters, Pacific Islands language groups, education and care services, home-based care services, and köhanga reo. Early childhood education programs are, on the whole, developmental and based in learning through play. All early childhood services wishing to receive government funding must be licensed and chartered. Licensing ensures that basic standards of quality are maintained. A charter sets out both mandatory and optional objectives and practices. Chartered groups receive funding direct from government in the form of a bulk grant.

Kindergartens predominantly operate early childhood education for children between the ages of 3 and 5. In general, younger children attend afternoon sessions for three afternoons a week, while the older age group attend five mornings a week. Play centers are parent cooperatives where parents take responsibility for the management and supervision of sessions. Children attending play center range in age from birth to school age.

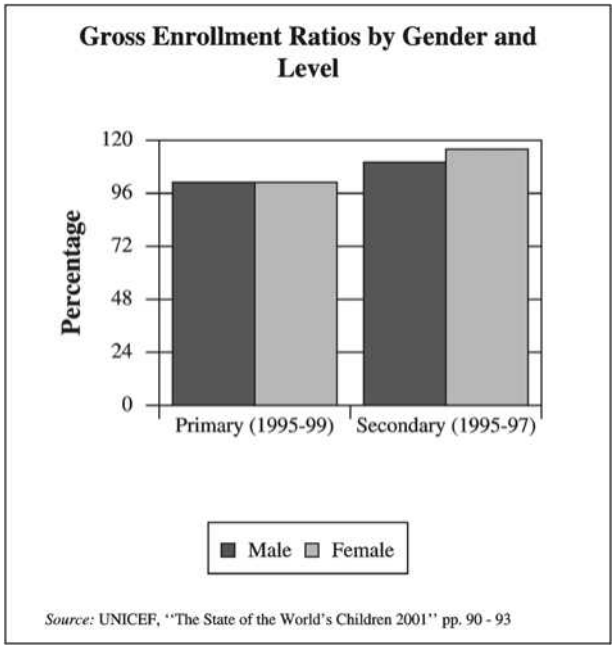
Te Köhanga Reo: *Köhanga reo* are sessional or all-day Maori language immersion early childhood institutions. Their prime aim is the maintenance of the language of the indigenous people of New Zealand, the Maori. The centers are community based and are administered by local management groups affiliated with the *Te Köhanga Reo* National Trust.

Pacific Islands Language Groups: Pacific Islands language centers offer programs based on the values and languages of Pacific Islands cultures. They range from license-exempt family playgroups, meeting once or twice a week, to licensed and chartered centers. These programs emphasize language development, both in Pacific Islands languages and English, and increasing parental knowledge in early childhood care and education.

Anau Ako Pasifika: Early Childhood Development is the grant holder on behalf of the Bernard Van Leer Foundation for the Anau Ako Pasifika Project, a home-based program in early childhood care and education for Pacific Islands communities. It is based in Auckland, Tokoroa, and Wellington.

Education & Care Centers: Education and care centers provide sessional, all-day, or flexible-hours early child-

hood education services other than play centers, kindergartens, or *köhanga reo.* Each center is autonomous and many are privately owned. Another type of early care is home-based care (family day care), an organized system whereby parents of young children or babies are linked to caregivers, who are often themselves parents of young children. Playgroups are license-exempt, community-based, nonprofit-making groups of parents who meet to provide early childhood education for their children. Finally, there is the Parents as First Teachers program, which is based on programs developed in the United States by the Missouri State Department of Education. In the program, there is a series of regular home visits by early childhood educators to parents with children; visits occur from birth to three years of age.



SECONDARY EDUCATION

National Vocational Qualifications: New Zealand Qualifications Authority (NZQA) has responsibility for advanced vocational awards qualifications, and trade certificate and advanced trade certificate qualifications; the New Zealand Diploma in Business; and New Zealand diploma qualifications. Many industries have moved to National Certificates and National Diplomas registered on the National Qualifications Framework. National certificates and national diplomas generally are developed by industry training organizations or other standards-setting bodies.

There is a wide range of other vocational qualifications. These include qualifications developed and administered by polytechnics and other tertiary training providers, national bodies such as the New Zealand Institute of Management and the New Zealand Air Force, and private training providers.

The National Qualifications Framework: The National Qualifications Framework brings together senior secondary education, industry training, and tertiary education under one system. It is coordinated and administered by the New Zealand Qualifications Authority (NZQA). The framework is based on nationally agreed ''unit standards.'' These standards are like building blocks towards a qualification. Each standard belongs to one of eight framework levels. Level 1 is comparable to entry-level learning (Year 11) while Level 8 is comparable to postgraduate degree learning.

The National Qualifications Framework has three types of qualifications: national certificates, national diplomas, and degrees. National certificates are generally earned at Levels 1, 2, 3, and 4 of the framework. National diplomas and degrees are generally earned at Levels 5, 6, and 7. Level 8 qualifications are regarded as postgraduate degrees. The framework means learners can continue their studies wherever they wish—at school, university, polytechnic, a private or government training establishment, wänanga, or even in the workplace. Up to 1 September 1999, 450,000 learners had been registered on the framework. There were 620 national qualifications registered, and 27,250 individual qualifications awarded.

To administer the National Framework and to ensure that it succeeds, the NZQA provides the following services:

- Framework registration. NZQA quality assures unit standards, National Certificates, and National Diplomas that have been developed by Industry Training Organizations (ITOs) and other national standards setting bodies.
- Moderation. National moderation systems ensure that assessment decisions made across all accredited providers are consistent. Where there is an ITO, the moderation system is run by the ITO. NZQA runs other moderation systems, including moderation for general education subjects (mostly offered in schools).
- Accreditation. Schools, polytechnics, *wänanga,* colleges of education, universities and government and private training establishments can be accredited—they are entitled to assess against unit standards and award credits towards National Certificates and National Diplomas. Most ITOs are accredited to register workplace assessors. To be accredited any organization must meet stringent quality requirements.

- Record of learning. Every learner being assessed for Framework qualifications receives a Record of Learning. This lists all unit standard credits, National Certificates and National Diplomas achieved in the previous year. Learners can accumulate Framework credits over a number of years and from many providers until they have completed a qualification.

The NZQA: The New Zealand Qualifications Authority was established to coordinate national qualifications. It took over the functions of several agencies that had run schools, trades, and vocational examinations. It also assumed new responsibilities, notably to develop a national qualifications framework and to approve nonuniversity degrees. The Qualifications Authority deals with the provision and quality of qualifications; it does not write the curriculum and it does not provide funds for education and training. The NZQA is a Crown Entity established under the Education Act of 1989. The authority is appointed by the Minister of Education, and is accountable through the Minister to Parliament. The Maorion of the Qualifications Authority is to promote improvement in the quality of education in New Zealand through the development and maintenance of a comprehensive, accessible and flexible National Qualifications Framework (NQF).

NZQA Board and Management: The NZQA is headed by a board appointed by the Minister of Education. The board represents industry, community, and education interests. The minister approves all policy matters related to schools. NZQA services are varied. It oversees national examinations, including School Certificate, Sixth Form Certificate, Higher School Certificate, and University Entrance, Bursaries, and Scholarships. Examination prescriptions are based on curriculum statements developed by the Ministry of Education. NZQA administers regulations, conducts examinations, and issues results and certificates. There are 34 School Certificate subjects, 30 Bursaries subjects, 28 national Sixth Form Certificate-(SFC) courses, and hundreds of local SFC courses. In total, NZQA deals with 130,000 subject entries and issues 500,000 results annually.

The NZQA also oversees trades and vocational examinations, including business studies. Learning takes place in polytechnics, other education providers, and the workplace. In consultation with these providers and industry, NZQA develops prescriptions, conducts examinations, and issues results and certificates. Most industries have moved to National Certificates and National Diplomas on the National Qualifications Framework.

To keep pace with global developments, the NZQA provides a service that compares overseas qualifications with New Zealand qualifications and may give exemptions towards technical qualifications. This is a cost-recovery service in which individuals, generally people migrating to New Zealand, deal directly with the authority.

Registration and accreditation provides the public with an assurance of quality in programs leading to qualifications. The authority deals with the registration of government and private training establishments (of which there are approximately 800). For these providers, the authority approves and accredits thousands of local courses and qualifications. The authority has approved almost 200 degrees outside of universities—in polytechnics, colleges of education, *wänanga* and private training establishments. NZQA also accredits organizations for the National Qualifications Framework.

Maori: The Qualifications Authority is committed to the principles of the Treaty of Waitangi. Today the Treaty has become the basis for negotiations between government representatives and Maori. The authority has a team called *Te Tari o Te Pou* (the Office of Te Pou) that is dedicated to dealing with Maori issues. All Maori staff are part of the NZQA Maori network. The Network meets monthly and provides a chance to raise Maori issues across the Authority. A main priority for the Network is also professional development. A Responsiveness to Maori Management plan gives all staff opportunities to learn about Maori language, culture and values within the context of the Authority.

Special Education: The special education policy provides: extra assistance; adapted programs or learning environments; and specialized equipment or materials to support young children and school students to access the New Zealand Curriculum Framework. Historically young children and school students with special education needs have not had equal access to funding or quality education services throughout New Zealand. To address this, in 1996 the government introduced Special Education 2000. Special Education 2000 addresses specific physical, intellectual, sensory, social, and emotional needs while preserving the parent or caregiver's right to choose. The policy insists that schools and early childhood centers work closely with students and their families, communities, and specialists to identify needs and together make the best decisions to meet those needs.

***He Tohu Ümanga Mätauranga* (Specialist Education Services):** Specialist Education Services (SES) is a Crown entity working with children and young people who have complex individual needs, their families, schools and early childhood centers. SES staff include speech-language therapists, special education advisers, advisers on deaf children, registered psychologists,

kaitakawaenga, early intervention teachers, and education support workers. The staff work in teams to meet individual needs of students. Families, early childhood centers, and schools are included as part of the team around the child. SES is contracted by the Ministry of Education to provide services to schools. It also provides a range of additional programs and services which schools, early childhood centers, and other clients can purchase directly. SES was set up in 1989 to deliver services to children and young people with special education needs. Since that time services have changed substantially and today SES works largely with children and young people with high support needs. Work with students with moderate needs is on a cost recovery basis. SES has a national office in Wellington and 15 Area offices, each with a manager and service leaders who take responsibility for each of the four strands.

International Students: Overseas students can get information about fees, courses of study in New Zealand, and academic entry requirements from the New Zealand Government Office in their home country or by writing directly to the school they wish to attend. A student visa is required for any course of study longer than 28 days. International students are not entitled to student loans or student allowances. Overseas students need a written guarantee of suitable accommodation and must also be able to show that they have enough funds to support them during their stay in New Zealand.

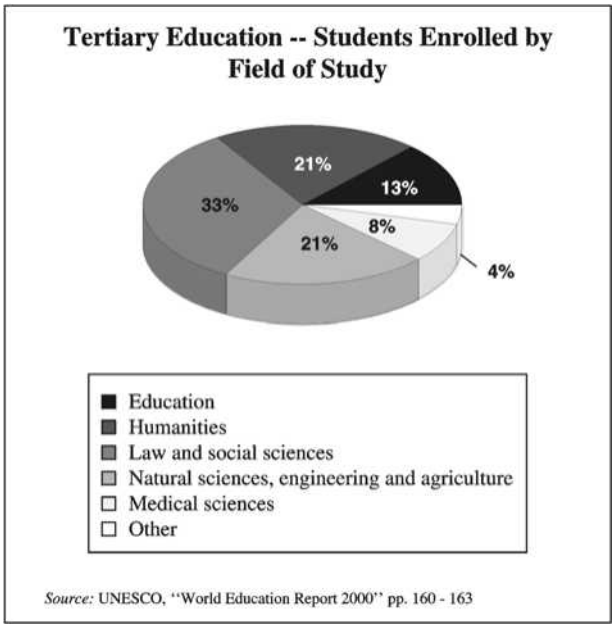
Additional Resources for Teaching: The Rural Education Activities Program (REAP) is a community-managed package of education resources based in a number of rural communities from the Far North to Southland. REAP provides programs and assistance of a supplementary and complementary educational nature across early childhood, primary, secondary, and community education.

Information studies and teacher librarianship is a three-year part-time program offered through the six colleges of education. Trained teacher librarians manage school library resource centers.

Advisory services are routinely provided to educators. Primary and secondary advisers are employed by colleges of education. They provide advice and guidance to schools and run professional development programs for teachers throughout the country. Particular emphasis is given to assisting schools to achieve local and national educational objectives. The Early Childhood Development and Specialist Education Services also provide specialist assistance and advice.

HIGHER EDUCATION

There is an extensive system of postcompulsory education and training. This includes universities, polytechnics, teacher training, and various private education institutions.



Source: UNESCO, "World Education Report 2000" pp. 160 - 163

Universities: There are eight universities in New Zealand. They are the University of Auckland, Auckland University of Technology, the University of Waikato, Massey University, Victoria University of Wellington, the University of Canterbury, Lincoln University, and the University of Otago. All universities offer courses in the usual faculties of arts, science, and commerce. Most universities specialize in certain fields. The two most prestigious universities with faculties including law and medicine are Otago and Auckland, situated at opposite ends of the country. Both have substantial international reputations and win the lion's share of competitive research funding.

New Zealand's oldest University, The University of Otago, was founded in 1869 by the early Scots settlers in Otago after gold had made the Wakefield settlement old enough to support one. It was later merged into the University of New Zealand until it became once again independent in 1960. Its campus is situated in Dunedin, a city offering the best of both worlds to 18,000 students. It has the facilities, entertainment, and variety of larger cities, with a wide range of social, cultural and sporting activities.

New Zealand's largest university, the University of Auckland, was established in 1883, and has grown into an international center of learning and academic excellence. The university is situated in the heart of the cosmopolitan city of Auckland and provides for 26,000 students.

Student Support: The student services section of the Department of Work and Income provides a range of allowances for students 18 years and over who are attending a secondary school or tertiary institution. Students may also qualify for an accommodation benefit, if they are receiving a targeted student allowance. Rates of allowances are changed annually and are subject to review. The Student Loan Scheme was established in 1992 to assist students to participate in tertiary education and eligible students may receive a loan from the government to cover fees; course-related costs—a maximum of NZ$1,000 a year is available to assist with course-related costs such as equipment, textbooks, field trips; and living costs—NZ$150 per week times the length of the course (less any entitlement to student allowances).

Students with student loans have to provide receipts for actual course costs incurred before the student is repaid. Loans, on which interest will be charged, are repayable through the Inland Revenue Department. The government reviews the interest rate yearly and the level of repayments is based on taxable income. The Department of Work and Income is responsible for administering the student loan scheme. The loans scheme was a major issue at the 1999 elections.

Polytechnics: Polytechnics provide a diverse range of academic, vocational, and professional programs and cover an increasing number of subjects at various levels of specialization. There are 23 polytechnics in New Zealand.

He Wharekura-tini Kaihautu o Aotearoa (The Open Polytechnic of New Zealand) is one of New Zealand's largest education providers with 29,050 students enrolled in 1999. Nearly 75 percent of students are in paid employment and are studying part time. Many study by correspondence. The Open Polytechnic offers more than 700 courses and 120 programs ranging from National Certificate through to degree level. It consults closely with industry to ensure that qualifications are directly related to the requirements of the workplace.

Teacher Education Providers: In recent years teacher training has been offered by a range of universities, polytechnics, and private training establishments. This has increased the number of places throughout the country where training can be accessed. For example, primary teacher training is now available in places such as Rotorua and Northland. Secondary teacher training is now available in Tauranga, Gisborne, and Wairarapa. Previously people interested in becoming teachers would have had to go to the main cities to train.

All teacher education programs must go through a quality assurance process and must have the approval of the Teacher Registration Board. There is an official list of institutions that are approved by the Teacher Registration Board to offer teaching qualifications as of 30 October 2000. Several of these institutions offer off-site programs in smaller centers when there are enough students, and some offer programs through distance technology.

Numerous Programs Available: There are several different teacher education courses and programs to choose from. Among the more popular is a three-year training program for early childhood workers and teachers that is operated at each of the colleges of education. For those who wish to go into primary school teaching, the usual course of training is a period of three years at a teacher training provider, followed by two years of satisfactory teaching in a state primary school. Courses may be shortened to one or two years for trainees who are university graduates or who are part way through degree courses, or for mature trainees with relevant work experience. Most primary trainees undertake a bachelor of education qualification or enter a program where previous completion of a degree is a prerequisite.

Two options are available to people who wish to train as secondary teachers. For graduates and those with other approved advanced qualifications there is a one-year course. People with University Entrance or acceptable Sixth Form Certificate grades may be accepted into division B, which involves up to four years consecutive or concurrent study. Secondary teacher training can be undertaken at a variety of institutions.

People who wish to become speech/language therapists enroll for afour-year bachelor of education (Speech-Language Therapy) degree at the University of Canterbury. Postgraduate courses for teachers who wish to be trained as teachers of people with disabilities are available at Auckland, Palmerston North, Wellington, and Christchurch. Specialist postgraduate training courses for teachers of the deaf and visually impaired are located at Auckland and Christchurch.

Continuing Education for Teachers: A wide range of professional education papers are offered to teachers, most of them intended to provide credits towards diploma qualifications and service increments for certified teachers. Wänanga (Maori tertiary institutions) provide tertiary education and training, while assisting the application of knowledge regarding *ahuatanga Maori* (Maori tradition) in accordance with *tikanga Maori* (Maori custom). Two wänanga qualified for funding on the same basis as universities, polytechnics, and colleges of education from 1994, and are governed in the same way as other tertiary institutions.

There are large numbers of private training establishments (PTEs) in New Zealand, of which about 800 are

registered with the New Zealand Qualifications Authority (NZQA). PTEs that enroll foreign students are required by law to have course approval and accreditation from the NZQA. The legislation provides protection for foreign students who pay tuition fees in advance. PTEs offer a wide range of courses, often in niche markets.

Other Tertiary Education Providers: There are a number of other tertiary education providers. Included in this group are national organizations such as Literacy Aotearoa, the Workplace Education Trust, three national early childhood preservice teacher education providers, and the National Association of ESOL (English for Speakers of Other Languages) Home Tutor Schemes. These other tertiary education providers receive an annual grant for the academic year and must conform to similar standards of accountability and financial viability as do private training establishments and tertiary education institutes.

Continuing Education: Continuing education for adults is widespread in New Zealand. The National Resource Center for Adult Education and Community Learning is a resource center for people and groups involved in adult and community learning. Community Learning Aotearoa New Zealand (CLANZ) gives recommendations on the dispersal of grants to community groups for nonformal adult learning projects. Many voluntary organizations make some provision for continuing education. Some organizations, such as the New Zealand Workers' Educational Association, have community education as their primary purpose.

All eight universities have centers for continuing education. Most offer the general public substantial continuing education programs in the liberal studies area. There has been, however, a significant increase in programs designed for specialist groups, especially occupational. Some of these are national in scope. At the local level, school community education programs provide educational opportunities for adults residing within a particular school community. Polytechnics provide a range of community education courses and programs for adults both on campus and through outposts.

Distance Education: The main agencies in the field of distance education are the Correspondence School, the Center for University Extramural Studies of Massey University, and The Open Polytechnic of New Zealand.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

***Te Tähuhu o te Mätauranga* (The Ministry of Education):** The ministry's mission is to raise achievement and reduce disparity in education. It is responsible for providing policy advice to the Minister of Education on all aspects of education, overseeing the implementation of approved policies, developing national guidelines, and ensuring the optimum use of resources. The ministry provides funding to early childhood centers and schools, negotiates levels of funding for tertiary institutions and wänanga, and ensures accountability for resources. It also administers legislation, manages education property owned by the Crown, conducts research, and collects education statistics. The ministry ensures the delivery of education advisory services, special education services, curriculum, and early childhood development through contractual arrangements with other agencies. The ministry's influence on education outcomes is indirect. It is not a provider of education.

Its purpose reflects this: *Te Ihi, Te Mana, Te Mätauranga* (Empowering Education). The ministry says:

> Education enables people to gain knowledge, skills, and attitudes so they can participate fully, socially and economically, in the community. Our role is facilitative rather than directive. We empower through our leadership, management of the infrastructure, problem-solving ability, and assistance of those at risk of underachievement. What we do influences the motivation and focus of the sector. We need to work with parents, teachers, and education managers to encourage, support, and enable them to use their energy, motivation, and skill to greatest benefit. We need to foster a policy environment that enables educators to operate effectively and students to participate and achieve. We need to ensure we are creating a system that can respond quickly and effectively to wider social and economic impacts and the needs of different communities, society, and employers.

The 2000-2001 Year in Education: The ministry reported that:

> The past few years have seen a significant shift in the thinking and approach of the Ministry of Education. The focus is now on educational achievement. This is reflected in work on literacy, numeracy, assessment, information and communication technologies (ICT), school support, Maori education, and teacher professional development. For a number of learners, influences in the wider family and community environment act as barriers to their education. We address and reduce these factors through working closely with health, social policy, and community agencies and through building up the capability of families and communities to support the education of their children.

The shift toward a focus on educational achievement is also mentioned in the ministry's mission statement, which discusses all aspects of the changing attitude.

New Focus on Achievement: This sees a continuation of initiatives that commenced in recent years and the in-

stigation of new government initiatives. Work under each of the mission statement headings contributes to the other, and it is important that such linkages are explicitly recognized. The government's priority to ''close the gap'' is a major focus for the ministry's work. Lifting both the achievement and participation of a significant number of participants from Maori communities and Pacific families is a priority.

Work continues on a range of initiatives to ensure all children have the opportunity to acquire the literacy and numeracy foundations that are essential to their ongoing education. One part of the plan to improve in those areas is to develop the capability within schools and classrooms to implement the most effective approaches for teaching students most at risk of not succeeding. Measures include developing a wider range of diagnostic tools and exemplars of effective teaching and assessment practice. A focus on the teaching strategies of schools and the professional development of their staff will continue to be important dimensions of the major strengthening education initiatives.

Another key initiative is to lift the participation of Maori, Pacific, and low-income families in high-quality early childhood education services to at least the level of the general population. The government has sought advice on additional measures and steps that are needed to achieve this goal. Areas that have been identified include improving the availability of early childhood services, increasing the professional capability of these services, and reducing the barriers created by language difficulties, lack of transport, transience, and parenting skills. Facilitating and supporting communities to develop the services that work best for them is another increasingly important role we look to play.

The ministry knows that families play an important part in any attempt to improve education. Strengthening the role of families and communities in the learning process, including developing genuine partnerships between the government, providers, and communities, is a key goal to help lift student achievement. An example of areas of work where this is important include the effort to strengthen education initiatives in disadvantaged areas such as Mangere and Otara, the East Coast, Northland, and Tuhoe and with AIMHI and Maori boarding schools.

The ministry knows that reaching young students will be easier if it can lift the foundation skills of adults and improve the pathways into tertiary education for those with few skills and low qualification levels. The work on industry training, adult education, adult literacy, community education, and parenting programs is designed to raise the skills of adults and, where possible, to also provide support for the education of children and strengthen the relationship between communities and education providers.

Success at all levels is important, so raising achievement levels for all learners is vital. To be a knowledge society, New Zealand has to better foster people's ability and willingness to learn skills in communication, numeracy, information, problem solving, and social and cooperative behavior, across a range of learning areas. Skill development starts in the earliest stages of life and continues through into adulthood. Increased diversity in our population, changing social and economic circumstances, and the impact on New Zealand of technology and globalization are placing increasing demands on the education system. Good quality early childhood education plays an important role in setting the foundations for successful transition to school. In the school, setting the national curriculum establishes expectations about learning outcomes as students progress.

Promoting Excellence Within the Education System: The ministry hopes to encourage early childhood education providers to raise their quality. Work will focus on the development of an early childhood sector plan and the proposed registration of early childhood teachers. Research will be on the best use of *Te Whariki,* professional development, and professional practice within the sector.

To improve the students, the ministry knows it must improve the effectiveness of teachers in subject knowledge, pedagogy, and assessment practices. The establishment of an education council and reviews of staffing will be significant areas of policy work. The demand for quality Maori immersion education continues to grow. The continued development of the Maori language education plan, increasing the supply of qualified Maori teachers, increasing the language proficiency of those teachers, creating more curriculum resources, reducing the workload of Maori teachers, and ensuring new *kura kaupapa* Maori and new *wharekura* are established with the necessary requisites for success will continue as areas of major focus. The National Administrative Guidelines now require schools to have explicit strategies to ensure the educational success of Maori students.

The implementation of the Samoan and Cook Island Language Curriculum will go some way to meeting the needs of those Pacific students whose families want their children to be proficient in the language of their culture. Increasing the supply of Pacific teachers will remain a priority, as will improving the responsiveness of mainstream schools to the needs of Pacific students.

Logically, if students and teachers are being asked to improve, administrators should also be expected to improve. The ministry hopes to support and develop the leadership capability of school boards and principals. The leadership capability of the principal and the board of trustees is of critical importance to a school's success and

needs to be supported along with that of teachers through a range of interventions.

To have the largest possible impact nationwide, the ministry intends to maximize the contribution of the tertiary sector to New Zealand's social and economic well being. The expansion of employment-based education, including the development of modern apprenticeships, the establishment of a Tertiary Education Advisory Commission (TEAC), review of tertiary resourcing including student loans, development of a Maori tertiary education strategy, and the Pacific Islands Tertiary Initiative will be important areas of work.

Finally, the ministry will look internally at ways to enhance its own capabilities. By improving the its responsiveness to Maori, the ministry shifted skills away from those that looked to control and instruct toward those that sought to recognize the importance of strong relationships, facilitate change, and nurture the ability to monitor and assess educational achievement at a range of levels across the system.

For 2000-2001, five areas have been identified as priorities for educational administration. They build on the initiatives that were introduced as part of the Ministry's Strategic Business Plan adopted in 1998-1999:

- Building on the investment in human resources systems by focusing on management training and developing organizational capability.
- Developing strong and effective relationships to support the process of change in the education sector.
- Continuing to increase the responsiveness of the Ministry and its staff to Maori.
- Developing stronger and more effective planning and management information systems.
- Improving business and information systems.

The new coalition government's priorities represent a significant focus in the work across the Ministry:

- A return to central resourcing of all schools and equity funding of early childhood education providers will require change in resourcing systems.
- Ministry will be involved in the negotiation of more collective employment contracts in the school and kindergarten systems.
- Legislation has been introduced to amend enrollment schemes.

Teacher supply in the secondary sector and particularly in disciplines such as math, science, Te Reo Maori, and computing will require close attention and monitoring as secondary school rolls continue to grow.

Three other key government goals are:

- Strengthen national identity and uphold the principles of the Treaty of Waitangi.
- Grow an inclusive, innovative economy for the benefit of all.
- Restore trust in government and provide strong social services.

Although these may appear to be little more than slogans, they have attracted considerable criticism when their implementation has been pursued. Closing the gaps, for example was modified in late 2000 to incorporate all sectors of the population and not just Maori.

Ministry of Education Overview: The Ministry reports that:

> It is vital to the well-being of New Zealand and its people to have an effective education system. Educational achievement levels of all students must rise over time. The significant disparity in the educational achievement of some groups in our community must be reduced. The quality of the education system must continually evolve and improve. Since it was established in 1989, the Ministry has seen far-reaching changes that have had an impact across the education community. Shifts in population, increasing ethnic diversity, a wider range of socioeconomic circumstances, advances in technology, and changes in the global market will continue to be important themes.
>
> The Ministry of Education's influence on education outcomes rests on the quality of policy advice, its implementation, services, and relationships with communities and education providers. We have an important responsibility to use our skills, knowledge, and experience to empower those in the sector to provide effective education. We need to work in partnership with and to apply the talent, skills, and enthusiasm of all those involved in education—students, parents, whänau, teachers, and managers. Jointly our efforts must focus on reducing disparity and raising achievement.
>
> Strengthening the Ministry's capability and effectiveness will remain a key priority over the next three years. We need to keep changing and become better at anticipating and adapting to changes in the wider environment. The Ministry needs to work within a clear, long-term, strategic context. The whole range of its responsibilities, including policy advice and implementation, need to be well integrated. We need strong, productive relationships with the education sector, and more effective policies for Maori in education and for the educational attainment of Pacific Islands peoples.

The educational administrative bodies are as follows:

Mana Tohu Matauranga o Aotearoa (New Zealand Qualifications Authority): The Qualifications Authority, a

Crown-owned agency, is an independent body that reports directly to the Minister of Education. Its main functions are to develop and maintain a comprehensive, flexible, and accessible National Qualifications Framework; oversee the setting of standards for qualifications; ensure New Zealand qualifications are recognized overseas, and overseas qualifications are recognized in New Zealand; and administer national examinations, both secondary and tertiary.

Te Tari Arotake Mätauranga (Education Review Office): The Education Review Office (ERO) reports publicly on the quality of education in all New Zealand schools and early childhood centers. This involves reviewing and evaluating all aspects of school and early childhood services including the quality of teaching, the quality of students' learning, and the role of management and elected school trustees.

Te Pou Taki Körero (Learning Media): Learning Media is an educational publishing company that specializes in producing programs and resources in a wide range of media for teachers and children, including the ''School Journal.'' In addition to producing educational materials in print and on audio and video cassettes, the Crown-owned company makes information and resources available online and on CD-ROM.

Te Poari Kairëhita Kaiako (Teacher Registration Board): The Teacher Registration Board is a Crown entity that maintains a register of teachers who fit the requirements of the Education Act. Teachers are issued with a practicing certificate valid for three years. Teacher registration is compulsory for teachers employed in all kindergartens, private, and state schools. Teachers who do not meet registration requirements can be temporarily employed with a limited authority to teach, which must be renewed annually.

Boards of Trustees, Councils, & Service Centers: Boards of trustees govern all state primary and secondary schools in New Zealand. Board members are elected by the parents of students enrolled at the school and may include three to seven parent representatives, the principal of the school, and a staff representative. One student enrolled full time in a class above Year 9 (Form 3) may also be elected to a board as a student representative. Boards may co-opt additional members, to ensure, for instance, that there is a gender balance and that the board reflects the ethnic and socioeconomic diversity of the student body of the school. Each board of trustees has a large measure of autonomy in its control of the management of its school. It has responsibility for payment of ancillary staff salaries, salaries of designated management positions in schools, and for the allocation of funds for the operational activities of the school. Boards of trustees are required to present an annual report and statement of service performance to their community and the Ministry of Education.

In addition to the boards, there are councils—polytechnics, universities, and colleges of education are all managed by councils made up of members representing various interest groups. Another functional group is the education service centers, which offer services such as administration of school transport, payroll, property, and other administration services to schools.

Pükenga Aotearoa (Skill New Zealand): Skill New Zealand is a Crown entity governed by a board appointed by the Ministry of Education. Skill New Zealand is the business name for the organization, which, until recently, has been known by its official name of the Education and Training Support Agency. Skill New Zealand promotes lifelong learning and works to raise the skill levels of all New Zealanders. It is responsible for a number of training initiatives: industry training, youth training, training opportunities, *te Ararau, takiala,* and commissioned youth action training.

Skill New Zealand oversees a range of initiatives designed to build a highly skilled and adaptable workforce. Their aim is to contribute to New Zealand's competitive advantage in the global market. It prepares school leavers to start their working lives, assists unemployed people to reenter the workforce, and facilitates training to raise the skills of people currently in employment. It has a national Office in Wellington and a network of regional offices to assist learners and industry around the country. It often purchases training on behalf of government, and works closely with the Department of Work and Income, the Ministry of Education, the Ministry of Maori Development, the New Zealand Qualifications Authority, Workbridge, the Department of Labor, and senior schools. The aim is to empower local communities to respond quickly to the education and training needs of their learners and employers.

This practical focus is underpinned by ongoing research into adult education and learning. This enables Skill New Zealand to provide strategic leadership and promote best practice in key education and training issues. Skill New Zealand supports workplace learning that raises skills and boosts competitive advantage for business. Its aim is to improve access to structured training in the workplace throughout people's working lives and purchase training in most areas of industry through Industry Training Organizations. Skill New Zealand also administers the new Modern Apprenticeships scheme.

The group also tries to achieve quality education and training outcomes for Maori learners in a variety of ways,

including initiatives developed and run by Maori providers and organizations. In purchasing education and training for Maori, Skill New Zealand places great emphasis on creating learning environments that recognize Maori needs and integrate Maori capability skills, such as Te Reo, Tikanga, and Te Mana Tangata.

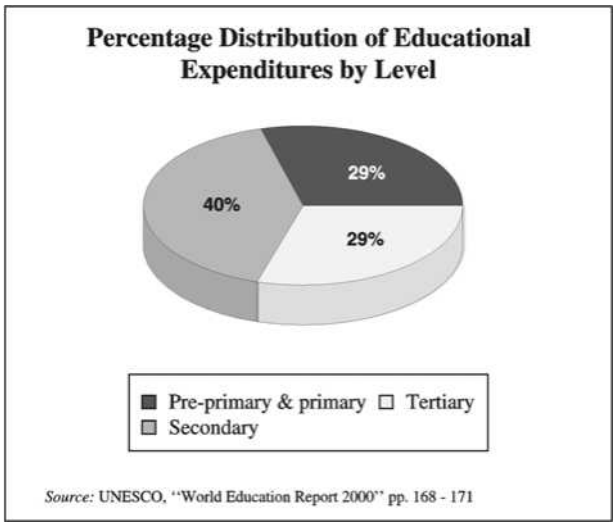
***Te Rünanga o Aotearoa mö te Rangahau i te Mätauranga* (New Zealand Council for Educational Research):** This is an autonomous body with statutory recognition, the council conducts educational research projects. The mission of NZCER is to support educators through quality research, resources, and information. NZCER is a not-for-profit organization with a bicultural focus. Its strong international reputation is based on 65 years of experience, political autonomy, and approximately 50 highly qualified, multilingual, multiskilled staff members. NZCER has a unique standing in New Zealand education and internationally. It is a leader in many research areas, and serves a wide range of educational institutions and agencies. Education House in Wellington is NZCER's headquarters. NZCER was set up in 1934 under a grant from the Carnegie Corporation, has undertaken 65 years of independent research and became a statutory body in 1945. The NZCER Act of 1972 states that the function of the council shall be:

1. To foster the study of, and research into, education and other like matters, and to prepare and publish such reports on these matters as may in its opinion be necessary or of value to teachers and other persons
2. To furnish information, advice, and assistance to persons and organizations concerned with education and other similar matters

The Board of NZCER, which represents a wide cross section of education interests, helps identify key educational issues and stakeholder needs, thus providing a strategic focus for the council. Some of its educational interests are as follows:

Te Kaupapa Mätauranga mö te Iwi Maori, the Maori Education Trust, administers and cosponsors scholarships, bursaries, and grants for Maori attending secondary, tertiary, and postgraduate courses both here and overseas. The sponsor parties include trusts set up by prominent Maori and other individual New Zealanders as well as business and community organizations. It also cosponsors the national Maori *Ngä Manu Körero* (speech competitions) and runs programs for Maori students in primary and secondary schools.

NCZER monitors and seeks to control education expenditures and funding. New Zealand's proportion of gross domestic product spent on education was 5.3 percent in 1996, above the OECD average of 4.9 percent. In 1997-1998 the state spent NZ$5,714 million on education or 16.7 percent of total government expenses; in 1998-1999, NZ$5,910 million or 16.8 percent; and in 1999-2000 NZ$6,238 million or 17.2 percent. For early childhood spending, a universal funding formula forms the basis for direct funding subsidies of chartered early childhood services. Services can claim funding for a maximum of six hours per childplace day, with a limit of 30 hours per week.



Compulsory schooling in New Zealand is funded by the government to varying degrees, depending on the type of school. Each state school is given a grant for operating costs and the board of trustees is responsible for making sure that the school is properly maintained. Expenditure is controlled by each school's board of trustees. The costs of teachers' salaries (excluding senior management salaries), school transport, teacher removal expenses, major capital works, and long-term maintenance are paid directly by the Ministry of Education. Financial management of the schools is subject to review and audit by the Audit Office. Education management and attainment is reviewed by the Education Review Office. Funds are also available for special education, school boarding bursaries, and the school transport system.

In 1991 a new system for funding tertiary institutions called the Equivalent Full-Time Student (EFTS) system was introduced. Under the system polytechnics, colleges of education, universities, and wänanga receive state subsidies for the number of equivalent full-time students in each of the course-cost categories at their institution. These funded places are provided in bulk by the government in advance of the funding year. The funding is inclusive of capital works. The EFTS funding system has abolished detailed central decision making about levels

of staffing, operating grants, and capital works projects. These responsibilities now lie with the management of tertiary institutions. In August 1999 it was estimated that 160,860 EFTSs were being funded with NZ$1.1672 billion.

The Ministry of Education, through its Property Management Group (PMG) is responsible for managing the Crown's ownership interest in New Zealand's state school property portfolio. This portfolio comprises around 2,300 state schools and their grounds throughout the country, with a total capital value of around NZ$4.7 billion.

NONFORMAL EDUCATION

The Mission Statement for Skill New Zealand says it will:

> Lead a national skills development strategy which makes a significant contribution to improving New Zealand's prosperity and well being; contribute to the expansion of a knowledge society where all New Zealanders can access nationally recognized workplace education and training qualifications leading to wider career and employment opportunities; and influence industry and enterprises to increase their investment in training for both competitive advantage and expansion of the nation's skills.

The new Labor coalition government is committed to introduce and expand the use of distance learning technology though the growing availability of the Internet in particular.

SUMMARY

The New Zealand education system has been among the most successful but faces six principal challenges:

1. It has a sector of the society that is presently 20 percent of the total and growing, and a higher percentage of the school and tertiary education age group and growing even more quickly, who have not previously and do not now access the resources of the system on the same basis as the larger population.
2. The quality of the New Zealand education system has been among the best in the world throughout the last century but it now faces a poorly performing economy, and financial and demographic pressures that may make maintaining this record increasingly difficult.
3. The salaries of New Zealand teachers throughout the system have declined by international standards and retaining the services of teachers trained in New Zealand against more lucrative opportunities overseas, especially the UK and Australia who both actively recruit in New Zealand, may be difficult.
4. Although there is pressure to maintain quality, there is less pressure to maintain funding and a common trend throughout the system has been to try to get more for less—thereby intensifying pressures on the already stretched resources of the system, including teachers, buildings, libraries, and other facilities.
5. At the same time, the New Zealand educational system must reorganize itself to train a new increasingly heterogeneous nation, in a new economic situation, with new cultural and material needs, which require a continuing revaluation and reconstitution of the national curriculum.
6. In addition, it faces the prospect of the continuing brain drain of those products of the system that it has successfully educated fleeing their loan burdens and seeking higher rewards in other countries.

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—Bob Catley

NICARAGUA

BASIC DATA

Official Country Name:	Republic of Nicaragua
Region:	North & Central America

Population:	4,812,569
Language(s):	Spanish, English
Literacy Rate:	65.7%
Number of Primary Schools:	7,224
Compulsory Schooling:	6 years
Public Expenditure on Education:	3.9%
Foreign Students in National Universities:	279
Educational Enrollment:	Primary: 783,002 Secondary: 265,515 Higher: 56,558
Educational Enrollment Rate:	Primary: 102% Secondary: 55% Higher: 12%
Teachers:	Higher: 3,840
Student-Teacher Ratio:	Primary: 36:1 Secondary: 39:1
Female Enrollment Rate:	Primary: 103% Secondary: 60% Higher: 12%

HISTORY & BACKGROUND

Spanning the breadth of Central America from the Pacific Ocean on the west to the Caribbean on the east, Nicaragua covers 129,494 square kilometers and was home to some 4.8 million people in 2000. Beginning with colonization by Spain in the 1520s, the history of Nicaragua parallels that of many of its neighbors with privilege, including educational access, which was reserved for the Spanish and those who affected Spanish ways. Although independence was gained in 1821, a highly hierarchical social structure remained in effect for the next 150 years. Education during those years followed an elitist Spanish model and was reserved for a very narrow segment of the population.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Title 7 of the 1987 constitution not only details the relative powers of government regarding education, but makes many statements regarding educational philosophy. Administratively the constitution establishes educational oversight and funding as the responsibility of the Ministry of Education, Culture, and Sports (MECD). The MECD falls within the executive segment of the government but operates under the laws created by the legislative *Asamblea Nacional.* One of the standing commissions within the assembly with particular responsibility for educational matters is the nine-member Commission on Education, Means of Social Communication, Culture, and Sports.

EDUCATIONAL SYSTEM—OVERVIEW

With a birthrate of 2.2 percent and 40 percent of the population below the age of 15, Nicaragua views education as a critical force to determine the future stability and prosperity of the nation. Nicaraguan education during the years since 1950 has been shaped by the same two major events that shaped the nation politically: the beginning and the end of the Sandinista government's tenure. Under the Somoza government, education levels, especially in the rural portion of the country were very low, with estimates of illiteracy ranging from 75 to 90 percent in the outlying areas and nearing 50 percent nationwide. In the years prior to the 1979 Sandinista emergence, Nicaraguan education functioned as two separate systems, the primary and secondary systems administered by the Ministry of Education and the higher education system, which consisted of the nation's two independent universities: National Autonomous University and the Central American University. In 1980, the Sandinistas integrated the autonomous higher education institutions into a single, centrally administered education system based in Managua. While some might criticize the Sandinistas for their political use of the education system, their emphasis on educational opportunity and literacy did bring about a renaissance in Nicaraguan schools.

In the first five years of their rule, enrollment in the nation's schools doubled from 500,000 to one million, despite the threats of violence from the contras. In 1982, UNESCO recognized the Sandinista Literacy Crusade for dropping illiteracy from 53 percent to 12 percent. After their electoral defeat in 1990, but before relinquishing power to the United National Opposition (UNO), the Sandinistas split the education system into four parts, a move criticized as being politically rather than educationally motivated. These parts are the Ministry of Education, with responsibility for preprimary through secondary-level schools; the National Technological Institute, which provides vocational training; the Institute of Culture, which administers the museums and other cultural institutions; and the higher education institutions.

Post-Sandinista education has continued to build upon the successes of the previous regime. While maintaining and expanding the Sandinista emphases on universal educational opportunity and literacy, the UNO government has reinstituted one aspect of education that

lay largely dormant through the 1980s: religion. Humberto Belli, a former education minister, described his educational approach as ''a Christian policy, dialectical in life, so the student can develop his critical consciousness.'' Predictably, this and related changes have drawn criticism from various quarters, but in a nation that is 90 percent Catholic, religion would prove hard to separate permanently from education.

''Access to education is free and equal for all Nicaraguans,'' reads the nation's constitution. Despite progress since 1980, this promise remains far from being met. Education is legally compulsory only through the primary grades, although even there the level of participation is rather low. In 1999, the nation's schools expected to enroll a total of 1,366,357 students but exceeded that number by nearly one percent for a total enrollment of 1,377,697. These students included 160,398 in preschool programs, 816,701 in primary schools, 304,169 in secondary schools, 5,250 in teacher training programs, 88,117 in adult education, and 3,065 in special education programs. Matriculation rates in preprimary through secondary schools have risen in recent years, but they still fall well below standards for universal coverage. In 1999, 26 percent of eligible preschool students were enrolled. Of eligible primary students, 75 percent were enrolled, with 32.6 percent of eligible secondary students in school. Mostly as a result of the relatively high enrollment rates in primary schools and as the aftermath of the Literacy Crusade, literacy stands at 65.7 percent for all citizens over the age of 15.

Enrollment by gender in all levels of education through secondary is fairly equal. The numbers at the preschool level are virtually identical. In the primary schools, the student population is approximately 50.6 percent male, while in the secondary schools 46.7 percent of students are male. This slight disparity helps to explain the higher level of literacy among women (66.6 percent) than among men (64.6 percent). Enrollment levels in both the adult education and literacy programs are virtually 50 percent for each gender. The academic year, as in much of Latin America, runs from March to December. Instruction is performed exclusively in Spanish. Given the very small number of citizens who speak primarily a Native American language, monolingual instruction remains a non-controversial issue.

PREPRIMARY & PRIMARY EDUCATION

Primary education as both the foundational level of studies and the level with the highest proportion of eligible students enrolled has traditionally been the most important focus of the Ministry of Education's work. The first six years of compulsory education are handled by the nation's primary schools, which serve students ranging in age from 6 to 12 years. At the completion of this course of study, students are awarded a *Diploma de Educacion Primaria* (Diploma of Primary Education). Of the 160,000 students in the primary schools in 1999, some 87.01 percent completed the year's studies, a rate that rose slowly but consistently over the decade of the 1990s. The objectives stated by the Ministry of Education for the primary curriculum are to develop fundamental skills in the areas of mathematics, reading, writing, science, and Christian moral values. Successful students are to be able to function in these skills at a level that will allow them to move into one of the courses of study available in the secondary schools.

SECONDARY EDUCATION

Secondary education lasts for five years, divided into three years of *ciclo básico* (basic cycle), with students typically aged 12 to 15 years, and two years of *ciclo diversificado* (diversified cycle) for students aged 15 to 17 years. Upon the completion of the liberal arts-oriented course of study in the diversified track, the student is recognized with the *Bachillerato* in Arts or Science, which is one of the prerequisites for access to higher education. The other option in the second portion of secondary education is a three-year course of study in one of the technical secondary schools. These students, aged 15 to 18, are awarded the title of *Técnico medio* after completion of their coursework. The stated objective of the secondary education system is to prepare students for successful entry into university study, although many students opt to enter the labor pool immediately upon completion. For those unable to attend traditional day schools, the MECD provides both evening and Saturday classes in various venues around the country.

Given the emphasis placed on primary education, the nation's secondary system has not developed to a comparable degree. A secondary school reform program, beginning in 1999 and funded by theInter-American Development Bank, sought to address perceived weaknesses in this system, specifically targeting the goals of quality and equity. This program was aimed at four areas of emphasis: changes to the education structure and curriculum within the secondary schools, increased and varies uses of educational technology, development of a pilot preschool education program to be administered within the secondary schools, and an incentive program aimed at encouraging the demand for and supply of educational services.

Curriculum—Examinations, Diplomas: The secondary curriculum in place during the 1990s was a traditional one including study of mathematics, language arts, science, and religion. This curriculum is actually little changed from that used during the Sandinista regime, al-

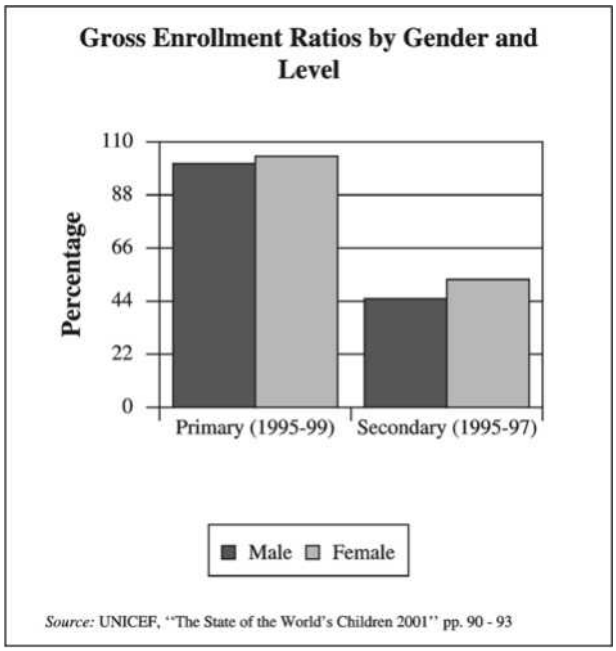
though overt political indoctrination has been removed from the schools. Beginning in 1999, the Ministry began a review of the existing secondary curriculum aimed at a complete revision. This revision will be effected with the assistance of people at all levels of the education system as well as non-education government representatives and representatives from private industry. The research guiding this revision includes the assessment of current and projected future needs regarding secondary enrollment and infrastructure, the social demands affecting the education system, a critique of existing administrative practices within the MECD, and inquiry into improved articulation between the various levels of education and between the education system and the workforce. At the completion of this research, the MECD proposes to review the current curriculum in light of the findings from the research and then to create a revised curriculum. Despite the pronouncements on the need for reform, it is not clear how committed the government is to significantly restructuring the nation's secondary schools.

Grading is performed on a 0 to 100 percent scale with 60 percent as the cutoff for passing. Although all instruction in government-funded schools is carried out in Spanish, four English-speaking schools operate in Managua: the American-Nicaraguan School, which is widely considered to provide the best education in English; the Lincoln Academy; the Notre Dame School; and the Nicaraguan Christian Academy. French, German, and other national schools also operate in the country, although their instruction is in Spanish.

HIGHER EDUCATION

A total of 14 higher education institutions serve Nicaragua. The most popular course of study at these schools are international relations, business, and medicine. The *Consejo Nacional de Universidades,* a body with representatives from all member institutions provides oversight and governance to all higher education facilities, while the *Asociación Nicaraguense de Instituciones de Educación Superior* coordinates higher education services and planning in both the areas of academics and administration. This latter organization also helps to facilitate communication and academic freedom between and within member institutions.

University study typically follows the following sequence. The first level of study culminates in the awarding of the *Licenciatura,* normally attained after four or five years of study, depending on the subject, and indicating a basic professional qualification. The shortest course of study is a two-year program in accounting and the longest is the six-year sequence for medicine, although the degree granted in that field is Doctor. The second stage of studies in the university leads to the *Maestría* (Masters) degree. This degree follows a two-year course of study and the presentation and defense of a thesis. Grading typically is done on a scale of 0 to 100 percent with 70 percent as the lowest passing grade. Instruction in all of these institutions is carried out in Spanish with the exception of the English-based University of Mobile, Latin American Campus.



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

Public & Private Institutions: Nicaragua's higher education is provided by four categories of institutions. The most prominent among these is the *Universidad Pública* (Public University) including the Universidad Americana. The Universidad Católica de Nicaragua (UNICA) and Universidad Centroamericana, a Jesuit university founded in 1960, represents the second category, the *Universidad Privada* (Private University). The remaining categories are the *Centro Técnico Superior* (Higher Technical Center) and the *Centro de Investigación y de Capacitación* (Research Center).

Admission to university-level studies requires the student to have earned the *Bachillerato* credential from their secondary school. In addition, students are required to sit for the *Prueba de Ingreso* (entrance exam). Non-Nicaraguan students should hold an equivalent secondary credential as well as be proficient in Spanish. The government provides for the autonomy of the universities and other higher education facilities. The management of the universities is constitutionally delegated not only to the administration of the institution, but to the ''professors, students, and workers,'' although their relative participation in management is not defined by law. Many students pay nothing for their education with all expenses

covered through government aid. The maximum fee at the public institutions is 150 cordoba (US$40) per semester while the average at the private universities is about US$1,000 per year.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Responsibility for education nationwide falls to the *Ministerio de Educación pública, Cultura y Deporte,* MECD (Ministry of Public Education, Culture and Sport). The MECD, aside from administering the nation's schools and providing a standardized curriculum, directly trains principals and oversees the training of teachers in member institutions. In a movement away from the highly centralized systems before 1990, the MECD in 1993 introduced a reform that granted managerial and budgetary independence to local school-based councils, analogous to local U.S. school boards. The results of this move were mixed.

Those schools located in wealthier areas with a cohesive sense of identity and greater community resources fared very well under the system, while less cohesive, less resourced schools in poorer areas did not find the change productive. By 1999, research suggested that the school autonomy project had not really effected as significant a change as the government had suggested. Instead, many schools that had not opted for the autonomy agreement were actually able to make more of their own decisions then those who had signed the autonomy agreement. This initiative has also been received differently by professionals, with principals typically enjoying the freedom the system offers and teachers feeling threatened under these guidelines.

In 1999, the MECD began a major reform initiative aimed primarily at improving the quality of secondary schools but touching on many areas of institutional practice. As a part of this reform, the ministry aims to overhaul its information system and its communications with the schools. University oversight is provided by the *Consejo Nacional de Universidades* (National Council of Universities) and the *Asociación Nicaraguense de Instituciones de Educación Superior* (Association of Institutions of Higher Education).

Funding for education has risen significantly over the 1980s and 1990s with more increases promised for the future. In the face of a significant budget deficit—$162 million of a $551 million budget in 1996—double-digit inflation, and unemployment of 16 percent, this continued expenditure has taken a great deal of political will.

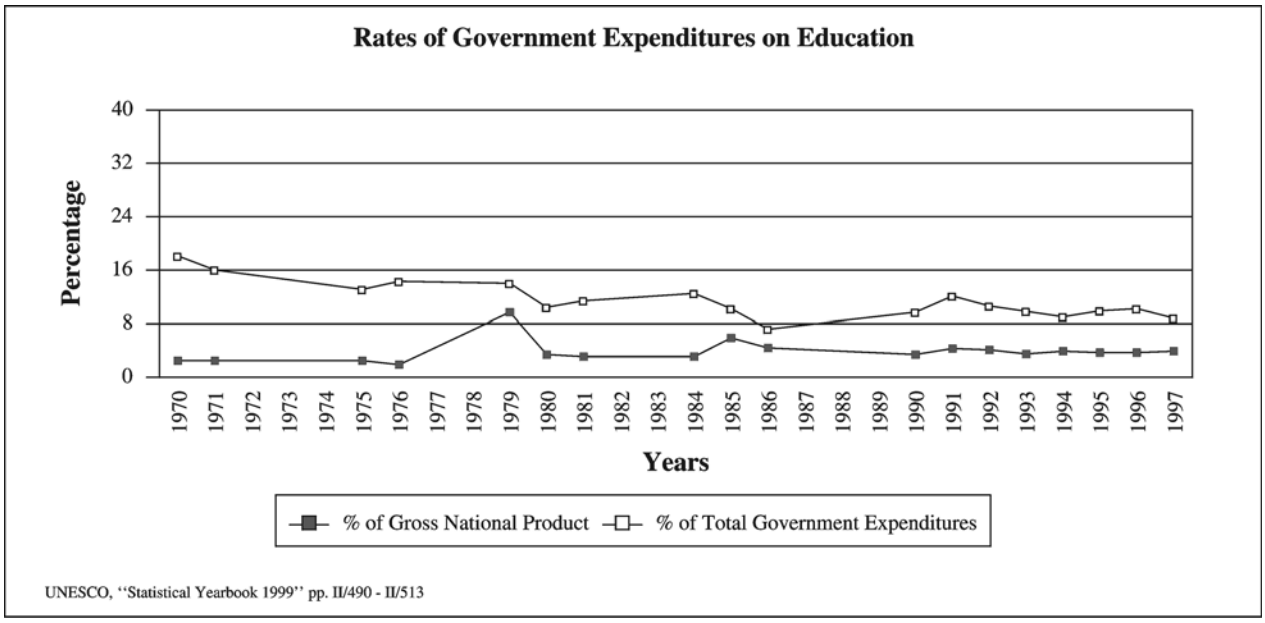
NONFORMAL EDUCATION

Vocational and technical education beyond that offered in the technical secondary schools is provided by Centros técnicos superiors, which fall under the jurisdiction of the higher education system. Studies in these facilities last for two or three years, leading to the degree of Técnico superior. Those holding this certification are admitted into university-level studies in related fields of study. Like the Centros técnicos, the nation's Polytechnical University, and the Institutos Politécnicos and Técnologicos offer two-and three-year courses of study leading to the granting of technical professional qualifications.

TEACHING PROFESSION

The nation's primary and preprimary teachers are trained in teacher-training programs administered by the secondary education division of the Ministry of Education in the nation's many pedagogical institutes. The best of these programs, and the strongest secondary school among all categories, is widely recognized as the Managua-based Escuela Pedagogico La Salle. The complete five-year course of study at La Salle and the other institutes is initiated after the completion of primary education and consists of a three-year program of general education followed by a two-year program of specialization. Upon completion of this program, students are awarded the *Diploma de Maestro de Educación Primaria* (diploma of mastery of primary education). Secondary schools receive their training in a four-year program of study at the Universidad Nacional Autónoma de Nicaragua (UNAM). Completion of this program is recognized by the conferring of the *Título de Profesor de Educación Media* along with the *Licenciatura* degree. Admission to the secondary training program requires the completion of the secondary-level *Bachillerato* or the earning of the primary education certification.

The nation's 28,000 teachers are not highly paid but, compared with their Central American peers, fare well. In 1995 union officials complained of average teachers earning only 275 cordobas (US$55) a month and noted that a family of seven is estimated to spend 200 cordobas on basic needs each month, leaving a teacher attempting to support a large family with limited disposable income. By 1999, this average salary had risen to 425 cordobas per month, compared with a salary of 400 for Salvadoran teachers and 358 for those in Panama. The post-Sandinista years have been considerably less friendly to organized labor than had the previous period. The teachers are represented by a union, ANDEN, which has sought not only an increase in wages, but job security for its members by creating a system of tenure in the schools. Although stating their dedication to preserving and expanding the gains made in education through the 1980s, ANDEN's activities and demands have largely focused on salary and working condition issues, rather than those of educational philosophy and curriculum.



SUMMARY

If Nicaragua's educational system was evaluated on the basis of its primary schools, the nation would earn medium to high marks. Unfortunately, educational performance, participation, and effectiveness drop off considerably as grade levels increase. Even by the fifth and sixth grades, despite high levels of participation, academic performance has dropped considerably. Secondary schools serve such a limited portion of the population that the question of their performance is somewhat moot. Given the weakness of the secondary schools, the numbers and quality of students in higher education are probably better than might be expected.

Given the low enrollment levels for students in secondary education and beyond, Nicaragua's greatest need is to extend universal education to a much wider portion of its population if its citizens are to compete with those in the more developed nations in Latin America. Specifically, secondary education needs to be made more accessible to those living in rural areas. Along the lines of accessibility, evening and Saturday secondary education classes, while widely available, suffer significantly in quality. Another significant improvement needed is improved primary teacher training, raising the level of this instruction above that of secondary education. Ultimately, the most important challenge facing Nicaragua in coming years is economic. With a crushing debt and other economic hardships, the incentive to slash education budgets will rise in the future. The nation's success in obtaining debt relief or otherwise dealing with its looming economic crisis will to a large degree dictate the possible future course of education.

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—Mark Browning

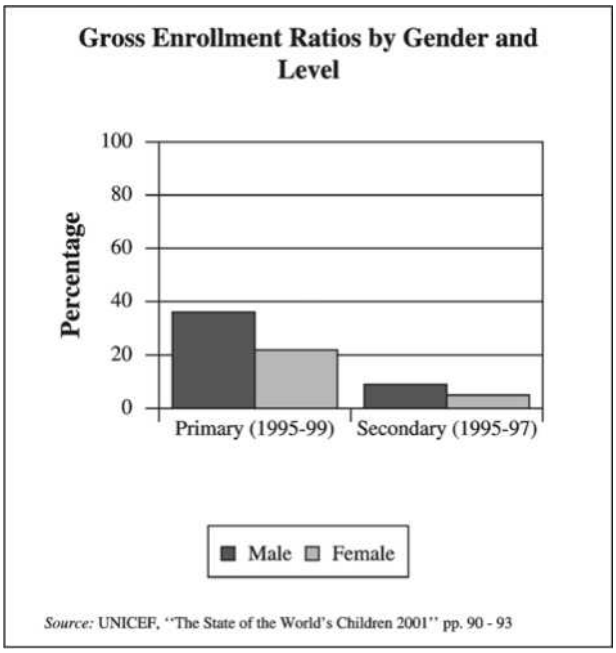
NIGER

BASIC DATA

Official Country Name:	Republic of the Niger
Region:	Africa
Population:	10,075,511
Language(s):	French, Hausa, Djerma
Literacy Rate:	13.6%
Number of Primary Schools:	3,175
Compulsory Schooling:	8 years
Public Expenditure on Education:	2.3%
Educational Enrollment:	Primary: 482,065 Secondary: 97,675 Higher: 4,513
Educational Enrollment Rate:	Primary: 29% Secondary: 7%
Teachers:	Primary: 11,545 Secondary: 3,579 Higher: 232
Student-Teacher Ratio:	Primary: 42:1 Secondary: 28:1
Female Enrollment Rate:	Primary: 23% Secondary: 5%

Niger, officially Republic of Niger (*Republique du Niger*), is a poor, landlocked Sub-Saharan nation in West Africa. Niger declared its independence in 1960, but it wasn't until 1993 that it held its first free and open election. Ongoing trouble with the Taurag, a nomadic ethnic group, and coups in 1996 and 1999 resulted in a transition to civilian rule and the creation of a National Reconciliation Council.

The total population of Niger, based on a 2000 estimate, is 10,076,551 people, divided into several ethnic groups including Hausa (56 percent), Djerma (22 percent), Taureg (8 percent), and other smaller groups (14 percent). The country is almost entirely rural and the population is unevenly distributed, putting a great strain on the educational system. Another complicating factor to standardized education is the language; French is the official language, but at least five principal indigenous languages are also spoken and represent the major ethnic groups. One unifying factor is religion, as 80 percent of the population are Muslim.



Schooling is free in Niger, but many areas do not have a school and, as a result, Niger has one of the lowest literacy rates in West Africa. Most of Niger's adults cannot read or write, and the literacy rate is only 13.6 percent. However, facilities are being expanded with aid from France and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) with the hope of correcting this problem.

The school system is based on the French model and consists of a primary school (*Ecole Primaire*), a secondary system (*Lycée*), and higher education system. Each of these is referred to as a cycle.

Primary schooling lasts six years and is attended by children from the ages of 6 to 12. At the completion of this cycle, students sit for an examination and are awarded the *Certificat D'Etudes Primaires Elementaires* (CEPE).

Schooling is compulsory in principle for ages 7 to 15 for a period of 8 years. However, there is only about a 25 percent school attendance by primary-school-age children, and even fewer 12- to 17-year-olds continue on to the secondary schools. An attempt is being made to reach more children by establishing tent schools or hut schools to serve the nomadic populations in the northern sector of the country. When the nomadic group moves, the school also moves, hoping to avoid the attrition that the frequent mobility causes. In addition, there has been a shift in the language used for primary instruction—from French to one of the four different languages that represent the ethnic group.

The common factor among the diverse ethnic groups is religion. Because of this, Koranic schools are widespread and continue their traditional teaching of Muslim theology, law, and history to preserve their heritage.

Secondary school follows the French model of education and is divided into a lower general secondary cycle that lasts four years, followed by a three-year upper cycle in which the student may specialize. On completion of the upper cycle and examination, students are awarded the *de bachelier de l'ensignement du second degre* (BEPC). There is also a technical secondary option that the student may take in lieu of the traditional model. This cycle is also three years and students earn their *bachelier technicien* (technical degree).

Niger's major institution of higher education is the University Abdou Moumouni in Niamey (the capital city) and the Islamic University. The councils or governing bodies of the institutions define all guidelines for teaching, the curricula and study systems, the organization of examinations, and vote on the budget. It is administered by *Ministere de l'Enseignement superieur, de la Recherche et de la Technologie* (The Ministry of Higher Education, Research, and Technology).

There are also specialized institutions of higher education, such as the *Ecoles Normales,* which train teachers for the primary schools. There are two tracks that one may take to earn teaching certification. The short track takes two years but requires that the student hold the *Brevet d'Etudes du primier* (BEPC); the long cycle takes four years but gives the student a bachelor status and the opportunity to become a teacher in a general college.

Postsecondary vocational and technical studies are separate from the university and are provided by postsecondary institutions or centers that are administered by other relevant ministries.

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—Jean Boris Wynn

NIGERIA

BASIC DATA

Official Country Name:	Federal Republic of Nigeria
Region:	Africa
Population:	123,337,822
Language(s):	English, Hausa, Yoruba, Igbo (Ibo), Fulani
Literacy Rate:	57.1%
Number of Primary Schools:	38,649
Compulsory Schooling:	6 years
Public Expenditure on Education:	0.7%
Libraries:	76
Educational Enrollment:	Primary: 16,190,947 Secondary: 4,451,329 Higher: 266,679
Educational Enrollment Rate:	Primary: 98% Secondary: 33%
Teachers:	Primary: 435,210 Secondary: 152,596 Higher: 18,010
Female Enrollment Rate:	Primary: 87% Secondary: 30%

HISTORY & BACKGROUND

Nigeria ranks as the tenth largest nation in the world, and by far the largest nation in Africa, with an estimated population of 123,337,822 people. Located north of the Gulf of Guinea in West Africa, Nigeria is bordered on the east by Cameroon, on the northeast by Chad, on the north by Niger, and on the west by the Republic of Benin. Land features change dramatically in Nigeria, from rain forests along the coast to rolling savanna hills about 200 miles north of the coastline. The savanna extends another 200 miles northward across the Niger and Benue Rivers. In the northeast, mountains form the border between Cameroon and Nigeria. The central and western part of northern Nigeria is a flat, semi-desert land called the Sahel. The Sahara Desert expands southward into the northern edges of Nigeria. The total land area is 356,669 square miles (923,773 square kilometers).

In 2000, more than 50 percent of the people in Nigeria lived in urban areas. Lagos, the former capital on the

southwestern coast, has an estimated 13.5 million citizens. Lagos is among the 10 largest cities in the world. Other large cities include Ibadan in the west with 1.5 to 2.0 million people, Ogbomosho in the west with more than 720,000 people, and Kano in the north with almost 800,000 people. In 1991 the capital was moved to Abuja, located in the central part of Nigeria north of the Niger and Benue River confluence. By 2000, the capital had grown to more than 335,000 people.

Four major ethnic groups make up about 65 to 70 percent of the population. The largest group is the Hausa/Fulani, a mixture of two ethnic groups living primarily in the northern half of the country. The Hausa/Fulani people number about 35 to 40 million. The Yoruba in western Nigeria number about 30 million people, and the Igbo in eastern Nigeria number about 15 million people. More than 300 ethnic groups, each speaking a different language, live in Nigeria. English, nonetheless, is the common language used for business, education, and government.

Before the British arrived in the early nineteenth century, there were two major types of education in Nigeria. In the Islamic north, education was strictly religious in nature. In each Muslim community, a mallam drilled children as young as five years old in the teachings of the Qur'an and the Arabic alphabet. During the colonial era, larger cities set up more expansive Islamic schools that included subjects such as math and science. In 1913, these Islamic schools, almost all in the north, numbered 19,073 and enrolled 143,312 students. In the 1970s the government took control of the Islamic schools, but in the 1990s, the schools were allowed to operate independently again.

The indigenous system was the second type of education before the British occupation. Students were taught the practical skills needed to function successfully in traditional society. Usually children within two or three years of age belonged to an age-group. Together, they learned the customs of their community and were assigned specific duties around the village, such as sweeping lanes or clearing brush. As the children grew older, the boys were introduced to farming and more specialized work, such as wood carving or drumming. Girls would learn farming and domestic skills. Boys would often enter into apprenticeship-type relationships with master craftsmen. Even in the twenty-first century, this kind of education is common.

Formal, Western-type of education was introduced by British missionaries in the 1840s. The Anglican Church Missionary Society (CMS) started several schools in the mid-1800s. The colonial government gave the church financial aid, but in the early twentieth century the government began building primary and secondary schools. By the time the British combined the northern and southern regions into one colony in 1914, a total of 11 secondary schools were in operation, all but 1 run by missionaries. There were also 91 mission and 59 government elementary schools.

Western education slowly entered the northern region. In 1947, only 66,000 students were attending primary schools in the north. Ten years later, the number enrolled had expanded to 206,000 students. In the western region, over the same period, primary school enrollment expanded from 240,000 to 983,000 students. The eastern region experienced the most dramatic growth in primary enrollment during this period, jumping from 320,000 to 1,209,000 students. The number of secondary school students in the entire nation grew much less dramatically, increasing from 10,000 in 1947 to 36,000 in 1957. Most of this growth, 90 percent, was almost entirely in the south.

In the 1950s, Nigeria adopted the British system called Form Six that divided grades into six elementary years, three junior secondary years, two senior secondary years, and a two-year university preparation program. Those who scored high on exit examinations at the end of Form Six usually were qualified to enter universities.

Although Nigeria celebrated its independence in 1960, the second half of the sixties brought the chaos and disaster of the Nigeria Civil War. After a long series of ethnic riots and killings against the Igbo of eastern Nigeria, the Igbos seceded from Nigeria in May 1967, naming their new country the Republic of Biafra. The war destroyed much of the nation's educational framework, especially in eastern Nigeria. Biafra surrendered in 1970, but the country never fully resolved the issues that led to the war.

In 1976, Nigeria passed a law making education compulsory for all children between the ages of 6 and 12. By 1980, approximately 98 percent (15,607,505 students) of this age group were enrolled in primary school, up from 37 percent in 1970. The military and civilian governments paid little attention to education, however, and the quality of education deteriorated nationwide.

By 1985, the country as a whole had 35,000 primary schools with fewer than 13 million students. Another 3.8 million primary school-aged children lived on the streets. Conditions became progressively worse. By 1994, the number of primary students in school had changed little, even with the country's high birth rate.

Secondary education fared worse than the other levels of education. During the 1970s and 1980s, the majority of primary students finishing sixth grade never went on to junior secondary school. Those who did rarely went on to senior secondary school, and for those who were

qualified for higher education, very few openings existed in the 1960s. At independence, with about 6,000 students, there were only six higher educational institutions in Nigeria: the University Ibadan, the University of Ife, the University of Lagos, Ahmadu Bello University, the University of Nigeria at Nsukka, and the Institute of Technology at Benin. More universities and polytechnics were built in the 1970s, and more students were able to go on for postsecondary education. In 1971, approximately 19,000 students were studying in institutions of higher education. By 1985, the number had increased to 125,000 students, but this still represented a tiny portion of the population.

Nigeria has since struggled through a series of military dictatorships that ended in May 1999 with the democratic election of President Olusegun Obasanjo. The government seems determined to restore a damaged educational system over the last two decades of the twentieth century.

CONSTITUTIONAL & LEGAL FOUNDATION

A nationwide Board of Education was established by the colonial government in 1926. The education departments of Southern and Northern Nigeria were shortly thereafter merged to form a federal Department of Education. Government planning occurred after World War II. The 1946 Ten-Year Development Plan stimulated rapid expansion of schools especially in the south. In 1951 Nigeria was divided into three regions: North, East, and West. Each region had its own Board of Education and Ministry of Education. Four years later, the West took the lead in Universal Primary Education (UPE) by passing a law making primary education free. Two years later the East made the first three years of primary education free.

In 1973, the government created the National Youth Service Corps (NYSC) to promote patriotism among the young. The program required all students finishing schools that grant diplomas and certificates (postsecondary programs), to serve one year in public service in areas such as primary education, rural health, and construction.

In September 1976, the federal government initiated a national UPE program. Its success was mixed because of the political and economic turmoil of the following two decades. In the late 1970s, however, the government was optimistic that it could bring the people together through an expansive educational program. Consistent with this goal, the government declared in 1977 that education was an instrument of national development. The 1983 Constitution placed elementary schools under the responsibility of local governments and secondary schools under the combined administration of state and federal governments. Chapter II of the Constitution passed in 1999 promised ''equal and adequate educational opportunities at all levels,'' to ''promote science and technology,'' and ''to eradicate illiteracy'' by working toward ''(a) free, compulsory and universal primary education; (b) free secondary education; (c) free university education; and (d) free adult literacy programs.''

In September 1999, President Obasanjo introduced Universal Basic Education (UBE), which promised free education for all Nigerians through junior secondary school (grade nine). Nigeria received a $55 million loan from the World Bank to help implement UBE. The money helped train about 30,000 teachers a year for 5 years. In addition, the president announced that Nigeria built 28,000 classrooms in the year 2000. UBE also includes a nation-wide literacy push to educate those outside the formal schooling system, including schools for families of pastoral nomads and migrant fishermen.

EDUCATIONAL SYSTEM—OVERVIEW

Nigerian law requires compulsory education for all students between the ages of 6 and 15. Students in primary and secondary school attend three equally divided sessions from January through December, with about a month vacation between sessions.

In 1982, Nigeria switched to the American system of six primary, three junior secondary, and three senior secondary school grades, but the rigid examination system remained. To qualify for entry into Junior Secondary School (JSS), Senior Secondary School (SSS), and higher education, nationwide examinations are held each year. Because exam scores determine a student's future educational choices, schools tend to stress memorization of facts, rather than creative problem solving. There are not enough senior secondary schools in Nigeria, so most students who finish JSS go into the workforce.

Certain federal and state agencies plan and carry out special education programs. Teachers receive training to teach in these programs. Mostly, though, the government encourages integration of special education students into the regular schools. The Ministry of Social Development, Youth, and Sports also runs centers throughout the nation to help train people with special needs.

There are three major categories of higher or tertiary education. One is postsecondary, which is non-university level training in technical and vocational fields. Students receive certificates of training for completing work-oriented courses. The second type of higher education institution consists of higher technical, but non-university level programs offered at technical colleges, polytechnics, and colleges of education. They usually offer a variety of options for students that lead to a National Diploma (ND) for two years of study or a Higher National Diplo-

ma (HND) for four years of study. The third type of tertiary institution is the degree-granting institution offering bachelor's and higher degrees.

About two-thirds of the universities are federally owned, and a majority of the others are state-owned. There are 13 federally owned and 14 state-owned polytechnic colleges. Unlike primary and secondary schools, the institutions of higher education normally follow a 15-week semester system, running from October to mid-July.

PREPRIMARY & PRIMARY EDUCATION

Most preschools and kindergartens are privately owned, but they must register with the government and follow federal guidelines. They are normally very expensive, so only the wealthy can afford to send their children to preschools and kindergartens. The federal government initiated an Early Childhood Care Development Education (ECCDE) program in the early 1990s, but rapid changes in political events prevented it from making progress. In 1991, only 4.7 percent of preschool children had some preprimary education. The program called for community-based childcare. In 2001, as support for the UBE program, some communities began building their own nursery and preschool facilities with federal money and international grants and loans.

Primary school is free, paid for by local governments, but there are expenses the families must pay, such as school uniforms, supplies, and transportation. In October 2000, there were almost 19 million students enrolled in more than 41,500 elementary schools. Estimates suggest that about 65 percent of primary students complete grades 1 through 6, but only about 45 percent of these continue on to junior secondary school.

A major factor in the quality of education is the teacher-student ratio. In Islamic schools, often the ratio is ideal, only eight or nine students per teacher. In the public schools where the vast majority of students are educated, the average pupil-teacher ratio in 1996 was 34:1. The range varies considerably, as UNESCO figures illustrate: Anambra, 21:1; Kwara, 21:1; Taraba, 22:1; Plateau, 26:1; Ogun, 26:1; Abuja (federal capital), 26:1; Adamawa, 53:1; Yobe, 73:1; and Kano, 565:1

The major courses taught in primary schools are mathematics, English, Bible or Qur'an, science, social sciences, and one of the three major Nigeria languages: Hausa, Igbo, or Yoruba. Most courses are taught in the local language. In some schools computer skills, art, and/or French are offered. In their sixth year, students take the National Common Entrance Examination (NCEE) for entry into federal and state government secondary schools.

In 1983, a 144-page guide was published by the government detailing the social science syllabus for primary grades 1 through 6. Using Nigerian culture as a base, the syllabus focused even more on social topics: problems of living in the family, problems of employment, problems of group conflict, and religious problems. In the late 1980s, the government added emphasis on health and safety. With some adjustments to encourage problem-solving skills, this guide remains to be used.

Primary school classrooms across Nigeria lack basic supplies for teaching. A study published by UNESCO indicates that 10 percent of the sampled schools had no chalkboards, and most of the chalkboards in use needed replacement. Ten percent of the schools with chalkboards had no chalk, and in more than 50 percent of the schools, the supply was too little. Teaching materials, such as charts and maps, were missing in 42.0 percent of schools, and another 44.5 percent had inadequate supplies of these materials. Almost 89 percent of the schools had no science equipment.

SECONDARY EDUCATION

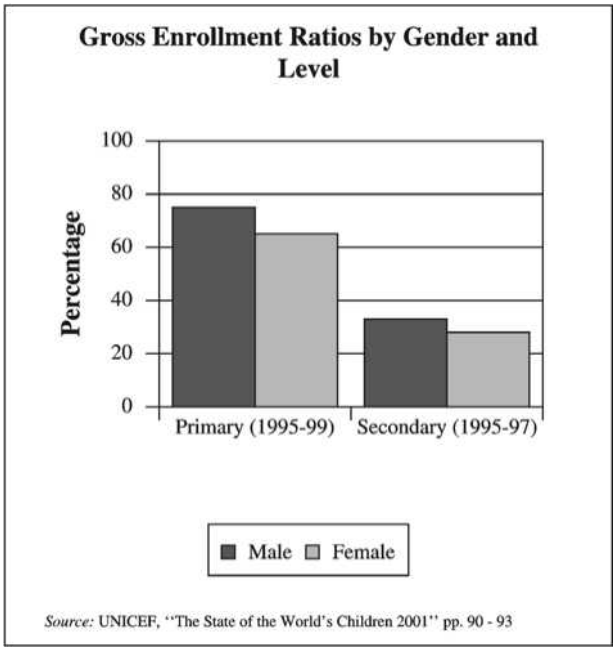
Secondary schools are mostly state or federally owned, although in 2001 the federal government began encouraging the return of former church mission schools. The federal government promised to continue paying teacher salaries. Generally, the federal government funds and manages two federal government colleges (secondary schools) in each state. In addition, each state owns and operates secondary schools. In 1996, there were 7,104 secondary schools with 4,448,981 students. The teacher-pupil ratio was approximately 32:1. The government pays most of the fees for students, but students must pay incidental costs and sometimes part of their board or other expenses that can amount to $200 a year, a considerable amount in a nation where the average annual income was only about $300 in 2000.

Students attend junior secondary school for grades seven through nine. At this point, the majority of students are at least 15-years-old and are no longer required to attend school. In the ninth grade, students take the Junior Secondary Certificate Examination (JSCE) to qualify for the limited number of openings in senior secondary schools. Those who do well on the exam may continue at the same institution or transfer to a different school if they qualify.

The language of instruction for all secondary school grades is English, except for special courses that require another language. Students study 9 to 12 subjects, including a core group that consists of mathematics, English language, a major Nigeria language (Hausa, Igbo, or Yoruba), social studies, creative arts, integrated science, practical agriculture, religious studies (Christianity or Islam), and physical education. Depending on the school, students may select electives from courses such as intro-

duction to technology, home economics, business studies, local crafts, and foreign languages (often Arabic or French).

Many of the subjects taken at the JSS level are offered in SSS, except in more depth. Students are streamed through testing and counseling into one of three areas of concentration: academic (science or humanities), technical/commercial, or teacher education. The core of required courses for all students includes English language, a Nigerian language, mathematics, science (physics, chemistry, and biology), humanities (literature, history, or geography), and either an agricultural science or a vocational subject. Students also select three more subjects from a wide range of electives depending on each school's resources. The more common electives are Christian or Islamic religion; business subjects such as economics, commerce, and accounting; foreign languages; computer science; fine arts; physical education; food and nutrition; home management; clothing and textile; applied electricity; auto mechanics; technical drawing; woodwork; and metalwork.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

In their twelfth year, students take the Senior School Certificate Examination (SSCE). They are required to register for a minimum of seven and a maximum of nine subjects. English and mathematics examinations are mandatory. The government estimated that over 500,000 registered to take the SSCE in May/June 2001.

To receive their Secondary School Certificate (SSC or West African Senior Secondary School Certificate), students are evaluated by a formula that combines continuous assessment in their courses, which counts 30 percent, and by their scores on the SSCE, which counts 70 percent. Those students who want to apply for higher education but who do not score high enough on the SSCE may take the General Certificate Examination (GCE) in the fall of the following year to attempt to qualify for openings.

The SSCE is prepared and administered by the West African Examination Council (WAEC), an organization that has operated school examinations in several West African countries since 1954. In 1989, the SSCE replaced the West African General Certificate of Education O and A levels.

In 1999, the Nigerian government established the National Examination Council of Nigeria (NECO) to compete with the WAEC. The NECO first try at offering the SSCE, in June and July 2000, was considered a failure. The rivalry between the two testing organizations increased so much that by early 2001 there was much confusion among students over which organization's exam they should take. The issue was not resolved by the spring of 2001, but more students will likely choose WAEC examinations for several years, especially if WAEC follows up on its promise to upgrade its system with modern technology.

Although technical and vocational education is offered at several kinds of institutions, including some academic secondary schools, most technical and vocational students attend specialized secondary schools or colleges. The programs can be short, such as welding programs that take only a few months, to longer programs, such as auto mechanics that lasts three years. Usually, students finishing vocational courses are offered apprenticeships for training in specific crafts. Apprenticeship programs vary from six months to three years of work under close supervision. Some technical schools offer the entire six years of secondary education and prepare students to take the SSCE. The majority, however, take national exams in their specialties, such as the Federal Craft Certification Examination (FCCE) and the National Business and Technical Board Examination (NABTEB).

Another group of students who finish primary school go into teacher training colleges that cover the entire six years of secondary school. Successful students receive the Nigerian Certificate in Education (NCE), qualifying them to teach in grades one through nine and in technical colleges.

In an effort to promote Nigerian patriotism and discourage ethnic rivalry, the federal government established 63 Unity Secondary Schools around the country. These special schools use a quota system to admit students from all the states in the nation. The purpose is to bring together young boys and girls from many different

ethnic groups to study and live together in harmony, so that in the future they might serve as good role models for others in the nation.

HIGHER EDUCATION

Because there are only enough openings annually for about 20 percent of the qualified applicants, competition for places in higher education is severe. In 1996-1997, for example, 475,923 applied for university places but only 79,904 received offers. Almost 50 percent of those enrolled in higher education go to universities to work on bachelor level degrees. The annual dropout rate for all university students is about 18 percent. For the 1996 academic year, teacher educational institutions of higher education enrolled 89,247 students. Those enrolled in technical education at the postsecondary level numbered 148,666. Most of the college fees for government universities are paid by the federal government. Whether this includes meals and other extras depends on the individual university and on the availability of funds.

There are several types of tertiary institutions, but the four most common are: those that offer university degrees; those that offer national diplomas; those that offer teacher training; and those that offer a variety of professional and skill certificates. In 1998, Nigeria had 37 arts and sciences universities, 3 agriculture universities, 1 military university, 4 polytechnics, and 63 colleges of education. In 1999 the National Universities Commission (NUC), which oversees the university system, approved the creation of private universities. In addition, there are 24 federal and 12 state government universities.

The technical colleges, polytechnics, and colleges of education offer the ND for two years of study, and the HND for four years of study. University programs in the arts, social sciences, and pure sciences usually take four years for the bachelor's degree. Engineering and technology degrees typically take five years. Medicine and dentistry are six-year programs. For a master's degree, one or two years is normal. Doctoral degrees take two or three years after finishing a master's degree.

In late 2000, President Obasanjo initiated the Nigerian University Systems Innovation Project (NUSIP), which began the process of making universities independent, so they would not rely on federal funds for survival. They would be run more like private businesses. The opposition to this plan was immediate, with students and teachers believing the plan required much higher fees and put higher education beyond the reach of most students, and the outcome is still in doubt.

In general, to gain admittance to a postsecondary institution, candidates need the SSC. Those with high enough scores on five major SSCE subjects, in no more than two attempts, qualify to take the Universities Matriculation Examination (UME). The major subjects on the SSCE include biology, chemistry, English language, geography, history, mathematics, and physics.

Begun in 1978 by the Joint Admissions and Matriculation Board (JAMB), the UME is more difficult than the SSCE. Students must register for English language and three more subjects in their major field. Candidates have traditionally scored low in mathematics and sciences. For the 2001 academic year, the average score in mathematics was 38.90 percent; in biology, 48.33 percent; and in chemistry, 45.51 percent.

For students who finished secondary school and took the West African GCE A Level or GCE O Level before 1989, high scores on these exams qualify candidates for university admission. There are several other possible options, including high scores on the NCE and ND. In addition, there might be other requirements depending on a student's major field.

In the spring of 2000, President Obasanjo introduced a new plan that required all primary and secondary schools to teach courses in African culture. In order to enter a university, students will have to provide proof that they have passed cultural knowledge courses. The courses focus on African and Nigerian history, mythology, and proverbs.

Higher educational institutions must also follow federal guidelines that attempt to balance the differences among ethnic groups receiving a higher education. They must weigh test scores, residency of the candidate, and whether the candidate is from an educationally less developed state in determining who is admitted.

The polytechnic colleges have different requirements for admission. Normally they require the SSC, but other requirements are generally set by the National Board for Technical Education (NBTE) and vary with programs. Most candidates must take an entry exam called the Polytechnics and Colleges of Education Exam (PCE). About 120,000 candidates took the exam for the 2001 academic year. A few polytechnics are beginning to offer bachelor's degrees in technical fields, but most offer programs leading to the ND and HND.

One striking feature of university education is the lack of majors in the sciences. Only 10.3 percent graduated in 1992 with degrees in pure science, engineering, agriculture, and technology. The government's goal is to shift the admission ratio of majors for incoming freshmen away from the humanities to 60 percent science and technology. In 2000, though, only 20 percent committed to science while 80 percent went into the humanities. The enrollment at technical training institutions, colleges of agriculture, and polytechnics remained disappointingly low as well.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

At the federal level, two major groups prepare and propose national policy for primary and secondary education: The Joint Consultative Committee on Education (JCC) and the National Council on Education (NCE). Drawn from federal and state ministries, university faculty, WAEC, the National Union of Teachers (NUT), and other groups, the JCC considers educational proposals and recommends policy to the NCE. The NCE, with the federal Minister of Education as the head, consists of state education commissioners and recommends policy to the federal executive council.

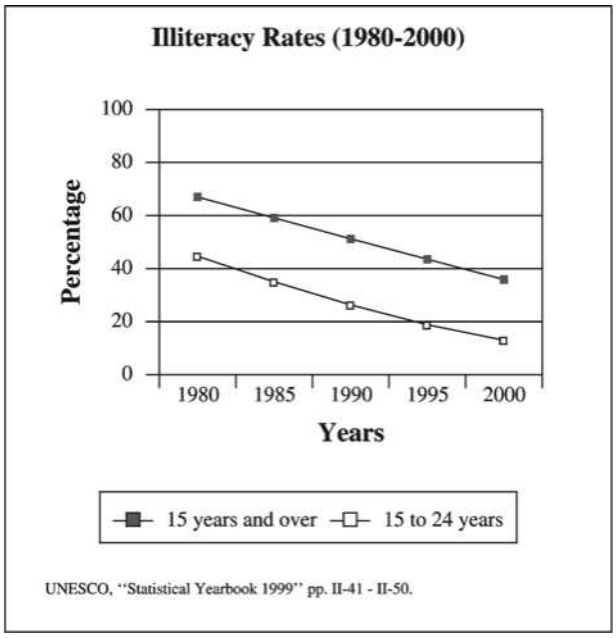
The organizations that consider policies for higher education are the National Universities Commission (NUC) and the National Board for Technical Education (NBTE). The latter considers policies for both bachelor level and lower certificate programs in the vocational and technical fields.

Money for education comes mainly from the federal government's Education Tax Fund (ETF). In 2001, the government allocated 35 percent of the budget, or 24.8 billion Nigerian dollars (about US$248 million) to education. This money was distributed to the states, and they determined how to divide it among the local governments. As a result, decision-making and policy implementation began at the federal level. The idea, however, is for the federal and state education agencies to cooperate in planning and allocating funds.

Some states, such as Rivers State in southern Nigeria, have built schools to serve as ''centers of excellence'' as part of a nationwide attempt to improve the educational system. Sometimes, state governments use the money to improve the lives of their students. For example, Lagos provides free lunch for all its primary students. Enugu State in eastern Nigeria offers students free train service. Many of the states pay for students' major national examinations.

In the universities, research is common. Some universities have received international recognition for their scholar and research programs. Funding is a problem, therefore, the most successful research programs are those with international funding.

In Nigeria's federal system, most educational decisions are made at the local and state level. A good example is Lagos in southwestern Nigeria, with the largest concentration of students being in the country. Lagos has a Ministry of Education made up of several departments, including Basic Education Services, Curriculum and Education Technology, Private Education and Special Programmes, Science and Technology, Finance and Administration, Inspectorate, and Curriculum Services.



UNESCO, ''Statistical Yearbook 1999'' pp. II-41 - II-50.

Lagos also has a Legal and Policy Unit, Examination Board, Scholarship Board, and a Library Board.

The state Ministry of Education actually depends on local Education Districts (ED) to carry out policies in the schools. A state Primary Schools Management Board (PSMB) performs much of the overall administering of primary education. The PSMB recruits teachers and staff; oversees promotion; disburses money from the federal, state, and local governments; and advises on school construction. The Lagos Post-Primary Teaching Service Commission (TESCOM) addresses similar issues at the secondary level. The state also has an Examination Board with the duty of conducting and supervising examinations sponsored by the state, including the NCEE, JSSCE, SSCE, and Civil Service Examinations.

NONFORMAL EDUCATION

Nigeria has an illiteracy rate close to 50 percent. The government spends a lot of effort promoting nationwide literacy and life-skills programs. Each state has agencies that also offer programs. The Agency for Mass Education in Lagos has set up 310 mass literacy centers around the state, which served 9,088 learners in 2000. They also have established 73 postprimary continuing education centers with almost 1,000 teachers.

Some universities are major forces in community education. The Adult Education Department of the University of Ibadan, for example, has won international prizes for its community-based programs to teach literacy in rural areas. The Department set up a Community Development Literacy and Health program in 1989 that

evolved into the University Village Association, which promotes and offers money for literacy classes and small-business start-ups.

TEACHING PROFESSION

In the past, to teach in primary school a person needed a Teacher Certificate Grade II (TCGDII) from four years of secondary school at a Grade II Teacher-training college. These were phased out after 1998, when the Nigerian Certificate of Education (NCE) became the required diploma for all primary and junior secondary school teachers. In 1996, out of approximately 420,000 primary school teachers in the country, about 80 percent had either the NCE or TCGDII (equally divided between the two).

The government created the National Teachers Institute (NTI) in 1978 to conduct programs that would upgrade teacher qualifications to the NCE level, with most of this training carried out by distance learning. Between 1993 and 1996, the NTI graduated 34,486 in their NCE distance learning programs. In 2000, it trained 20,000 teachers. A Bachelor of Education program with NTI received approval by the government at the end of 2000. NTI also conducts workshops and conferences on curriculum development and in other areas of teacher training.

To teach in senior secondary schools a person must have either a bachelor's degree in education or a bachelor's degree in a subject field combined with a postgraduate diploma in education. The faculty in senior secondary schools are among the best qualified in the country, almost all holding bachelor's degree. A few teachers possess the NCE.

The bachelor's degree programs in education are offered at major teacher universities, such as Ahmadu Bello University in Zaria, the University of Ibadan in Ibadan, and the University of Nigeria in Nsukka. Of the 63 colleges of education offering the three-year NCE program, about a third are owned by the federal government, and about half by state governments. The remaining are privately owned. All are under the supervision of the National Commission for Colleges of Education (NCCE), which sets and maintains standards and approves of courses and programs for all universities in Nigeria.

To teach at Nigerian universities, teachers must have qualifications that are similar to professors at U.S. and European universities, usually a doctorate. At the university level, the Academic Staff Union of Universities (ASUU) represents university faculty, and the Senior Staff Association of Nigerian Universities (SSANU) bargains for the senior non-academic workers. The Academic Staff Unions of Polytechnics (ASUP) represents polytechnic faculty members. These unions are very active.

The major teacher organization representing primary and secondary school teachers is the Nigeria Union of Teachers. Although it is very active, NUT has been unable to change the unsatisfactory conditions under which teachers work. UNESCO reports that ''34.4 percent of the teachers had neither the pupils' textbook nor the teachers' guide for any of the school subjects.''

Another major concern of teachers is salary. Not only is payment often incomplete, but the salaries are low. Salaries are set by the local, state, and federal governments, depending on which level controls the institution. Some of the higher paid teachers are in the northeastern state of Jigawa where the State Commission of Education reported that in September 2000 the lowest paid teacher received 20,000 Nigerian dollars monthly (about US$176). A senior lecturer in higher education received about 80,000 Nigerian dollars monthly (approximately US$704).

This is a dramatic improvement from the long years of decline under the military governments. A senior lecturer in a university averaged about $23,500 annually in 1982. Within four years, poor economic policy and the decline in international oil prices led to the near disappearance of the Nigerian middle class. The salary of senior lecturers fell to about $2,630 and continued to fall for many years. In 1994, for example, the average annual salary for senior lecturers was $754. Only after the May 1999 election of Obasanjo were any serious attempts made to reverse this downward trend in salaries.

SUMMARY

The problems in Nigeria's education system stem from a complicated mix of economic, political, and social situations. Three decades of political instability followed civil war in the late 1960s. Economic wealth from huge oil reserves in the southeast were diverted away from education and other socially progressive programs into the pockets of corrupt politicians and military leaders. The formula of corruption, poor planning, and a worldwide drop in oil prices in the 1980s resulted in the crash of Nigeria's economy. According to the United States Agency for International Development (USAID), Nigeria's per capita income dropped from US$1,200 in the 1980s to US$300 in 2000.

The economic decline and the political rivalries, especially dividing the northern Muslim states from the southern non-Muslim states, resulted in deterioration in the educational system all over the country, but the most dramatic figures are reported from the northern states. Of the 19 states labeled ''educationally disadvantaged,'' 17 are in the North. In 1995, for example, there were 4,448,869 secondary students enrolled in Nigeria. The northern area, with about half the country's population,

accounted for only 1,417,645 of these students. In 1999, the six states with the most candidates applying for university admission (all in the south) had a total of 200,506 applicants. The bottom six states in number (about the same population) were all in the north, with a total of 5,619. The numbers for applications to polytechnics and colleges of education showed similar results. Out of a nationwide total of 160,724 candidates, some 72,830 were from 6 southern states, while the bottom 6 states, all in the north, had only 375 candidates. The qualification of teachers mirrors the same unequal distribution. In the late 1990s, only 16 percent of the primary school teachers in the north held the NCE, considered the minimum qualification for teaching. In the south, more than 94 percent held the NCE.

The educational infrastructure needs to be revamped, especially at the primary level. At most schools, there is a desperate shortage of texts. Even in better areas, such as Abia State, primary schools only have enough texts in core subjects for 45 to 50 percent of the pupils. In the poorest states, the number is lower than 10 percent.

Another serious problem is the dropout rate at all levels of education, especially among boys. In 1995, the percentage of elementary students dropping out by the sixth year stood at 30.8 percent. The dropout rate in areas with long reputations for high achievement in education is especially surprising. In Enugu State, for example, nearly 100 percent of primary-school-aged boys and 91 percent of the girls were enrolled in schools in 1992. As political and economic conditions worsened, the figures declined. In 1996 the enrollment figures showed only 42 percent for boys and 35 percent for girls. In the conservative Islamic state of Sokoto in northwest Nigeria, the enrollment statistics for 1992 and 1996 were 41 and 49 percent for boys and 12 and 15 percent for girls. People in conservative Islamic states, however, often send their children to Qur'anic schools, so it is likely that a higher percentage of their children were attending schools.

Because school graduates often have difficulty finding jobs that match their education, the younger generation frequently sees little practical value in staying in school beyond a few primary grades. This problem is especially severe in the eastern region among the Igbo people. The dropout rate becomes critical at the junior secondary level. In 1994, for example, the distribution of boys and girls in Enugu state is about equal in primary school. Of the 156,001 students enrolled in secondary schools, 81,080 were females. The dropout rate in the following year for boys was astronomical. In 1995, of the 99,867 students enrolled in secondary schools, some 91,311 were girls. Boys had dropped out to find work in businesses and trade, while girls stayed in school. At the beginning of the twenty-first century, the completion rate for boys in the east stood at only 30 percent.

The federal government has made a strong commitment to education. The UBE is a positive step towards educational success. The goal is to create an educated public whose best interests are to support a unified nation. Emphasizing African and Nigerian history and culture in social sciences is another important step in developing a feeling of unity among the people. Another step is the creation of Unity Secondary Schools throughout the country.

Probably the most promising long-term programs involve local communities throughout the country taking control of their future. These range from integrating teaching in Qur'anic schools with national basic literacy programs to private businessmen offering prizes for students who win literacy contests. They include community involvement, such as the pilot school program initiated by NPEC for the state education boards to seek schools and communities that will set up community participation programs. They come together and raise funds, provide supplies, and help coordinate the various social services available such as health and child care.

The prospects for the future are uncertain. The federal government must deal with great divisions between regions politically, the gap in economic development, and the strong identity of people with their local cultures. People still distrust a strong centralized government. The idea of a unified nation of people who should sacrifice ethnic loyalty for the welfare of the country as a whole is still being tested in Nigeria. The government leaders realize that the survival of Nigeria as a unified country is at risk if the educational system remains inefficient and inconsistent.

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—John A. Zurlo

NORFOLK ISLAND

BASIC DATA

Official Country Name:	Norfolk Island
Region:	Oceania
Population:	1,892
Language(s):	English, Norfolk
Literacy Rate:	NA

Covering only 14 square miles, Norfolk Island is located in the South Pacific Ocean, about 1,000 miles northeast of Sydney, Australia. It was discovered in 1774 by British explorer James Cook and, from 1788 to 1856, the island was used as a penal settlement for convicts from Australia. In 1856 the island was turned over to the Pitcairners. The Pitcairners started the first free settlement, and the people living on Norfolk Island today are their descendants.

According to a 1996 census, the permanent population is 1,470 people. Tourism is the main source of income, but people also grow bananas, citrus fruits, and vegetables.

Norfolk Island was part of the colonies of New South Wales of Australia. Queen Victoria of England ordered that it be a separate colony of the British Crown between 1856 and 1896, when the Pitcairners governed it. The Pitcairners believed in equal suffrage, and they were the first people ever to afford women the vote. In 1979, the Norfolk Island Act established a legislative assembly and executive council to handle local government matters. The act preserved Australia's overall responsibility for the island.

Norfolk Island Central School teaches grades K-12. Enrollments were expected to be 320 K-12 students in the year 2001. The school also has 20 teachers; there are eight infant through primary teachers, including two executive teachers and two release face-to-face teachers. The remaining 12 teachers are secondary teachers, including 1 head teacher. A counselor is also employed for K-8 students.

Secondary students undertake subjects such as English, math, science, history, and geography. Electives include woodworking, metalworking, food technology, textiles and design, business studies, and sports. The school has 2 school buses, which were donated by the parents and citizens.

Greenwich University moved to Norfolk Island in 1998. It is a small graduate school with high academic standards in teaching, scholarship, and research that welcomes students from all countries of the world.

Norfolk Island is very small; therefore, its education system is just big enough to educate its modest population, though Greenwich University has brought the island some notice from the outside world. Unfortunately, the island was settled with turmoil, and Norfolk Islanders still battle to regain full self-government from Australia.

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—Deanna Edens

NORTH KOREA

BASIC DATA

Official Country Name:	Democratic People's Republic of Korea
Region:	East & South Asia
Population:	21,687,550
Language(s):	Korean, English
Literacy Rate:	99%
Academic Year:	March-February
Number of Primary Schools:	4,813
Compulsory Schooling:	11 years
Public Expenditure on Education:	NA
Foreign Students in National Universities:	NA
Libraries:	NA
Educational Enrollment:	Primary: 1,884,000 Secondary: 2,915,000 Higher: 310,000
Educational Enrollment Rate:	Primary: NA Secondary: NA Higher: NA
Teachers:	Primary: 47,000 Secondary: 98,000 Higher: 23,000
Student-Teacher Ratio:	Primary: 40:1 Secondary: 30:1
Female Enrollment Rate:	Primary: NA Secondary: NA Higher: NA

HISTORY & BACKGROUND

Education in North Korea is regarded as a vital area of national concern, shaping the country's future. This notion is more evident in North Korea because it has been transformed into a highly mobilized, state controlled society. To accomplish this transformation, North Korea has developed a very unique educational system.

In North Korea, education plays the vital function of developing people's minds as well as controlling them. The political dimension of the educational system is well-recognized. The universal nursery school education is connected to 11 years of compulsory education that is free of charge. The applied principles of education are officially formulated according to the state's so-called theory of education. Teaching and learning patterns follow these guidelines as stated in the ''Thesis of Socialist Education'' issued by the ''Great Leader'' Kim Il Sung in 1977. An examination of the school curriculum easily reveals its continuity with the goals of political education.

North Korea is a society that is basically closed to outsiders. Reliable and accurate information is often not available or difficult to acquire, and observation as to actual practices in the schools is almost impossible. Therefore, the characterization and estimation of the educational outcomes can be interpreted as an exercise in speculation or conjecture.

Political, Social, & Cultural Bases: The educational ideology formulated by the Party has been the foundation of the educational policy framework. This framework specifies the official educational objectives and basic policy directions.

Marxist Leninism was the guiding ideology of North Korean education for the first period of the North Korean government's rule. But since the late 1960s, North Korea has begun to take a more independent course of action away from the influence of the Soviet Union and the People's Republic of China. In 1997, the central committee of North Korea's Labor Party, the Chosun Nodong Dang (Chosun Labor Party), adopted ''The Thesis on Socialist Education.'' Since then, this thesis has become the only ideological foundation for North Korean education and the basis of the state's educational principles. The thesis clearly specifies the basic objectives on which an educa-

tional system has to focus its efforts: ''To transform the next generation to be 'revolutionaries' who fight for the benefits of the Communist Society and its people and to be Communists intellectually and morally and with physical strength'' (The Constitution, Article 43).

The Party's ideological doctrine and ''*Juche* Doctrine'' are the unique guiding principles that the North Korean educational system has to follow in its operation. The initial idea of *Juche* stated by Kim Il-Sung is that the human being is the prime actor as the only determinant of creating history (Kim Il-Sung's collection of writings, 6: 277). The *Juche* idea emphasizes the independence of people as a collected identity of human beings with the capacity of creating its own history.

This *Juche* idea implies that North Korea must pursue an independent course of action from the influence of other countries in politics, economy, and national defense. It also implies that people must realize the revolutionary ideals with consciousness and revolutionary action. However, in the practice of the *Juche* idea, ''*Juche* Doctrine'' emphasizes that people have to be guided by the great leader. Critics of ''*Juche* Doctrine'' indicate that there is a logical gap between the original *Juche* idea and justification of the guidelines by the great leader. ''Based on these guiding principles, the state has to develop a general school system that provides basic and common education and a recurring educational system for lifelong learning for workers in various occupations. A general school system has to contribute to the development of basic science, social science, and technologies'' (Constitution, Article 46).

The state has continuously developed an educational policy framework directed to give priority to (1) political-ideological education for all students, (2) science and technical education, and (3) highly selective education for the elite political-governing sector, science technology areas, and a recurring education system in higher education.

The 11-year system of compulsory education is the most effective way to meet the requirements of political-ideological education (general school system). This equity-oriented school system is parallel with the very selective ''center schools'' and key leading universities. These educational institutions serve special purposes for the school system and are the second category in the system. The third category is the recurring and lifelong education system for all workers.

North Korea's educational system is considered to be the initial indoctrination into the Party's ideology, and in turn, it is highly integrated with the political system to meet the Party's political needs and control. The system is closely coupled with the political, administrative, economic, and social systems.

In the first place, the political system directly controls the economic and administrative systems through the Party's guidelines and executive orders. The political system extends its control of people's daily lives through the administrative, economic, and educational systems. The social system also influences education by providing hidden curriculum to make people adapt themselves to the social structure. The educational system is served with financial support from the economic system.

The educational system's unique contribution to the other systems in North Korean society takes several forms. Politically, the educational system contributes to maintaining the state system by providing the ideological justification for the state system. In this context, the political indoctrination into the ''*Juche* Doctrine'' plays a very important role. Socially, the educational system does much for social control by instructing people in the hidden curriculum. The educational system also contributes to the functioning of the economic and administrative systems by supplying administrators from the elite class and technical-managerial manpower.

However, the deteriorating economy can hardly provide adequate financial support for operating the state's educational system. Since 1990, the growth rate of the Gross National Product (GNP) has been at a negative 3.7 percent average for the last eight years. Per capita GNP decreased from US$1,064 in 1990 to US$910 in 1996.

North Korea has adopted an efficient school system to provide 11 years of free compulsory education, kindergarten through secondary, for the entire school-age population by shortening the schooling period by two years compared to most countries. The educational system claims to provide equal education through the secondary level. The 11 years of K-10 free schooling is a case in point. After 10 years, since North Korea adopted 11 years of compulsory education, the government began to drive the movement by making it possible for all citizens to become intelligentsia by offering almost universal opportunities for higher education. The recurring higher education at the various kinds of attached universities was institutionalized for this purpose.

In spite of this proclamation and tailoring the school system toward equal education, the educational system maintains a dual structure to support the reproduction of the elite ruling class. It is assumed that this ruling class can enjoy the privilege of putting their children into elite schools and universities.

North Korea has developed a school system of equal education for all children, and the country praises its 11-year, free, compulsory education system. However, by developing special purpose schools for talented children and children of the elite class, the educational system has

an efficient means of talent development and class reproduction within the socialistic, equity-oriented educational system.

In the 1950s and 1960s, special purpose schools were originally developed to take care of the children of revolutionaries who died during the Korean War. Special purpose schools to develop special talents were added to this category. There are many kinds of quality schools in the areas of sports, arts, foreign languages, and science.

EDUCATIONAL SYSTEM—OVERVIEW

The educational system of North Korea consists of three types of schools. The main track is the general school system, and the other two types are schools for continuing education and schools for special purposes. The school system has maintained its basic structure since the system's major reforms in 1975 following the Party's major policy changes in 1975.

One facet of the formal education system is the general school system. The general school system is the same as school systems in other countries. It is called the general school system to differentiate it from the schools with special purposes and institutes for continuing higher education. The general school system (GSS) has kindergarten through tenth grade (K-10) elementary-secondary schools and higher education. Kindergarten has two levels for two years. The lower class begins at age four and the upper class begins at age five when free compulsory education begins. The elementary school, called people's school, begins at age six and takes four years to complete. The secondary school in North Korea is higher middle school, and it provides six years of schooling. Higher middle school has two levels. The lower-level middle school takes 4 years from age 10 to 13, and the higher-level high school takes 2 years from age 14 to 15.

Higher education has two systems for academic purposes and continuing education. Academic higher education of GSS is composed of universities (four to six years), College of Education for secondary school teachers (four years), Teachers' College for primary school teachers (three years), and junior colleges (three years). After university studies, graduate school for master and doctoral study is continued at post-Doctoral schools.

Another educational system is the continuing education system. The university or continuing higher education is attached tofactories, farms, and fishery cooperatives. The Air and Correspondence University operates a five-year curriculum.

Another type of school system is the special purpose school. This is for talented children and children from the elite class. It consists of the revolutionary school (also called elite school, beginning at age 5 and lasting for 10 years), schools for arts and sports (ages 6 to 18), schools for foreign language (ages 10 to 18), and schools for science (ages 10 to 21).

PREPRIMARY & PRIMARY EDUCATION

Kindergarten has two levels with each level consisting of a one-year period and the lower level beginning at age four. The elementary school consists of four years from ages six to nine and is called the ''people's school.''

All children of school age (from 5 to 16) are included in the 11-year compulsory education that is intended to efficiently realize the ideals of socialistic human beings. The system is efficient because it reduces the universally required 12 years to 10: 4 years for primary schooling and 6 years for secondary education.

This system is also organized to ensure the continuity and integration of basic education with political education from preschool to the second cycle of secondary education. Basic education is focused on language, math, science, and physical education subjects.

Primary school children usually receive 4 hours of instruction each day during 2 semesters of 39 weeks per year. In addition to regular classroom instruction, they participate in various kinds of group activities. In primary education, time allocation for subjects is: political education, 13.6 percent; language, 31.7 percent; and math, 23.1 percent (together accounting for 68.4 percent of general classroom instruction time in primary education). Other subjects are science, 6.7 percent; physical education, 8.4 percent; and music and arts, 16.8 percent (Han Man-Kil 1997).

Following the guidelines of the thesis of socialist education, primary education has the unique quality of emphasizing political education and collectivistic pedagogical methods. North Korean's Socialist theory of education even controls extracurricular group activities that are designed to integrate theory with practice even in primary education. Upon graduation, pupils are assigned to secondary schools in their residential areas.

In 1965, the number of primary schools reached 4,024. That number has increased gradually to 4,700 in 1975; 4,760 in 1985; and 4,813 in 1996. On the other hand, student enrollments reached 1,152,000 in 1965; 1,715,000 in 1975; and 1,908,000 in 1985. But in 1996 the numbers decreased slightly to 1,884,000 students. The number of teachers reached 26,000 in 1965; 39,000 in 1975; and 47,000 in 1985. (Numbers for 1996 are unknown.)

SECONDARY EDUCATION

The secondary school is named ''The Higher Middle School of Six Years.'' As its name suggests, the ''Higher

Middle School'' provides six years of schooling. The Higher Middle School has two levels: four years on the lower level and two years on the higher level. The lower level is called the middle school class for students from the ages of 10 to 13. The higher level is named the high school class for those from the ages of 14 to 15. Official documents indicate that there is a selection process at the end of the first four years of schooling. However, it is assumed that automatic promotion to the second fall term is practiced in most schools.

Secondary education is also focused on political education, basic science and technology, physical education, and music and arts. Major topics for political education include the revolutionary activities of the Kim Il-Sung and Kim Jung-Il, the Party's major policies, and communist morals. The pedagogical practices recommended by the thesis of socialist education are applied systematically. Time allocation of subjects is: political education, 12.5 percent; language, 15.8 percent; math, 18.6 percent; and science, 18.5 percent. These four subjects take 65.4 percent of all instruction time. Foreign language instruction starts at secondary level and takes 9.3 percent of regular instruction time. Other subjects are physical education, 4.6 percent; music and arts, 4.1 percent; and social science, 9.7 percent (Han Man-Kil 1997).

In secondary education, there were 3,276 schools in 1965; 3,861 in 1975; and 4,842 in 1996. The number of enrolled students in 1965 reached 717,000, and it increased rapidly to 2,322,000 in 1975; 2,655,000 in 1985; and 2,915,000 in 1996. The number of teachers was 27,000 in 1965; 80,000 in 1975; and 98,000 in 1985 (Han Man-Kil 1997).

In North Korea, basic foundational courses for vocational and technical education are taken during secondary education. In addition to this, secondary school students are expected to develop vocational techniques by participating in the production process as part of their after-school program. There is no vocational secondary school in North Korea. However, there are many kinds of specialized short-cycle institutes for technical education. Large-scale vocational and technical education is conducted on the job for all workers.

HIGHER EDUCATION

Higher education has two kinds of systems: academic higher education and higher education for continuing education. The academic higher education system includes three kinds of institutions: universities, professional schools, and technical schools. Graduate schools for master and doctoral level studies are attached to universities.

In North Korea, only a few universities and colleges are well known. There are a few leading universities and professionally specialized universities. The following universities are playing leading roles in their specialized areas: Kim Il-Sung University in Humanities and Social Science, Kim Chaeck Engineering University in heavy industry, Koryo Sung Kyun Kwan University in engineering, Pyongyang Medical College, and Kim Hyung Jik College of Education.

Higher education plays the very important role of supplying the revolutionary ruling elite for the party and government. The major and leading universities are major sources of elite production. In addition, various kinds of specialized institutes develop professional and managerial manpower. For this reason, emphasis is given to intensive political education. The management of the universities is under the direct supervision of the Party's Education Committee.

In 1965, there were 98 higher education schools with 156,000 students and 7,601 teachers. In 1975, school numbers increased to 150 but the number of students (92,000) and teachers (4,490) decreased. After that the numbers increased again; there were 234 schools, a total of 280,000 students, and 23,000 teachers in 1985. In 1996 school numbers reached 286 with 310,000 students. The identity of the large number of universities is not confirmed. It is just assumed that most of them are the type of attached university for continuing education.

NONFORMAL EDUCATION

The continuing education system has three types of institutions. First, there are various kinds of institutions for training political elites to be assigned to the Party and government at the central and local level. ''The Kim Il-Sung High Level Party School,'' The People's Economic Institute, Institute for International Relations, The Kumsung Political Institute, and The Kim Hung-Il Military School are the most prestigious institutes at the central level. Local Party branches also operate Communist Party Schools in each province for training middle-level political elite. The provincial Party schools, the railroad schools, and the district-level Party schools are examples of this type of school.

Second, major production units or government-operated companies have their own technical training institutes for developing technical manpower. These are on the job training institutes that provide five- to six-year training programs. Employees must take the courses after working hours. These institutes are named ''attached universities'' because they're attached to factories, cooperative farms, and fishery cooperatives. Production units or companies operate the attached universities.

Third, air and correspondence universities were established to give an opportunity for higher education

based on the ideals of lifelong education, and for the promotion of the intellectual level of the nation. The Kim Il-Sung Air and Correspondence University is the most famous institute for these purposes. Also, there is a university of television broadcasting for higher education. Their course consists of a five-year curriculum and is considered to offer better educational contents than night courses in the attached university.

SUMMARY

The North Korean educational system has maintained its own unique structures as well as the typical socialist structures of an educational system. The ''*Juche* Doctrine'' has been institutionalized in the ideology and aims of the North Korean educational system. This doctrine requires an educational system involving human resource development along with a political consciousness that follows the Party's course of action.

The educational system has been changed to develop a socialistic, efficiency-oriented school system. The current school system is evaluated on the basis of how well it reflects the principles of a socialistic school system and concerns for efficiency. Some key features include:

1) Beginning schooling at an earlier age—nursery and kindergarten;
2) Providing 11 years of free, compulsory education for every child from the ages of 5 to 15;
3) Maintaining a dual-structured school system or a general type of schooling for the masses and selective elite schools and special purpose schools for the privileged class;
4) No recognition of private schools; and
5) Tight administrative control of schools by the state administrative system.

The educational system has also adopted socialistic pedagogical principles. The thesis of socialist education emphasizes the following principles: 1) Political education in the ''*Juche* Doctrine.'' This political education focuses on the indoctrinating of the Kim Il-Sung ideology and strategies for the revolution; 2) Collectivistic activities as a major form of the teaching-learning process. The thesis of socialist education puts higher priority on various kinds of collective activities to facilitate the internalization of socialistic collective norms and culture; and 3) Integration of theory into practice. The thesis emphasizes that theory has to be validated in the process of practice, so the teaching-learning process aims to develop ''Praxis.''

General Assessment: Judging from the information garnered from the very limited number of officially released documents and from interviews with the deserters and refugees from North Korea, we can make some conjectures as to the operating strategies of its educational system and some limitations as to its outcomes.

The educational system seems to be so highly coupled with the political system that it becomes very much subordinated to the political system. The educational system is designed to meet the political requirements. It provides an effective mechanism for social integration and for internalizing the information in the ''*Juche* Doctrine.'' The political function of the educational system seems to be of top priority.

Uniformity in formal education seems to be the most common characteristic in the operation of the educational system. The political-administrative control of education appears to prefer the uniformity of formal education to diversity in education. This top-down control seems to cause rigidity in managing educational institutes. Uniformity and rigidity also seem to inevitably reduce the autonomy and accountability of schools. Thus, in respect to educational outcomes the supporting mentality for cultivating creativity can hardly be expected.

The general operational pattern of the educational system seems to be inefficient in human resource development. Too much emphasis on political education takes a large amount of time from developing the educational qualities of knowing and morality. Furthermore, the stifling of individuality in the educational program and rigidity in its management further limit the educational function of the educational system.

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—Chong Jae Lee

NORTHERN MARIANA ISLANDS

BASIC DATA

Official Country Name:	Commonwealth of the Northern Mariana Islands
Region:	Oceania
Population:	71,912
Language(s):	English, Chamorro, Carolinian
Literacy Rate:	97%

The Commonwealth of the Northern Mariana Islands (CNMI) is a U.S. territory that is a 300-mile archipelago comprised of 14 islands. Although the U.S. Congress approved a covenant to establish a commonwealth in 1976, it did not become a territory until 1986. Unlike the 12 outlying territories of the United States (Guam, Virgin Islands, etc.), the people of CNMI adopted a constitution for its government functions. Federal funds to CNMI are administered by the U.S. Department of Interiors, Office of Insular Affairs. CNMI is divided into four municipalities: Northern Mariana Island, Rota, Saipan, and Tinian.

The population, as of July 2000, was 71,912 people with 24 percent being under the age of 14. About 28,000 inhabitants are alien workers due mostly to an increase in the tourism and manufacturing (clothing) industries. The resident population is made up mostly of Chamorro, Carolinians, and Micronesians. The three main languages spoken are English, Chamorro, and Carolinian. Some 86 percent of the inhabitants speaks a language other than English at home.

The CNMI educational system is similar to that of the U.S. public school system. Accreditation started in 1987 and is through the Western Association of Schools and Colleges (WASC). Education is compulsory from the ages of 6 to 18.

In early 2001 the public school system of CNMI had 15 facilities with plans to build two more. Of these, 11 served the primary level. The school year runs from August to June with class hours from 7:30 a.m. to 2:00 p.m. in elementary school and 8:15 a.m. to 3:10 p.m. for high school. Teachers are required to have certification. There are also 15 private schools offering education in the primary and secondary levels. In 1995 the pupil-teacher ratio was nearly 21:1.

Numerous programs are offered by the public school system, such as the provision of childcare for 190 families (380 children) whose parents are in school; bilingual education; and Head Start for children under six years of age. The country uses the Stanford Achievement Test 9 (SAT9) as their form of student assessment.

The Commonwealth has one postsecondary institution, Northern Mariana College, that offers programs such as associate of arts or science; adult, vocational, and continuing education; and professional development. For further studies students go to the University of Guam or the University of Hawaii.

CNMI faces three main issues to resolve: a 14 percent unemployment rate, an immigration problem, and reports of industrial worker abuse. A report from the U.S. Congress in 1998 estimates that there are at least 10,000 illegal aliens in the Commonwealth. Additionally, in 1999 several American clothing makers agreed to pay some $1.25 million as a settlement on behalf of more than 50,000 workers forced to work in undesirable conditions. Part of this settlement fund goes to an education campaign to create awareness for better work conditions.

—Juanita Villena-Alvarez and Victoria Villena

NORWAY

BASIC DATA

Official Country Name:	Kingdom of Norway
Region:	Europe
Population:	4,481,162
Language(s):	Norwegian, Lapp, Finnish
Literacy Rate:	100%
Academic Year:	August-June
Number of Primary Schools:	2,129
Compulsory Schooling:	9 years
Public Expenditure on Education:	7.4%
Foreign Students in National Universities:	11,225
Libraries:	1,108
Educational Enrollment:	Primary: 320,752 Secondary: 368,074 Higher: 185,320
Educational Enrollment Rate:	Primary: 100% Secondary: 118% Higher: 62%
Teachers:	Higher: 13,665
Female Enrollment Rate:	Primary: 100% Secondary: 116% Higher: 71%

HISTORY & BACKGROUND

Norway, officially known as the Kingdom of Norway, includes a large mainland, a variety of small islands, and other territories totaling 368,658 square kilometers (149,366 square miles). Located in northern Europe, Norway lies on the Scandinavian peninsula and is surrounded by three seas to the west and shares most of its eastern border with Sweden. The northern section of Norway experiences cold winters and weeks of continuous darkness, along with weeks of continuous sun in the summer. The country includes large barren and mountainous regions and has a population of just 4.4 million people. In 1999, it was estimated that 28.1 percent of Norwegians live in one of the four largest urban areas, and only these four areas have more than 100,000 inhabitants. Oslo, the capital of Norway, has approximately 500,000 inhabitants, and the next largest area, Bergen, has 220,000 inhabitants. Just 15 communities have more than 20,000 inhabitants. About 20 percent of Norwegians are under the age of 15, and 38 percent are married.

Relative to most countries, Norway's population is overwhelmingly homogenous. The vast majority are Nordic in heritage and appearance, and more than 60 percent have blue eyes. About 85 percent of Norwegians claim membership in the Lutheran Church of Norway. Most though are merely nominal members of the state-run church with less than 3 percent attending regular religious services. Freedom to practice any religion is available to all. The language of Norway is German in origin, and modern Norwegian has several dialects but all are understood across Scandinavian countries. One written language, known as *Riksmal* or ''official language,'' was in place until about 1850. *Landsmal* or ''country language'' was a written form created out of rural Norwegian dialects. A struggle over these two written forms resulted in both being given equal status. Over 80 percent of schools use *Riksmal,* now known as Dano-Norwegian (*Nynorsk*). English is a compulsory subject in school, and German and French are common third languages selected by students.

Just one hundred years ago, Norway was an agricultural society. In 2000, the 3 largest sectors of employment were public services (40 percent); commerce, hotels, and restaurants (18 percent); and industry (17 percent). Norway is one of the leaders in the world in the exportation of petroleum. With an abundance of offshore oil and peaceful political and labor relations, Norway's standard of living is one of the highest in the world. A social democracy, Norway has a parliamentary monarchy with numerous political parties. A strong sense of equality dominates social policy in Norway. National health and welfare systems provide for all Norwegians and include free medical care and full support in retirement or because of disability. Norwegians also rank among the highest in the world in projected life expectancy.

In terms of its educational history, independence from Denmark in 1814 was pivotal in the development of Norway's educational policy. Denmark had ruled Norway for the previous 400 years, but turned over control to Sweden when Napoleon was defeated. To counter this transfer of control, Norwegians quickly created a constitution that called for the most democratic political structure to date, including a parliamentary system, the abolition of any further hereditary titles, and expanded voting privileges. Although a small elite still ruled Norway, this constitution resulted in the limitation of Sweden's control and has been maintained, with the addition

of amendments, to this day. With independence and a democratically based constitution, it was believed that Norway should be an open society, one in which all children have the right to be literate and all citizens should participate in decision making. A centrally organized and comprehensive school system was thought essential for this and to make a cohesive nation out of such a dispersed population. While at least a few years of religious training had been available to most children before this time, independence and the industrial revolution inspired the expansion of educational opportunities for Norwegians. National educational policy was developed through legislation over the next 150 years.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Just after independence from Denmark, the Storting committee was organized in 1815 to address all school matters. Before independence, Luther's focus on schooling was supported by ordinances in the late sixteenth and early seventeenth centuries, and consequently, some schooling was available to children of all social classes for the purpose of religious development. These ordinances recognized that children needed to be literate to read scriptures and to learn specific religious knowledge for Christian confirmation into adulthood. Norway was one of the first countries in Europe to have compulsory education. With the 1739 School Ordinance, schooling was required, even of children in the countryside beginning at the age of seven. The motivation for this ordinance was the religious development of all Norwegian children, including those located away from any sizable town. The provision in this ordinance that required the creation of permanent schools was unworkable though in tiny communities that could not afford them. As a result, local parishes took responsibility for providing schooling and traveling schools were established in which teachers would spend a few weeks at a time in various locations. Mostly, children were taught to read and study religious principles. Children were rarely taught to write, and most attended school for just a few years. Schooling was widely available at this time though, and Norwegians prided themselves on their rate of literacy. By 1800, it was believed that almost all Norwegians were literate, a remarkable achievement given that the literacy rate for all of Europe did not exceed 50 percent for adults until about 1850. For the most part, higher education institutions did not exist prior to Norwegian independence. Some alternative forms of schooling were available. The developing industrial revolution in Norway at the time of independence required vocational training opportunities. Thus, traditional apprentice systems were replaced with schools focused on seamanship, handwork, drafting, and mining.

National school policy continued to be developed and refined and became more secular and extensive with time. The 1848 Folk School Law mandated the creation of a least one folk school in each town, that teachers meet certain qualifications, that 60 students per day is the maximum allowed per teacher, that children attend school from age 7 until confirmation, and that each town have a school commission consisting of town clergy and council appointees. Most important, this law expanded the educational content offered. While only reading and religious instruction were taught previously, now subjects such as writing, singing, and math were to be taught in all schools. By the end of the nineteenth century, laws establishing elementary and secondary schools were passed.

The modern school was developed in three stages of reform, each stage was established through national legislation. The compulsory school (*Grunnskole*) was revised in 1969 into a nine-year mandated program. Two stages, stage 1-6 (*barnesteget*) and stage 7-9 (*ungdomssteget*) were created. The next step of the reform involved the upper secondary school (*Videregaende skole*), which lasted from one to three years and incorporated a wide variety of courses with a focus on higher education preparation or vocational training. The last reform stage involved the development of the tertiary level of education. The University of Oslo was the only university in Norway until 1948. Three additional universities were eventually established, and in the 1970s, regional colleges grew at a tremendous rate. These colleges allowed for greater access to higher education across Norway and served local needs for education, research, and development.

EDUCATIONAL SYSTEM—OVERVIEW

The national school system is designed to provide a quality education to every citizen. Egalitarian values with respect to education are quite strong in Norway. In fact, the government attempts to provide the same quality education to absolutely every Norwegian, no matter how remote a community is or how few children it has. For example, the government spends twice as much per pupil in poor areas where children are scattered over a large area than in other regions of Norway. Likewise, gender differences in educational opportunities have been eliminated. The percentage of girls in upper secondary schools, for example, exceeds the percentage of boys in those schools. Gender preferences in course selection are still apparent though. The result is that parents and communities tend to regard their local school as equal to any other school. Schools do not compete against each other for students, and parents do not ''shop'' for schools for their children. Almost all Norwegians attend local publicly funded schools.

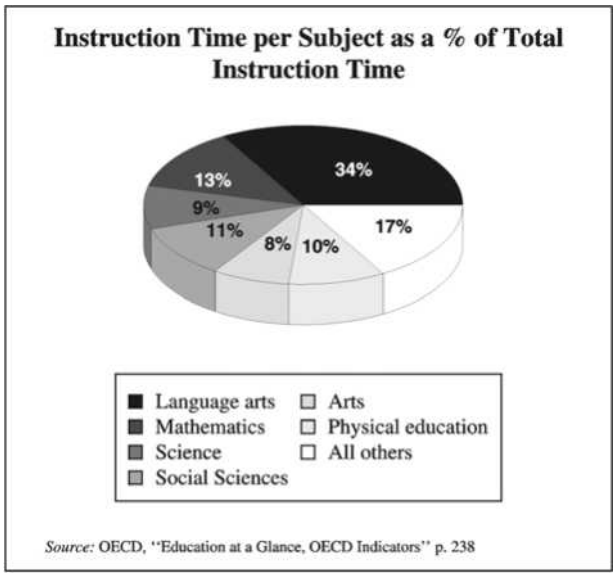
In 1997, the mandatory age at which children must start school was changed from seven to six years old.

Now, all children are required to attend school for 10 years from the age of 6 until the age of 16. After these mandatory years, an optional eleventh year is offered. School size is limited by the Parliament. A maximum of 450 students per school is mandated by law. The philosophy behind this is that small schools function better than consolidated schools at facilitating close connections between the school, students, parents, and community. Some school subjects are required. These include Norwegian, English, mathematics, science, physical education, music, and religion. Students may elect to take courses in the arts, other foreign languages, and vocational programs, such as seamanship, office skills, or agriculture. After these mandatory school years, many students go on to three more years of upper secondary school. They may then take an examination that allows them to be considered for entrance into a university. About the same number of students attend vocational schools as attend college and universities. Because of state support, few schools charge tuition, and all interested students, no matter what their financial need, are eligible for loans from the government.

In 1998, the percentage of those 16 years of age or older whose highest level of education completed was primary/lower secondary school was 23.2 percent, whose highest level was upper secondary school was 54.5 percent, and whose highest level was tertiary education was 22.2 percent. This last percentage has doubled since 1980. Gender differences in these rates exist but are small. The percentage of males who are 16 years of age or older and have completed tertiary schooling is 22.7. The corresponding percentage for females is 21.8 percent. In 2000, the expected years of tertiary education for a 17-year-old Norwegian was 3 years. This is higher than the expected number of years for both Denmark and Sweden. Again, gender differences in these expectations are minimal. Expected years of tertiary education was 3.4 years for 17-year-old women and 2.5 years for 17-year-old men in 2000.

PREPRIMARY & PRIMARY EDUCATION

Kindergartens have come into popularity in Norway only recently. The number of children in kindergartens more than doubled in the 1980s, and there still are not enough schools. The dramatic increase seems to be due to a high rate of female employment outside of the home, the increase of single-parent families, and a demand by the public for more focus on basic instruction. About a third of eligible children attend kindergartens, and half of these children attend private kindergartens. The kindergarten in Norway is intended to serve both the educational and the social development of children. Consequently, kindergartens are run by the Ministry of Consumer Affairs and Administration, not the Ministry of Church and Education. In 1999, a total of 189,382 children were enrolled in kindergarten. The 5,991 kindergartens in Norway employ 52,898 people. Of these kindergartens, 3,013 of them are state schools.



Source: OECD, "Education at a Glance, OECD Indicators" p. 238

As of 1997, compulsory education begins at the age of six. Typically, compulsory education begins with six years of primary school. A class teacher model is usual, and classes are generally held together through compulsory schooling. Moreover, it is typical for a student to have the same primary teacher for the first three years, and many have the same primary teacher for their first six years. No students repeat grades. Teachers are given materials that help them respond to different ability levels in their classrooms, but students are never divided at this level based on ability. No examinations or grades are given in primary school, although both are prevalent in lower secondary school. Parents are given a report about their child's progress at least twice a year. Primary school is followed by three years of lower secondary school, and usually all nine compulsory grades are located in a single school building.

In lower secondary school, classes are still kept together, but for some subjects, especially in the eighth and ninth grades, students are divided into three levels for courses, such as Norwegian, English, German, and mathematics, based on the students' ability in each of these areas. Parents and students are involved in the placement of students into these courses. The goal though, as determined by the Parliament, is to keep classes of students together as much as possible throughout their comprehensive school years. As in primary school, students do not repeat grades in lower secondary school. However, students do receive marks at this level and, at the end of the ninth grade year, take a formal examination.

Norway has about 3,500 compulsory schools, resulting in an average school size of 150 students. By mandate of the Parliament, no compulsory school has more than 450 students. Some schools are quite small and occasionally must accommodate more than one grade in a single class. All compulsory schools are operated by local municipalities, although they are subject to the framework and regulations of the central government. The national plan allows for numerous variations and even encourages innovations at the local level. Locally initiated and registered development projects number over 3,000. Class size is also mandated by the Parliament. In primary school, the maximum class size is 28, and for the lower secondary school, it is 30. The average class size is much lower than these mandates. For primary and lower secondary schools, the average class size was 20.2 students per class in the 2000 to 2001 school year. From 1991 to 2000, the number of students per class rose from 19.2 to 20.2. In compulsory education, the student to teacher ratio is 12.5 in full-time teacher equivalents. In 1998, school expectancy for five-year-old Norwegian girls was 18.1 years and for boys, it was 17.2 years. More than 90 percent of students go on to upper secondary school after completing their compulsory schooling.

In autumn of 2000, approximately 590,000 pupils populated Norway's primary and lower secondary schools. From the 1991 to 1992 to the 2000 to 2001 school years, the number of pupils in primary and lower secondary schools increased by a total of 117,000. Much of this change can be explained by the lowering of starting school age from six to seven years old in 1997. At the beginning of the 2000 to 2001 school year, there were 12 fewer primary schools than at the beginning of the previous school year and 150 fewer schools than there were in 1991. A wide variation in the number of primary and lower secondary schools in the various counties exists. Hordaland is the county with the most schools (350), and Nordland, More og Romsdal, Akershus, and Rogaland have more than 200 schools. The counties with the smallest number of schools are Aust-Agder (80) and Finnmark (100). Interestingly, the number of students in Nordland and More og Romsdal counties is relatively small, about half the number of students in the most populated county, yet these two counties have a large number of schools because of differences in demography and settlement patterns. While quality of primary and lower secondary schools are similar, their distribution and size is quite diverse.

SECONDARY EDUCATION

Three years of upper secondary education are offered to students. Classic academic and vocational training programs were combined into a single comprehensive school as a result of the 1974 Upper Secondary School Law. This law was intended to eliminate any status differences between practical and theoretical kinds of education. With both vocational and general studies offered in the same school, all students became free to choose between these kinds of programs. Students may also participate in apprenticeship programs where their training comes from a purely apprentice based experience, a combination of apprentice work and school based activities, or purely school based activities. A general studies education in upper secondary school is considered the best preparation for university attendance. The competition, however, is greatest for the vocational programs, and once students are admitted to the foundational course for a vocational program, they are not necessarily continued to the next levels of more specialized vocational training. Students must be high achievers to be selected for and to move on in their chosen practical programs. In addition, because these students learn job skills and are still eligible to go on to higher education, they are thought to have the best of both worlds. In contrast, admission standards for general studies are minimal, and fewer students seek those slots. Moreover, continuation is virtually assured. However, some of the brightest students choose this route because it leads most directly to higher education. The trend though is that many of the brightest students compete for spots in the top vocational courses, and the availability of general studies slots has lowered the status of this emphasis. A consequence of top students taking so many vocational slots that would have previously gone to students who have had difficulty in a traditional school format is that these students are forced to take a general studies program or drop out of school. A general studies program would allow them to compete more effectively for higher education admission, but few seek it and all are left with no vocational skills and three more years of the type of schooling in which they have not been successful in the past. Some have referred to students who are not motivated by traditional classroom learning techniques as ''school tired youth.'' Of those 16- to 18-years-old, the usual age group for this level of schooling, about 57.5 percent participated in a general studies program in the 2000 to 2001 school year.

Eleven branches of study are available at the upper secondary level. These include general education, manual and industrial studies, arts and crafts, fishing and maritime studies, sports, clerical and commercial studies, domestic arts and sciences, social and health studies, media and communication, and retail and service trades. Each branch has the same structure in that students participate in one or two years of foundation courses, and then, depending on the branch and the length of the foundation courses, one or two years of concentrated training. Within each branch, more specialized courses of study are available. For example, within the Metals and Industrial

Studies branch, subjects may include carpentry and metal work, plumbing, clock repair, flower decoration, and piano tuning and repair. The full range of possible vocational courses are not available at every school. In this circumstance, students and their parents may search for a school offering the specific desired courses. Grades are given at this level to reflect student's school work, and separate grades are given to reflect achievement on standardized examinations. The number and nature of examinations depend upon the area of study. Examinations may be written, oral, or some combination of the two. In general studies, students take several examinations, including one for Norwegian composition. In vocational studies, students may take an examination in each of the first two years and then two examinations in their final year. Both kinds of grades, teacher ratings and examination results, are listed on the certificate students receive upon leaving secondary school. Details about the individual student's academic record are also recorded on this certificate, including courses taken and school attendance record.

Although there are more girls, 54.4 percent, in the general areas of study than boys, girls are the vast majority of the health and social studies with 91.7 percent. Girls also account for 82.8 percent of those in arts, crafts and design and 73.2 percent of those in music, dance, and drama. These are considered ''soft'' areas of emphasis. In the 2000 to 2001 school year, two new areas of study, media and communication and retail and service trades, were added. These new areas have an equal distribution of male and female students. The curriculum for upper secondary schools is developed by the central government, but secondary schools are administered by each county. Although three years of upper secondary or post-basic education are typical for students, certificates are available after completing one and two year programs. Graduation from upper secondary school typically occurs at age 19. Approximately 164,000 students are registered in upper secondary education for the 2000 to 2001 school year. Vocational programs accounted for 42.5 percent of the total number of students. The number of students in secondary school age 20 and over dropped from 14.4 percent in the 1999 to 2000 academic year to 12.6 percent in the 2000 to 2001 school year.

Large differences in the social backgrounds of pupils in general studies and vocational programs in upper secondary school exist. About two percent of students in the vocational programs have parents with a post-graduate level education, while more than 65 percent have parents with an upper secondary level. Although few gender differences in the rate of attendance at upper secondary schools exist, course choices are quite gender specific. Girls choose health, social studies, and aesthetic programs more than boys do, and boys outnumber girls by far in engineering and mechanical trades. In the 2000 to 2001 school year, girls accounted for just 1.7 percent of building and construction trades, 3.8 percent of electrical trades, and 4.4 percent of engineering and mechanical trades. The gender distribution in upper secondary education and at folk high schools has changed slightly from autumn 1996 to autumn 1999. The female percentage in general studies programs has remained the same, but an increase of 3 percent in vocational programs has occurred over these three years. At folk high schools, the percentage of female students has risen by 5 percent from 1996 to 1999. In apprentice programs, 31 percent of students are female, an increase of five percent since 1996. In an effort to expand opportunities for all Norwegians, the Parliament gives priority to disabled students in admittance to upper secondary schools.

Student councils were mandated for secondary schools with the 1974 Secondary School Law. Students have worked to create more say in school affairs and have been successful in getting more power to determine what is relevant and appropriate for their education. Teachers at the upper secondary level tend to find their jobs to be difficult. They complain of conflicting objectives and too much being asked of them. They are required to teach basic subjects, along with cultural heritage, democratic values, and vocational training. Updating subjects and secondary training is done at the national level by the Upper Secondary School Council. This council also creates new initiatives and was responsible, for example, for a program that introduced computers into schools and established training in information technology for teachers in the 1980s. In 1998, there were 230,115 students in upper secondary schools in Norway. In 2000, among all Norwegians between the ages of 55- and 64-years-old, 65 percent have completed at least upper secondary education; but for Norwegians between the ages of 25- and 34-years-old, 93 percent have done so.

HIGHER EDUCATION

Norwegian universities offer programs of study at undergraduate and post-graduate levels. Four universities and 26 state colleges, among a variety of other kinds of higher education institutions, are available to students in Norway. Smaller specialized colleges offer degree programs that are just two or three years in length, while university studies tend to be longer in duration. A small percentage of students attend college outside of the country. About 40 percent of 19-year-olds meet the formal requirements for higher education and about 25 percent of them immediately enter a college or university. Another 10 percent who do not meet the formal criteria are admitted based on other criteria. Entrance to most fields of study is limited because the number of applicants exceed the number of places available. In medicine, technologi-

cal fields, teacher training, and business economics, minimum entrance regulations help to limit applicants. Unlike most other countries, high achieving students are as likely to attend district colleges as they are to attend universities in Norway, and district college students have the opportunity to transfer to universities if they desire. The student to teacher ratio is 17 in colleges and 11 in universities. Although students do not usually complete upper secondary school until 19 years of age, most put off higher education for a few years while gaining work experience. Others interrupt their higher education for paid employment. The majority of young men in Norway are drafted into military service lasting more than one year, and this delays the completion of their higher education programs. The result of these delays is that about half of the students at institutions of higher education are over the age of 25, and one-fifth are over the age of 30. In terms of gender disparity, in all higher education institutions in 1998, there were 106,711 female students compared to 77,352 male students. Females also outnumber male students at universities with 43,166 female to 37,962 male students enrolled in 1998. The difference is much larger at the state college level with 51,869 female to 28,965 male students. In 2000, nearly 59 percent of students in higher education were female. Male students are in the majority at a few universities and colleges with mostly technological or economic degree programs, such as the Norwegian University of Science and Technology, Norwegian School of Economics & Business, and Narvik College. At military colleges, women make up only about 10 percent of students.

Two university degrees were traditionally available in Norway. These were a first degree after four or five years of study (*cand.mag*) and a higher degree with two to three more years of study (*cand.philol, cand.scient,* and so on). An informal doctoral degree, which followed these levels, was available to students with additional training and who worked as research associates or fellows. New doctoral degree programs, inspired by those available in the United States, were established in the 1970s and 1980s because they offered more formal, structured programs that were recognized internationally. In Norway, this Ph.D. model emphasizes structure and supervised research. Typically, these programs require 3 years of research training but distributed over 4 years with the student devoting 25 percent of their work to other duties. These degrees have become prerequisites for academic positions.

Regular higher educational programs are available to international students who are capable of funding their own education. Admission for international students though is highly competitive and criteria include academic background, plan of study, and proficiency in English. If the desired program of study is taught in the Norwegian language, international students must spend their first year in an intensive language program or must pass a Norwegian language test called *Bergen-testen.* During that year, the institution may or may not reserve a place for the student in their chosen department.

Higher education originally developed in Norway in order to create a more educated work force. This was the prime mission of the first university, the University of Oslo, established in 1811. In the 1960s and 1970s, higher education institutions began to differentiate themselves. A binary system was the solution to the quantity versus quality problem. District colleges served vocational needs, and universities maintained a traditional focus. The 1980s brought accusations of mediocrity in terms of both university teaching and research. The Hernes Commission Report of 1988 called for higher quality teaching and research and more integration and flexibility across institutions. A more efficient higher education system was desired by the commission. Among other things, the plan called for the ''Norway Network,'' which merged small colleges and required more cooperation between district colleges and universities, although it was not until 1995 that the district colleges were combined into a state college system. In addition, even though the plan called for integration across district colleges and universities, universities maintained their distinct status and mission. The binary system survived the attempt at integration and increased efficiency. University teachers supported this distinction. District college teachers, on the other hand, fought to obtain university type responsibilities and rewards, including the opportunity to incorporate research into part of their workload.

To further the reform plan for higher education, in the 1990s, state run institutions were given more autonomy with fewer state imposed regulations, but higher education personnel and institutions became subject to performance control. Goal formation and achievement became imperative, with a focus on greater productivity and lower costs. Funds were tied, for example, to the production of new graduates, and incentive funds were given to faculty for publications. A pay for performance system was also put into place, although its impact was minor. Overall, the 1990s brought greater power and control over higher education by the Parliament, despite the stated goal of decentralization. District colleges and students were more powerful in achieving their goals for higher education than university affiliates due to more state support and sentiment for less expensive, more applied, and shorter programs of study.

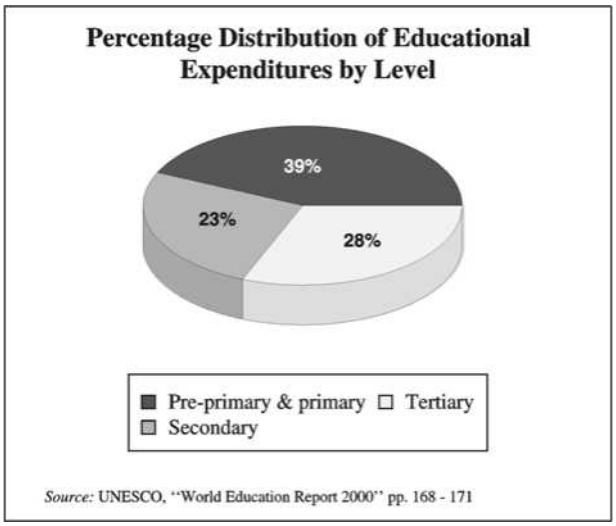
In fact, the purpose of higher education in Norway in the year 2000 seems to have shifted back to its original goal of preparing workers. The university is no longer seen as a purely cultural institution, but rather as one that

needs to be responsive to corporate and consumer demands and where efficiency is prized. Providing a more skilled work force that can help Norway compete in the international economy is the desire of many Norwegians and Parliament. District colleges have shorter and more occupational oriented programs and became available to more students in more locations across the country in the 1990s. In 2000, Norway had 26 district colleges. Faculty at district colleges are primarily responsible for teaching. Universities, on the other hand, remained traditional in their orientation and actively resisted calls to be more practically oriented in their teaching programs. In 2000, the public debate about higher education focused on whether or not the higher education system is too centered on examinations and the certification of students as opposed to learning for its own sake.

The higher education system is essentially state-owned. University teachers are civil servants, and in fact, the Parliament is responsible for establishing any new professorships. A high degree of autonomy exists, and academic institutions are important regional forces, but their budgets are fully controlled by the government. One percent of the Gross National Product (GNP) of Norway was spent on higher education in 1990, while all education costs consumed about 5.8 percent of the GNP. Higher education institutions generally regard their budgets as tight and lobby for an increase in expenditures. About 25 percent of all of the research and development done in Norway is undertaken by higher education institutions. Most of this is basic research and occurs at universities, but applied research and development has proliferated at district colleges in recent years. Research funding is provided through university budgets, along with public and private contracts.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Education is controlled and funded by the central government. Government regulations cover such issues as class size, length of school year, teaching obligations, and minimum number of lessons offered. Even teacher salaries are controlled by the central government as teachers are civil servants and, as such, must lobby public employee salary regulations to impact their pay. Of course, education is also effected by government regulations concerning safety, buildings, and work environment. On the other hand, local governments control the number and location of schools, the hiring of teachers, and the maintenance of their schools. All comprehensive and upper secondary schools are under the control of the Ministry of Church and Education. On a day to day basis, primary and lower secondary schools are administered by local community authorities, and upper secondary schools are administered by the county or region. Each



of the 20 counties in Norway have a school board. Members of each board are appointed by the county council which must give each political party representation on the school board in the proportion to which that party is represented on the county council. County school boards are responsible for the teachers and principals, and the county council votes on the annual budget for the school.

The central government finances the bulk of education in Norway. About 40 percent of compulsory education, 60 percent of upper secondary education, and a full 100 percent of higher education is paid by the central government. Local municipalities cover the remaining expenses. Previously, primary and secondary schools had been funded by specific grants for clearly specified activities or projects. In 1985, in an effort to transfer decision-making in education from the central government to local municipalities, the financing of schools was altered. A lump sum is now given to local municipalities to fund all central government services, including education. Local governments must now decide how much to allocate to education. It is generally believed that education has received more funding from this method, not less, as education is a priority in local communities. For higher education institutions, the budgets provided by the central government are a frame for decision making.

In order to facilitate developments in education, a law in 1954 established the Council for Innovation in Education (*Forsoksradet*). This was the national center for research and development in education. Concerns had been raised that previous educational reforms had not been fully informed by research or testing. This council was charged with assuring educational leaders that any future innovations would be an improvement over what already exists. Experimental forms of schools and educational techniques were advanced and tested under the di-

rection of this council, which served as a consultant to the Department of Church and Education and was responsible for a variety of reforms as described above.

NONFORMAL EDUCATION

Nonformal education was widely available at the end of the nineteenth century as some young people, upon finishing folk school, wanted more yet did not want to participate in college preparatory programs. Clubs or groups revolving around literature, sports, and music developed. In 1999, adult education courses numbered 61,319, and 681,845 Norwegians participated in one of these courses. Participation was distributed by age as follows: 187,626 participated from the 14- to 29-year-old group, 240,783 participated from the 30- to 49-year-old group, and 158,793 participants in adult education courses were over 50 years of age; some of the ages of participants are unknown.

The variety of nonformal or adult education opportunities are immense. Extensive programs for employment training are provided by the Ministry of Labour and Local Affairs. These programs are usually housed at institutions of higher education. Private corporations also provide their employees with numerous training courses, as do the large local public utilities. Another source of adult education in Norway comes from volunteer organizations. These organizations may be affiliated with religious institutions, trade associations, or political parties. More formal adult education programs are offered by district colleges by universities. The government encourages the participation of the disabled in these programs by offering special appropriations for accommodating programs. More than a quarter of adult Norwegians participate in at least one adult education course each year. In recent years, adult education programs have seen budgetary cuts that have resulted in fewer offerings. The desire to participate does not seemed to have changed, but government cutbacks in education have been focused on these kinds of opportunities.

TEACHING PROFESSION

Teacher training for compulsory education occurs mainly in teacher training colleges in a program that lasts four years. Primary school teachers were qualified after three years of schooling until 1992 when the training requirements were enhanced. It was felt that compulsory education teachers needed more depth and breadth in their subject education. The fourth year then became devoted to specialized study, along with education theory. In addition, the first three years of teacher training are now more constrained with fewer optional courses. This added structure insures that teachers receive more instruction in the main subjects taught in the first few years of compulsory school. Twenty teacher education colleges provide elementary teacher preparation. Upper secondary teachers must have a full university degree or professional experience in a vocational field, along with pedagogical training. Secondary teacher training is available at four universities and eight other institutions of higher education. All teacher education programs were standardized in the mid-1990s. The emphasis was on strengthening subject education and developing reflective teachers and a cooperative mentor-focused culture for educators. This was to ensure cohesion across diverse parts of the educational system and to allow for educational content to be adjusted as needs or trends in Norway dictate.

Teachers enjoyed much public support and great respect through the 1960s. In the 1970s, the developing oil industry required more infrastructure, and the public became concerned with health care and other kinds of services. The result has been less remuneration and respect for teachers, especially in comparison to growing salaries in the private sector. Teachers also complain of diminished facilities and increasing responsibilities. In 1999, the number of teachers who worked in primary and lower secondary schools, upper secondary schools, colleges, and universities numbered 110,500. This number increased by 1,400 from the previous year. Across all schools, 30 percent of teachers worked part-time in 1999. Primary school teachers have the highest percentage of part-time teachers (33 percent), while in comparison only about 20 percent of university teachers work part-time. The average age for teachers in Norway is 44.7.

Academics in Norway were considered part of the educated class (*Akademikerne*) and, for most of the nineteenth century, part of the political elite. Academics had a large role in the cultural and social development of Norway. The original pedagogical purpose of the university was to prepare students for a vocation. To become an academic before the early 1980s required a two year masters-like program called the *magister* degree. Increasingly academic departments developed Ph.D. programs, including more structured course requirements and research work. By 1990, the doctorate was generally considered a minimum requirement for a permanent university position. Doctoral students are paid comparable to laborers outside of academics, and unlike other countries, most in Norway stay at the same university throughout their careers. This may be a function of the small higher education system in Norway and may also lend itself to the influence of a small group of senior academics and favoritism.

In higher education, beginning in the late 1960s, the equalization of both the status and the working conditions of academics was advanced. A hierarchy consisting of the

sciences (*amamuensises*), medicine (*prosektors*), and arts and sciences (*lecturers*) had existed prior to this time. *Lecturers* had more teaching responsibilities than the other academic groupings. Work conditions were homogenized as duties for each grouping were moved to about half of their work activities devoted to teaching and half to research. Faculty boards also became less hierarchical. While department chairs and deans had occupied faculty boards, representation was extended to all levels of faculty.

SUMMARY

Norway has achieved a remarkable educational system. Adult literacy exceeds 99 percent, and school expectancy for a five-year-old in Norway was 17.7 years in 1998, one of the highest school expectancy rates of any country. For Norwegians age 25- to 34-years-old, 93 percent have completed upper secondary education, a rate that compares with Japan and is among the best in the world. Norway excels in educational attainment for women as well. The percentage of Norwegian women who have a tertiary level of education is exceeded only in the United States. While many more men than women have at least an upper secondary education in the 55- to 64-year-old age group, among those aged 25 to 34, 31 percent of Norwegian women and 24 percent of Norwegian men have completed a tertiary education program.

Although a prominent goal of the national educational system in Norway is to provide the same quality education to all Norwegians, some disparity still exists. For example, parental education is an indicator of children's level of education. Of all the students enrolled at Norwegian universities and scientific colleges, 23 percent had parents with a post-graduate degree, and another 31 per cent had parents with up to a 4 year tertiary degree. Only one in three had parents with only an upper secondary school education. For the state colleges, the corresponding percentages were smaller with 8 percent of students having parents with a post-graduate degree, and 25 percent having parents with up to a 4-year tertiary degree. More than 50 percent had parents with an education at the upper secondary school level. In addition to parental education, gender also seems to play a large role in educational choices. Norway's achievement is that opportunities are available to all, even though there are still significant group differences in educational outcomes.

The school system in Norway then has come quite close to achieving its primary goal of a high quality education available to all citizens, regardless of geographical location, ethnicity, gender, social class, or any other consideration. The system is subject though to constant revision. Some of the prominent issues in education for Norway at the beginning of the twenty-first century concern the development of preschool programs, including the availability of kindergartens, the decentralization of education affairs, and the efficiency and effectiveness of such a comprehensive school system. While the state provides school funding and has a strong interest in maintaining uniformity across the system in terms of the quality and the structure of education, decision making power is being dispersed to local school administrators. This philosophy of decentralization is sought in a variety of realms, extending beyond the educational system in Norway. Likewise, efficiency and effectiveness are prized across systems in Norway as this country's economic well being is tied to oil prices, and Norway has had experience with economic recession. In the vast and complex national school system then, budget cuts are common and a source of much contention. Finally, Norwegians are especially concerned that their educational system prepare their citizens to compete in a world market. The inclusion of technology in education and the development of a highly skilled workforce are key components of future educational reforms.

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—Melanie Moore

OMAN

BASIC DATA

Official Country Name:	Sultanate of Oman
Region:	Middle East
Population:	2,533,389
Language(s):	Arabic, English, Baluchi, Urdu
Literacy Rate:	80%
Number of Primary Schools:	411
Compulsory Schooling:	6 years
Public Expenditure on Education:	4.5%
Educational Enrollment:	Primary: 313,516 Secondary: 217,246 Higher: 16,032
Educational Enrollment Rate:	Primary: 76% Secondary: 67% Higher: 8%
Teachers:	Primary: 12,052 Secondary: 12,436 Higher: 1,307
Student-Teacher Ratio:	Primary: 26:1 Secondary: 18:1
Female Enrollment Rate:	Primary: 74% Secondary: 66% Higher: 7%

HISTORY & BACKGROUND

Located in the Middle East, Oman, officially known as the Sultanate of Oman, borders Saudi Arabia, Yemen, and the United Arab Emirates. Its bordering waterways include the Arabian Sea, Gulf of Oman, and the Persian Gulf. Oman is 82,030 square miles (1,374 kilometers) large. Its capital and largest city is Muscat.

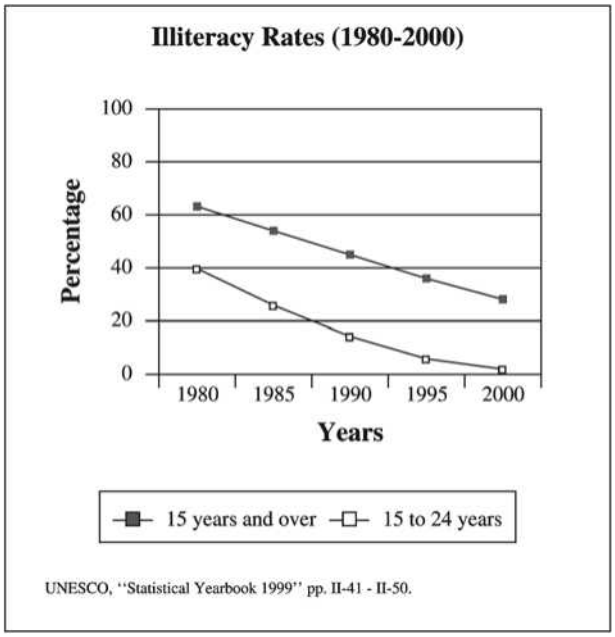
Oman has a mixture of ethnic groups including people of Arab, Baluchi, South Asian, and African decent. Its official language is Arabic, but English, Indian dialects, Baluchi, and Urdu are spoken as well. Its primary religion is Islam.

Oman gained its independence during its expulsion of the Portuguese in 1650. Its government is a monarchy, and the legal system is based on a combination of English common law and Islamic law. Although Oman is an independent state under the sultan, it has been under British protection since the early nineteenth century.

Even though it is an active member of the World Trade Organization (WTO), Oman's borders were once sealed to the outside world, with Muscat's gates closing shut at sunset. In 1970, however, things changed drastically; Sultan Qabus bin Said overthrew his father, Sultan Sa'id ibn Timur, as the sultan and began to use money that came from the oil surplus to build schools, houses, roads, and improve the environment. The young sultan also made health and education free.

EDUCATIONAL SYSTEM—OVERVIEW

In 1970 there were only three official (government-run) schools in the country of Oman, with slightly more than 900 pupils. In fact, these three schools were reserved for boys that were personally chosen by the former sultan. In addition to these official schools, there was a religious institute with an enrollment of about 50 boys, three private schools for *Hyderabadis* (Indians), and one U.S. missionary school for 50 girls. Schools were, and contin-



UNESCO, ''Statistical Yearbook 1999'' pp. II-41 - II-50.

ue to be, segregated by gender in Oman; the exception to this is rural schools where a lack of facility space requires gender-mixed schools.

In contrast to small enrollments and a few schools in 1970, by 1998 there were more than 950 government schools, 84 private schools, 192 adult education schools, and 228 literacy centers. In addition to these educational facilities, a special school for children with hearing impairments and a special school for children with intellectual impairments were established in the 1980s. However, by 1998, a special school for children with visual impairments had not yet been established, resulting in many of these students being sent to neighboring countries to get an education.

In 1970 the adult illiteracy rate, according to the *Europa World Yearbook 2000,* was at a high of 80 percent. By 1994, under the leadership of Sultan Qabus, who made the expansion of the school system a national priority, government education expenditures rose to 4.5 percent of GNP and had grown to represent 15.5 percent of all government expenditures. By 1995 adult illiteracy had dropped to 36 percent, and government literacy centers had been successful in helping to correct illiteracy problem. By 2000 the illiteracy rate had dropped further nearing about 20 percent.

PREPRIMARY & PRIMARY EDUCATION

In 1993, there were no government established nursery schools. As Oman's society continues to develop and grow, more women are entering the workplace, thus creating a growing need for government-supported nursery schools. Although there were some nongovernmental schools, the government had not taken steps in that area. Part of this can be explained by Omani culture, which supports children being cared for by their parents or extended family members. However, since more Omani women are continuing their education and pursuing professional roles, added nursery schools will be useful.

Overall, education in Oman is based on a 6-3-3 system, which means six years of primary education, three years of preparatory education, and three years of secondary education. Primary education begins at age six and continues for six years. Primary education is not compulsory, however, despite it not being compulsory, there are a growing number of Omani children who are attending due to a widespread support of education. At the primary level, students learn basic skills. Primary education enrollment was 76 percent of all relevant age-group children in 1997. Once children successfully complete primary education, they are promoted to their first grade of the preparatory level.

SECONDARY EDUCATION

Following primary education, pupils who successfully complete that level advance to the next level of education, which is divided into two equal parts called preparatory and secondary education, lasting a total of six years. The first preparatory schools were established in 1972. One was designated for boys and one for girls. Preparatory schools often share facilities with either a primary or secondary school. At the preparatory level, students may choose from four specific options: general education, health sciences, military studies, or vocational training. At the end of preparatory education, students take a national examination. If they successfully pass it, they are enrolled in secondary education. However, if they do not pass, they are not eligible to re-enroll as regular students.

The first secondary school opened during the 1973-1974 academic year with an enrollment of 25 students. By 1985, there were more than 12,000 secondary students in Oman. Although secondary education levels still have lower enrollments than primary education (67 percent enrollment), this rate has been growing. Secondary education has two options, general education, which prepares pupils for the university, or a vocational education, which prepares pupils for careers. General education provides one year of basic academic subjects and two years in the humanities or sciences. The specialized vocational education includes basic academic subjects, but emphasizes Islamic, commercial, agricultural, industrial, or teacher training.

During the 1998-1999 academic school year, a new system was initiated, which consisted of ten years of

basic education and two years of secondary education. This was introduced to 17 schools with the intent of gradually implementing this change throughout the country.

HIGHER EDUCATION

Oman's first university, Sultan Qaboos University, was founded in 1985 and opened in 1986. Its academic year begins in September and ends in May. The university is made up of five colleges: Education and Islamic Sciences, Science, Medicine, Agriculture, and Engineering. In 1998 there were more than 6,000 students attending the university. In addition to Sultan Qaboos University, the *Europa World Yearbook 2000* identified eight teacher-training colleges, eight Islamic colleges, and nine vocational institutes—including institutes for health sciences, banking, and technical institutes. There have also been great gains in the area of adult literacy, and education centers have been established.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Oman's education system is governed by the Council for Education, which is chaired by the sultan and operated by the Ministry of Education and Youth. With continued government support, the total number of pupils in state education had grown from 909 pupils in 1970 to 528,400 between 1995-1996, with 24,100 teachers to instruct them in 965 schools. By 1997 there were 967 schools identified at the primary, preparatory, and secondary levels, not including 106 private kindergartens and schools regulated by the Ministry of Education. Plans were initiated in 1997 to further develop technical, agricultural, and artistic/craft training at the intermediate and secondary levels.

The state has endeavored to make education available to all by providing free public education and encouraging the growth of private educational programs. Despite all of these government endeavors, education is not compulsory, which ultimately impacts the national literacy rate. Even though Oman's literacy rate is much better than many countries, the literacy rate would be expected to grow even more with a compulsory education system.

TEACHING PROFESSION

Training for Omani primary level teachers was first initiated in 1976. From there, training for preparatory and secondary education teachers was established. By 1984, the intermediate colleges for male and female teachers were established; intermediate colleges accept secondary education graduates and train them to be teachers, focusing on developing well-rounded teachers who have both scientific and educational backgrounds and an ability to be leaders in their communities.

By the mid-1980s the government began to put a greater emphasis on teacher training to reduce its dependency on foreign staff. In 1980-1981 only 11 percent of the teaching staff were native Omanis. Although this number has increased since then, having indigenous Omani teachers continues to be a national agenda.

SUMMARY

Oman has made great growth in its general educational arena and literacy improvements; however, growth in technological supports that facilitate educational advances have been slower—the type and amount of instructional technology that teachers receive varies greatly. Even at the higher education levels, the most common instructional media used by many teachers and a large portion of student teachers has been chalkboards, followed by lectures, printed materials, and the use of textbooks. The use of computer tools, including software and Internet sources has not been fully accessed, understood, or used. The use of more media in the Omani education system is still needed. In 1999, Oman had only one Internet service provider, which minimized the amount of global resources that pupils could receive and access.

In addition to the need for more technological and Internet resources, Oman is in greater need of library resources at all levels of the education system, including national. Library resources and facilities have been limited in content and sparsely populated.

As a whole, the educational system in Oman has improved tremendously under Sultan Qabus. The literacy rate has greatly improved, national resources have made educational support a priority, and teacher training has sought to better prepare teachers and to solicit more indigenous teachers from Oman. With added improvements in the area of technological resources, library expansion, and government nursery care, Oman's educational system will only grow stronger.

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—Kimberly A. Battle-Walters

PAKISTAN

BASIC DATA

Official Country Name:	Islamic Republic of Pakistan
Region:	East & South Asia
Population:	141,553,775
Language(s):	Punjabi, Sindhi, Siraiki, Pashtu, Urdu, Balochi, Hindko, Brahui, English, Burushaski
Literacy Rate:	37.8%
Compulsory Schooling:	6 years
Public Expenditure on Education:	2.7%
Libraries:	10
Educational Enrollment:	Primary: 15,532,000 Secondary: 5,022,416

HISTORY & BACKGROUND

There are two systems of education in Pakistan: traditional and modern. The traditional system, which focuses on Islam, has experienced an exponential growth since the 1970s, influenced by the wave of Islamic fundamentalism from Iran. In the late 1990s, the traditional Islamic schools, called *madrassahs,* came increasingly under the influence of the anti-West Taliban movement in Afghanistan. The traditional schools have multiplied tenfold, for the large part training *mujahideens* whom the government of General Parvez Musharraf, who assumed authority in October, 1999, has lauded as freedom fighters, ready to wage a *jihad* (religious war) through terrorist activities against nonbelievers. While only 4,350 *madrassahs* are registered with the government, the actual number has been estimated at between 40,000 to 50,000. A revealing article by U.S. anti-terrorist expert Jessica Stern in *Foreign Affairs* (November-December 2000) has warned the world about the kind of ''education'' imparted by these ''Schools of Hate'' and their role in creating a ''mindset'' for *jihad.*

A critical examination of the modern formal education system extending from primary to the university levels by experts ranging from the World Bank to those in research institutes in Pakistan has found the colleges in the country ''sub-standard, bureaucratic, government-controlled, poor and inefficient,'' to quote Tariq Rahman of the National Institute of Pakistan Studies of the Quaid-I-Azam University. Such criticism fails to explain how the several hundred thousand Pakistani graduates who have migrated to the West, notably to Great Britain, the United States, and Canada, mostly as professionals—whether as doctors, engineers, pharmacists or educators—have with only marginal additional training been able to compete with the very best in those advanced countries.

Pakistan came into being when colonial British rule on the Indian subcontinent ended in August 1947 and the two sovereign states of India and Pakistan were created. Of these, Pakistan constituted two wings—West and East—separated by more than one thousand miles of Indian territory. The new state was the result of a demand for a separate homeland for India's Muslims as articulated by the Muslim League political party and its sole spokesman, Mohammed Ali Jinnah (1876-1948). The Lahore Resolution, adopted by the Muslim League in 1940, however, had called for independent states in the northeast and northwest. That was changed by Muslim League legislators in 1946, who called for a single Muslim state, Pakistan. The new state's capital was Karachi. Partition still left one-third of the subcontinent's Muslims

in India; after the separation of East Pakistan and the birth of Bangladesh in 1971, Pakistan was left with 45 percent of its original population, the number of its Muslim citizens being less than those in India.

For the first 24 years of its history, Pakistan had two constituent parts: West Pakistan, comprising the four provinces of the Punjab (western half of the old Punjab), Sind, the North-West Frontier Province (NWFP), and Baluchistan; and East Pakistan, comprising East Bengal, which seceded after a bitter political struggle and military conflict from Pakistan in December 1971 to become the new state of Bangladesh with 55 percent of the population. Pakistan is bounded to the west by Iran, by India to the east, China to the northeast and Afghanistan in the north. There are federally ruled territories, including the capital of Islamabad, and the country controls a part of the former princely state of Jammu and Kashmir.

Pakistan traces its history of education to the advent of Islam and Islamic/Arabic culture to the Indian subcontinent with the invasion of Muhammad bin Qasim in Sind in 712 A.D.. By that time, the Arabs had already distinguished themselves not only as conquerors and administrators over vast territories in the Middle East and North Africa but even more significantly as creators of a culture replete with literature, art, architecture, and religious studies. With the establishment of Muslim rule at Delhi in 1208 A.D., the Islamic culture made extensive inroads on the subcontinent, converting a quarter of its population to Islam over the next five centuries.

The traditional school system had been the mainstay of education among Muslims of the subcontinent from the thirteenth to the eighteenth centuries until the rise of the British power beginning in 1757. Increasingly, some leaders of the Muslim community, notably Sir Sayyid Ahmad Khan (1817-1898), urged the Muslim youth to join the modern educational system initiated by the British. With the adoption of English as a medium of instruction after Thomas Babington Macaulay's infamous minute in 1835, and the rapid increase in the number of educational institutions following Sir Charles Wood's Education Despatch of July 1854, learning in Sanskrit, Arabic, and Persian receded, making way for English and for the adoption of Western education. In 1857 three universities were established in the ''presidency'' cities of Calcutta, Bombay, and Madras, producing not only the subordinate bureaucrats as intended but also hundreds of university graduates wanting to take up higher education in the social sciences, humanities, and natural sciences.

Hindus took more readily to the new education than did the Muslims. Muslim leaders such as Sir Sayyid saw the danger that their co-religionists would fall behind the Hindus and be kept out of the bureaucracy if they did not prefer the modern educational system over the traditional. Under Sir Sayyid's leadership, the Anglo-Oriental College (later upgraded to Aligarh Muslim University) was founded in 1875. It did not eliminate the traditional system of education, but there is no doubt that it seriously undermined its standing and standards. The Anglo-Oriental College provided higher education on the British pattern (more particularly that of Cambridge University) and produced a remarkable leadership for the Muslims of the subcontinent, particularly in present-day Uttar Pradesh, for educational, social, and legal reform and promoted the Muslim nationalist movement, which eventually led to the partition of the subcontinent and the birth of Pakistan. It also produced brilliant graduates, who went to England for higher education, some of them serving in the Indian Civil Service, which prided itself in being the iron framework of the British imperial edifice in India.

Roughly 67 percent or two-thirds of Pakistan's population of 129,871,000 (1995 estimate) lives in rural areas, leaving about 43 million in urban areas. Nationwide, children between ages 5 and 9, the primary school age, numbered about 16.8 million, while those between 10 and 17, at which point they would reach the 12th grade, numbered about 21.7 million. In general, the population is young, with persons below 30 numbering about 65 million, accounting for 50 percent of the total.

The population comprises five ethnic groups: the Punjabis, constituting the majority at 63 percent of the total; the Sindhis, at 12 percent; the Pathans, at 16 percent; Baluchis, at 5 percent; and *mohajirs* (literally, immigrants), who were primarily the result of a massive migration in 1947 mainly from India's state of Bihar. Corresponding to these categories are the linguistic groups, though they do not necessarily match the administrative boundaries. The languages claimed by the people in the census as mother tongue include: Punjabi, Sindhi, Pashto, Baluchi and Brahui, the last two being used in Baluchistan.

Although Urdu is claimed by a small percentage (eight percent) as their mother tongue, it enjoys the status of the national language largely because of its historical importance during the movement for the Muslim homeland. Urdu, the language of the educated Muslim elite from Northern India who provided critical leadership to the nationalist movement for the creation of Pakistan, draws substantially on Persian and Arabic for its vocabulary and uses a modified version of the Persian script, which is written from right to left. Since the birth of Pakistan, Urdu is taught in all schools; in Punjab, it is taught as first language and its script is used by those writing in Punjabi.

English was used from the beginning as a national language for official purposes. And though the 1956 con-

stitution limited its use for 20 years, the 1973 constitution stipulated a 15-year period during which Urdu would completely replace English for official purposes. This has not happened.

Almost all the people—97 percent—are Muslims, two-thirds of whom are Sunnis professing the orthodox Hanafi school of jurisprudence. Nearly one-third are Shi'ites, who are subdivided into Ismailis (followers of the Agha Khan), the Twelvers (Ithna Asharis), and Bohras. Besides these, there is a very small though influential sect of the Ahmadiyahs, or Qadianis, who do not accept Muhammad as the final prophet, which constitutes the first of the five basic tenets of Islam. In 1974, a constitutional amendment categorized the Ahmadiyahs as non-Muslims; they were grossly persecuted during the decade-long Zia regime (1977-88). Hindus and Christians account for 1.5 percent each, and there are small numbers of Parsis or Zoroastrians, with a very high percentage of graduates and professionals.

At the time of the country's birth in 1947, large-scale human migrations took place: an estimated 4.7 million left Pakistan for India while 6.5 million came to Pakistan with a net gain in population of 1.8 million. The largest demographic changes occurred in the Punjab, which gained 5.2 million and lost 3.6 million. The second largest to suffer demographic changes was Sind, which lost most of its Hindu population, which had controlled more than 90 percent of its economy and held important positions in bureaucracy, education, and the professions. Most immigrants flocked to the cities; in 1951, nearly one-half of the population in the major cities were immigrants, including a very large group from India's Bihar state. The Biharis and their descendants are pejoratively called *mohajirs* (immigrants), a term that should have applied to everybody who came from outside and should, in all fairness, have a terminal date, after which time they should be considered regular inhabitants of the land. The Biharis, who concentrated in Karachi, remain unintegrated into the Pakistani society even a half-century after their initial migration. During the very unsettling conditions in Afghanistan in the late 1970s and early 1980s, an estimated 3.7 million refugees moved into Northwest Pakistan, placing an economic burden on all the facilities, including the educational system.

Constitutional & Legal Foundations

Pakistan has had three constitutions and has been for periods of time totaling over three decades ruled by its armed forces. Regardless of the nature and composition of the governments, however, education has been given a high priority throughout the country's history, as a vehicle essential to the needs and demands of a modern, independent sovereign state. Such motivation has unfortunately not been matched by adequate allocations of funds, not at least until the 1990s. At the time of its independence from British rule in 1947, Pakistan had 1 university, 20 professional colleges and 83 colleges of arts and science with a total enrollment of 37,102 students. In 2000, there were 35 universities. As for primary and secondary education, in 1947, the country (including the eastern half) had 11,057 schools with an enrollment of 1,053,000. By 1991, the number of primary schools had risen dramatically to 87,545 primary schools with an enrollment of more than 7.7 million students. There were 11,978 secondary schools with nearly 3 million students. The phenomenal expansion in education measured in the context of population rising from 42 million in the areas of the western half in 1947 to 129 million in 1995, is impressive but not adequate because it leaves illiteracy at 75 percent and female literacy at only 10 percent nationally and much lower in the rural areas of provinces such as Baluchistan, where only 2 percent of women are literate.

Importantly for education, there were several commissions periodically appointed by the government to review and recommend measures for improvement. They have all invariably been critical of the government's performance. The first All Pakistan Educational Conference was held within months of the country's birth in 1947.

Several commissions followed with their reports, often making contradictory recommendations. The Report of the Commission on National Education in 1959 constituted a landmark in the educational history of the country. It was arguably the most articulate and comprehensive statement on Pakistan's needs and plans for educational reform. Its elaborate recommendations formed the basis of the provisions for education in the Second Five Year Plan (1960-65), which by itself was noted for setting a vision for the country's development for nearly a decade and a half.

The educational goals of the Commission of 1959 and the Second Five Year Plan were universal literacy and universal primary education; qualitative improvement in education at all levels, with particular emphasis on science and technology; reduction of inequalities in educational opportunities; and, significantly for a Muslim nation established on a religious basis, an emphasis on Islamic ideology, observances, and character-building.

In 1972 Pakistan lost its eastern wing, which became the new nation of Bangladesh. In the following year, the new prime minister of Pakistan, Zulfikar Ali Bhutto, criticized the post-colonial education system and urged major changes:

> Ever since we gained independence, education has remained the most neglected sector in the body politic of

> our country. For a long time, the obsolete idea of producing an educated class from amongst the privileged few to constitute the elite in the country remained the cornerstone of our educational system. This was a heritage of colonialism (quoted in N. A. Baloch, ed., *The educational Policy 1972: Implications and Implementation,* Hyderabad, University of Sind Press, 1972, p. 2).

The new policy of education Bhutto announced was designed to broaden the base of education through increased access to it by people from all strata of the society. The aim of education would be to create an equitable society based on socialism and the egalitarian values of Islam. Admission to higher education would be based on merit. Special efforts would be made to remove regional economic disparities. The government's policies would be directed toward enabling people of all provinces an opportunity through education and training to participate in the country's agricultural and industrial development and in higher levels of employment, including government. Academic freedom, limited only by considerations of national security, would be fully guaranteed to institutions of higher learning. The system would create respect for manual labor, would be more science-oriented and conscious of environmental needs, and would make the youth of the country aware of their duty to participate in social improvement programs.

Prime Minister Bhutto regretted that 50 percent of the population of the country as a whole was illiterate, with the female population being worse off, with 75 percent illiteracy. His plan introduced a number of adult literacy programs all over the country and aimed at universal primary education up to the fifth grade for boys by 1979 and for girls by 1984. The plan also aimed at redressing the imbalance in higher education, which had thus far stressed arts and humanities with an enrollment of 61 percent and grossly neglected science and technical education. In order to promote the industrial development of the country, the Bhutto administration aimed at raising the enrollment in technical education to 42 percent and in science to 30 percent.

Between 1972 and 1974 several new universities were opened and some institutions of higher education upgraded to a university status. In 1973 the University Grants Commission was established to fund all universities in the country and to help them, particularly with planning new programs. Some universities were identified as Centers of Excellence; new Area Studies Centers were established at some leading universities. Among the most notable initiatives was the establishment of the People's Open University (later named Allama Iqbal Open University) in 1974, which has blossomed into a dynamic agency for adult education open to all across the country regardless of age, gender, class, or ethnic origin. The education offered by this remarkably successful university has not only raised the level of literacy but has produced large numbers of highly qualified persons who have earned higher degrees, including the doctorate, in several fields.

Bhutto's government was toppled by General Zia-ul-Haq. Bhutto was assassinated in 1977, and along with him, his several policy initiatives, including those in the field of education, were laid to rest. Zia instituted a number of measures to win over important segments of the society, notably, the mullahs (Islamic clerics) and the large numbers of masses whom they controlled. In the late 1970s Zia ordered nationalization of private schools with the intent of providing broader access to the middle and lower classes, thereby making major dents in the elitist policies dating from the British colonial rule that had favored the middle and higher classes. Among his populist measures was making the study of Urdu compulsory at the primary and secondary levels and increasing the content of Pakistani and Islamic studies in the curriculum. Regarding these as anti-elite measures, a large number of affluent families sent their children abroad not only for university education but even for high school diplomas.

Consistent with the Zia regime's policies of Islamization of the country's polity and society, a series of educational conferences was held during 1988-89. In 1991 the government appointed the Commission on Islamization of Education to emphasize Islamic values, learning and character-building.

EDUCATIONAL SYSTEM—OVERVIEW

The academic year extends roughly from April to September/October and November to March, varying from province to province. The weekly holiday is on Friday, the day of prayers in the Muslim world.

Basically, there are two systems of education prevalent in Pakistan: the traditional religion-based education system and the modern formal education system begun under British colonial rule and continued after the country's independence. Both systems are financed by the ministry of education, although the scrutiny by the government of standards in the modern education sector is far stricter than for the *madrassahs.* Since the late 1970s, with the increasing Islamization of Pakistan's polity and society, the management of the traditional institutions has been streamlined both at the provincial and the federal levels by the mullahs. This was partly helped by the fact that the madrassahs were financed out of the *zakat,* the Islamic tithe collected by the government.

The Traditional Schools: Above the primary level are the *maktab* schools, attached to the mosques, where children are initiated in religious instruction emphasizing

memorization of the verses in the holy Quran. Those who complete elementary education are awarded certificates depending on their proficiency in Nazira (Reading of Holy Quran), Hifz (Memorization of Holy Quran), and Tajweed-o-Qiraat (Techniques for the Recitation of Holy Quran). Those who complete the equivalent of secondary level education are awarded the Tahmani certificate. The examination leading to it includes Arabic language and literature, Islamic law and jurisprudence, and translation of some chapters of the Quran. The higher level of Islamic learning is imparted at the *madrassahs,* whose graduates, called *fazils,* are qualified to be religious teachers in secondary schools as well for teaching religious subjects in the modern education system. They may be awarded Mauqoof Alaih, equivalent to a bachelor's degree, for their advanced knowledge of Arabic language and literature, history, logic, and the ability to translate passages from the Quran. Still more advanced education is given at *dav-ul-uluma,* which are university-level postgraduate institutions that award Daurai Hadeeth—regarded as being the equivalent of a master's degree—indicating the candidate's specialization in the meaning and interpretation of the sayings of Prophet Muhammad.

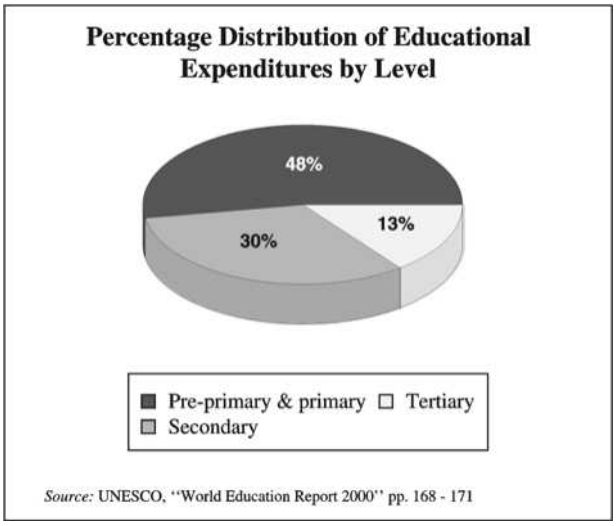
At all levels of the traditional system of education, secular subjects such as math and science, essential for the functioning of modern societies, are not taken seriously, making the students, in the words of Maududi in his *First Principles of the Islamic State* (1960), ''incapable of giving any lead to the people regarding modern political problems.'' Until the 1980s enrollment in these schools was limited because of the justified general perception that such an education did not help future employment prospects or pursuit of a profession. Therefore, there was an increasing trend until that point of time in favor of introducing ''regular'' subjects in the curriculum of the traditional schools.

In the 1980s President Zia-ul-Haq promoted the *madrassahs,* partly out of his personal conviction that instruction in such schools would help the people to behave as genuine followers of the Islamic faith and partly because such institutions helped him to mobilize support of the religious hierarchy and religion-based political parties for his rule. Their support was also valuable to him in the recruitment of soldiers for the anti-Soviet war in Afghanistan. The number of *madrassahs* in the country grew rapidly, financed by the United Arab Emirates, Saudi Arabia, and Iran as well as by affluent Pakistan industrialists and businessmen both at home and abroad. Part of the estimated $3.5 billion given by the United States and Saudi Arabia to Pakistan for assistance in the anti-Soviet war in Afghanistan was diverted to Islamic education on the assumption that it would fuel the spirit of *jihad* against the Soviet Union. During that period, the efforts of the government to broaden the curriculum of the *madrassahs* failed because the religious heads refused to accept any suggestions for change on grounds that the government had no right to interfere in an education system fashioned twelve centuries ago by the Caliphate in Baghdad.

During the U.S.-supported war against the Soviet Union in Afghanistan, Pakistan played a crucial role not only as a conduit for U.S. arms to the Afghans but also in the military training Pakistan provided to the Afghans. In the 128 camps established for that purpose in Pakistan, mostly in the northwest, Zia's pro-Islamic government evoked the defense of Islam against the atheistic Soviets. Each camp had a large *madrassah,* where a heady mixture of the teachings of Islam and militancy was provided to the youth as the spirit of *jihad.* This led to the rise of the Taliban (literally, student) movement in Afghanistan. After the Soviet withdrawal from Afghanistan in 1989, the Taliban and their trainers in Pakistan were elated by what they interpreted as a victory of Islam over a superpower. The Taliban was not disbanded; instead, it established itself over the years as the government of most of Afghanistan. It developed itself as the center of a global *jihad* for the propagation of alleged Islamic values, including denying women an education and role outside the home. It also became the focal point of opposition to ''decadent'' Western—more particularly, American—influence, and offered the Saudi terrorist millionaire Osama bin Laden refuge and assistance in establishing his headquarters in Afghanistan.

In the 1990s the *madrassahs* in Pakistan changed drastically in their purpose and curriculum content. The experience of training the Taliban militants had influenced the clerics and teachers in the *madrassahs,* whose numbers touched 8,000 by the year 2000. Robin Wright wrote in December 2000, ''Most of the *madrassahs* are a byproduct of a crumbling state. More than a million youths are now enrolled in *madrassahs* because of Pakistan's deteriorating education system and the growing appeal of Islam.'' The impact of all this on terrorism in the region supported by Osama bin Laden led the U.S. government to ask Pakistan in 1999 and 2000 to clamp down on the terrorist groups and close a number of militant *madrassahs.*

The Modern Educational System: The modern educational system comprises the following five stages: The primary stage lasting five years, applicable to children from 5- to 9-years-old; a middle stage of three years for children 10- to 12-years-old, covering grades six through eight; a two-year secondary, or ''matriculation'' stage (grades nine and ten), for children 13- and 14-years-old; a two-year higher secondary, or ''intermediate college,'' leading to an F.A. diploma in arts or F.S. in science; and a fifth stage covering college and university programs



leading to baccalaureate, professional, and master's and doctorate degrees. The preprimary or preparatory classes, called *kachi* (literally, unripe) or nursery, were formally integrated into the education system in 1988.

The two major stages in the pre-university period are marked by primary and secondary schooling for 10 years leading up to the Secondary School Certificate Examination (SSCE), and an additional two years in higher secondary school or college leading to the Higher Secondary Certificate Examination (HSCE). The SSC and the HSC examinations are conducted by the Boards of Intermediate and Secondary Education. It is the stage at which most of the brightest students take up medicine, engineering, pharmacy, dentistry, or architecture. There is a special public examination at the end of grade eight for those wishing to apply for government scholarships. The participation rate falls from 58 percent at the primary stage to 36 percent at the middle three-year stage, to 22.5 percent at the SSCE level, and to a precipitately low of 7.3 percent at the HSCE stage.

Those who prefer technical education enroll after SSCE into one of the ''intermediate'' colleges offering technical and vocational education, or they enroll in one of the numerous technical institutes run by provincial departments of education. A separate board examines students of technology and awards certificates to those who pass the examination.

While most students take the three-year course in college leading to the bachelor's degree, students aiming at a professional degree in medicine, engineering, architecture, or pharmacy join the appropriate professional colleges after the HSCE. The duration of study leading to the professional degrees varies. While the bachelor's degree in medicine (MBBS or Bachelor in Medicine and Bachelor in Surgery), requires five and one-half years including one year of internship, a degree in engineering, architecture, pharmacy, or veterinary medicine requires four years. The participating rate in the bachelor's degree or professional degree courses is a meager 2.8 percent.

Graduate education, known as ''postgraduate'' education, is available at the universities and some institutions of higher learning ''deemed'' to be universities. A master's degree would require two years, while the Ph.D., taken in almost all cases after the master's (theoretically an option exists to take it after the bachelor's), takes two to three years of additional work involving a thesis or doctoral dissertation.

Female Education: A major problem in education in Pakistan has been the low rate of female participation and the substantial disparity between males and females in educational achievement. In 1992, among all persons above 15 years of age, only 22 percent of females were literate as against 49 percent of males. United Nations sources show that in 1990 only 30 percent of primary school age girls were in school; only 13 percent were in secondary schools; and only 1.5 percent were in grades 9 and 10. The percentage was and is even lower in rural areas, where 67 percent of the population lives. It varies from province to province from 26 percent in Punjab to a deplorable low of only 2 percent in Baluchistan. Among the entire population of over 25, in 1992, females averaged a mere 0.7 year of schooling compared to an average of 2.9 years for males.

In order to understand the low numbers in education and employment for women, one must understand that gender status in Pakistan, as in some other Muslim societies, is based on two assumptions: that women are subordinate to men and that a family's honor depends on the activities of female members of the family. Therefore, such societies believe that women's mobility should be severely restricted by encouraging them not to go outside the home. Even for those who manage to obtain higher education, the colleges and universities are segregated by gender. In general, people consider a woman—and her family—to be ''shameless'' if no restrictions are placed on her mobility.

The movement for education among Muslim women on the subcontinent went hand in hand with the social and legal reform movement as well as the anticolonial nationalist movement against British rule. A number of prominent Muslim reformers of the nineteenth century tried their best to encourage female education, to enable greater freedom of movement among women, to eradicate or limit polygamy, and to guarantee women's rights under Islamic rule. Many of the graduates of the Anglo-Oriental College (later Aligarh Muslim University), founded by Sir Sayyid Ahmad, strove to improve the social status of

women. Unfortunately, but for a few exceptions, their liberalism did not extend beyond advocating ''cooking and sewing classes conducted in a religious framework to advance women's knowledge and skills and to reinforce Islamic values.'' It is no wonder that there was little progress in women's education before 1920.

As the nationalist movement progressed in the 1920s and 1930s, the issue of empowerment of women was linked to the independence of the subcontinent. A striking result of this was the enactment of the Muslim Personal Law in 1937, which improved the condition of women, particularly in regard to inheritance of property.

Since the birth of Pakistan, the changing status of women has been linked with the discourse about the role of Islam in a modern state, the extent to which civil rights are appropriate in an Islamic society, and how they could be reconciled with Islamic family values. Thanks to some elite women and liberal-minded men of the middle and upper classes in the new country, the Muslim Personal Law of Sharia was passed in 1948, giving women rights to inherit all forms of property. And although the women's movement failed to get the Charter of Women's Rights included in the 1956 constitution, it succeeded in getting the Muslim Family Laws Ordinance promulgated five years later. This confirmed women's rights to inheritance and improved their position in regard to marriage and divorce. During the first decade and a half following the independence of Pakistan, women's prospects looked fairly promising, including in the field of education.

Of significance to women's status in Pakistan were two significant movements in its neighborhood propelling the Pakistani society into two diametrically opposite directions. First was India, where the high status of women, on a level of equality with men, was guaranteed under the country's constitution of 1950 and implemented in politics and law ever since. The other was the rising tide of fundamentalism in post-Shah Iran and in Taliban-dominated Afghanistan, which has adversely affected the status of women and of female education in many countries of the Muslim world, including in Pakistan.

Major setbacks came during the decade-long conservative regime of President Zia-ul-Haq and his Islamization program, beginning in 1979. Several laws and ordinances were aimed at prejudicing women's position under the Muslim family law and the enjoyment of democratic rights. In 1986 a revision in Pakistan's Penal Code provided that ''whoever by words, spoken or written, or by visible representation or by any imputation, innuendo, or insinuation, directly or indirectly, defiles the sacred name of the Prophet Muhammad shall be punished with death or imprisoned for life and shall be liable to fine.'' The law was used indiscriminately against anyone but more particularly against women and minorities.

Improvements in education, including female education, occurred during the brief first administration of Prime Minister Benazir Bhutto (December 1988-August 1990). The momentum continued during the next three administrations, indicating the people's rejection of Zia's Islamization program. Such steps were partly also the result of long-term pressures from international donors. In March 1990, the World Conference on Education for All met in Jomtien, Thailand. Prior to the conference, UNICEF, the UNDP, the World Bank, and UNESCO, the sponsors of the meeting, had declared ''Education for All'' as their top priority. They had impressed on Pakistan's bureaucrats and businessmen that their country would not make progress without a healthy, well-educated population. The developing countries meeting in Jomtien pledged to concentrate on providing universal education, including that of females. Thanks again to the continuing efforts of the world agencies and some of the participating countries at the conference, the heads of state and governments of nine large countries—Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria and Pakistan—met in New Delhi in November 1993. Representing three-quarters of the world's illiterate population and huge numbers of the world's out-of-school children, they pledged to institute urgent and appropriate policies to promote education for all. Accordingly, in 1994 the Social Action Program, an expensive joint effort of the government and the donor agencies involving $8 billion to be spent over 5 years, was inaugurated in Pakistan.

The reason for the low rate of education among females is primarily attributed to religious and social conservatism, which inhibits the movement of girls outside the home. Research conducted by Pakistan's Ministry of Women's Development and by international agencies in the 1980s and early 1990s showed that ''danger to women's honor'' was the parents' most crucial concern. Moreover, except in major urban centers, women are not expected to work outside the home, and more often than not it is prohibited. Even in the cities, those who do not go on to higher education (and such numbers are very high) have few employment options. Increasingly, however, because of economic pressures and rising numbers of nuclear family units who do not have the benefit of the social insurance provided by traditional extended families, many more young women have taken up employment outside their homes, and their husbands have ''acquiesced.'' In 1981 the census reported only 5.6 percent female employment; only 4 percent of all urban women held salaried jobs. By 1988 that figure had increased to 10.2 percent. In 2000, it was estimated that the female employment had risen to 13 percent.

The governments in Pakistan have generally been less than enthusiastic in augmenting employment options

for women or in providing legal support for women's participation in the labor force. Therefore, a majority of women end up doing domestic chores or making or marketing handicrafts or embroidery products, figures for which are not entered into the labor statistics of the country. Officially, therefore, only 13 percent of women were shown as a part of the labor force. In fact, false notions of ''propriety'' induce families to conceal the extent of employment or work among women. All these factors—social and religious conservatism, restriction on the mobility of women, fear of ''losing honor,'' perceived loss of dignity and status—have contributed to the widely held perception among parents in conservative urban families and generally in rural areas that the academic curriculum in schools is irrelevant to women's future roles as homemakers.

PREPRIMARY & PRIMARY EDUCATION

Preschool education up to the age of five mostly takes place in nurseries and kindergarten schools run by the private sector, some of them by Christian missionaries. The traditional practice of training a child at home while in the preprimary stage is increasingly giving way to preprimary schools, necessitated in urban areas in homes where both the parents are working or because the parents see the value of children learning social skills in situations away from the sheltered conditions of home. In 1988 the Seventh Five Year Plan integrated the preprimary classes into the formal system of education.

Despite the government's aim of making primary education universal among children aged five to nine, the participation rate has only a little more than one-third in that age group. In 1991 there were 87,545 primary schools, with an enrollment of 7.768 million students and a teacher-student ratio of 1:41. In the same year, there were 11,978 secondary schools, with an enrollment of 2,995,000 students and a teacher-student ratio of 1:19. Significant in this respect are the primary school dropout rates, which remained consistently high in the 1970s and 1980s at over 50 percent for boys and 60 percent for girls. Experts indicate that the middle school dropout rate, which had been relatively equal for both boys and girls at 14 percent in 1975, altered noticeably after President Zia's policy of Islamization affecting the boys (25 percent) more than the girls (16 percent). After Zia's death, there was a dramatic reversal: the dropout rate for boys plummeted to 7 percent while the rate for girls remained steady at 15 percent.

The generally low rate of student enrollment in primary schools is attributed to a variety of factors: a high rate of increase in population (over three percent) and, therefore, burgeoning numbers in the five to nine age group; lack of access to primary schools in rural areas, where one has sometimes to walk two or three miles to school, often in inclement weather; poor finances; unsafe school buildings; a high dropout rate due to poverty; and habitual teacher absenteeism. The reasons for the low rate of education among females is primarily attributed to religious and social conservatism, which inhibits the movement of girls away from home, and the generally perceived irrelevance of the curriculum to their future role as housewives.

SECONDARY EDUCATION

Following the primary education from ages 5 to 9 is the 3-year Middle School (sixth to eighth grades for children ages 10 to 12), a 2-year secondary school (ninth and tenth grades culminating in ''matriculation'') and higher secondary or ''intermediate''—eleventh and twelfth grades). Some accounts, including official reports, include the post-primary Middle School as part of the ''secondary'' stage. On the other hand, some include the ''Intermediate'' or ''Junior College'' as part of the ''secondary'' distinguishing it as ''higher secondary.''

In 1991, there were 11,978 secondary schools with an enrollment of 2.995 million students and 154,802 teachers with a student-teacher ratio of 19:l. Because of the relatively low enrollment at the primary education level and high dropout rates at the Middle School (see the section on Preprimary & Primary Education), the Seventh and Eighth Five Year Plans substantially augmented allocations at the primary and Middle School levels. The government also sought to decentralize and democratize the design and implementation of the education strategy by giving the parents a greater voice in running school. It also took measures to transfer control of primary and secondary schools to nongovernmental Organizations (NGOs).

There is a major qualitative difference between government-run schools and ''public'' schools (public in the British usage, which means real exclusive, elite schools). These charge very high fees affordable only by the economically topmost level of the society, probably no more than five percent of the families, some of whom prefer to send their children to even more exclusive schools in the Western world, notably, Great Britain. Such ''public'' schools are mostly located in major cities and in the ''hill stations'' and attract children from the wealthy and the powerful including the higher levels of bureaucracy and the military. They generally prepare students for the Cambridge Examination, maintain excellent facilities including laboratories and computers and highly-trained teachers. Thanks to economic growth of the country including foreign trade, employment in multinationals and according to some, higher levels of corruption, the number of families which can afford the high fees of the

''public'' schools has been increasing since the 1960s. It is also considered a mark of high status to have one's children admitted to such schools because of the possibility that it may result in developing contacts which may be useful in their future careers. There are, therefore, tremendous pressures on such schools for admission. There were also ''socialistic'' pressures. In 1972, following the rise of Zulfikar Bhutto to power, some of these ''public'' schools were compelled to reserve one-fifth of their places for students on academic merit basis, thus helping the less affluent to get into such schools.

The bulk of the secondary schools come under the aegis of the Ministry of Education. They follow a common curriculum, imparting a general education in languages (English and Urdu), Pakistan Studies, Islamiyat and one of the following groups: Science, ''General'' or Vocational. The Science group includes Mathematics, Physics, Chemistry and Biology; the ''General'' group includes Mathematics or Household Accounts or Home Economics, General Science and two general education courses out of some 40 options. The Vocational group provides choices from a list of commercial, agricultural, industrial or home economics courses. There are also ''non-examination'' courses such as Physical Exercise of 15-20 minutes daily and Training in Civil Defense, First Aid and Nursing for a minimum of 72 hours during grades 9 and 10.

The Secondary School Certificate Examination (SSCE) taken at the end of the tenth grade is administered by the government's Board of Intermediate and Secondary Education. Admission to the ''intermediate'' colleges and Vocational schools is based on score obtained at the SSCE. The grading system is by ''divisions'' one to three. In order to be placed in the First Division, a student must score a minimum of 60 percent of the total of 1000 ''marks;'' those obtaining 45 to 59 percent are placed in the Second Division ; and those getting between 264 and 499 out of 1000 are placed in the Third Division, while below 264 are declared failed. For those accustomed to U.S. grading, these norms would appear low. Those in the First Division would compare favorably with A students in American schools.

HIGHER EDUCATION

At the time of its independence in 1947, the nascent nation of Pakistan had only one university, the University of Punjab. By 1997, the number of universities had risen to 35, of which 3 were federally administered and 22 were under the provincial governments, with a combined enrollment of 71,819 students. There were also 10 private universities. The universities are responsible for graduate (postgraduate) education leading to master's and doctoral degrees in a variety of fields. Most universities have their own faculty in the various departments but many use senior faculty from the colleges to participate in the teaching program at the master's level as well as for supervising students at the doctoral level. The trend is, however, to concentrate all postgraduate work in the university departments in order to maximize the benefits of teacher-student interaction on a daily basis. This has tended to limit the college faculty exclusively to undergraduate education, which serves as a disincentive for them to conduct higher-level research or writing.

Of the 10 private universities, eight were established after 1987. Some of them may be called ''vanity'' universities; they lack serious standards and were established to please major donors. Before long, they were able to exert pressure on the government, resulting in the government giving financial assistance to the private universities as well.

The universities play a crucial role in undergraduate and professional education, although the actual teaching is imparted by colleges. Colleges are affiliated to the universities, which, through the Boards of Studies in the various disciplines, prescribe the curriculum, conduct the final examinations, and award the baccalaureate degrees. Minimum qualifications for the recruitment and promotion of the college faculty as well as standards for the physical facilities such as classrooms, laboratories, and libraries are established by universities, which periodically send visitation teams to colleges. In 1997 there were 789 colleges with an enrollment of 830,000 preparing students for baccalaureate degrees in arts, sciences, and commerce in addition to 161 professional colleges with a total enrollment of 150,969 students in medicine, pharmacy, dentistry, engineering, architecture, and law.

The quality of education in colleges and most of the universities has come under much criticism. Undergraduate education rewards memorization and prompts students to apply their minds only to the study of ''expected questions'' that are sold or circulated by ''experts,'' who speculate on the basis of questions in examinations of the previous three to five years. Students tend to rely more on examination-oriented textbooks and cheap ''guides.'' The percentage of ''marks'' required to pass at most university-held examinations is 35 percent, requiring only 60 percent to be placed in the First Division. Since the paper-setters and examiners are anonymously appointed by the university, there is a lack of direct relevance to what is taught in the classroom, which accounts for large-scale student absenteeism and lack of respect for teachers.

Professional Education: The education in the professional colleges is decidedly superior. Only the very best students, often scoring more than 80 or 85 percent at the

Higher Secondary Examination (twelfth grade or HSCE), are able to gain admission. It is these institutions that produce the doctors and engineers who migrate in droves to the Western world and perform so remarkably well in a competitive environment. Sometimes the percentage of professional graduates successfully moving to better pastures overseas, causing the so-called brain drain, is as high as 80 or 90, which accounts for the charge that countries like Pakistan basically end up training professionals for Western countries for a fraction of the cost and, therefore, deserve to be compensated or reimbursed for their expenses on professional education.

In the fields of engineering and technology, Pakistan has 7 universities/colleges of engineering. There are 9 colleges of technology and 26 polytechnics (of which 19 are for males and 7 for females). Their curriculum, faculty, and physical facilities do not compare favorably with those in engineering colleges/universities. Most of them give short-term courses leading to diplomas instead of degrees.

As for the universities, critics allege that they are not able to attract the best minds to join their faculty. The lure of high-level government service, lucrative employment in multinational corporations in Pakistan, or jobs overseas leaves a much smaller pool of genuine talent for the universities, which, moreover, lack the facilities and ambience for quality research. Due to such a multiplicity of adverse factors, the universities are often unable to fill all their faculty positions. As Tariq Rahman of the National Institute of Pakistan Studies, lamented in 1998:

> The Quaid-I-Azam University of Islamabad, meant to be a premier institution when established in 1967, does not have many subjects thought essential to a university—linguistics, sociology, philosophy, political science, astronomy, cognitive sciences, archaeology, literature, and so on. The libraries are substandard, with very few journals—even such basic facilities as fax, e-mail, photocopying machines, computers, and microfiche readers are either missing or are in short supply. Thus, to begin with, universities do not get the best human material. In addition, no incentives are offered for improvement. For all practical purposes, once one is hired one is not removed—at least for academic incompetence.

In 1979, following the publication of the National Education Policy in Pakistan, universities followed the U.S. example and adopted the semester system. The semester system continues in the Quaid-I-Azam University and a few departments of some other universities, but by and large it has been abandoned. Students tended to take what are termed in the U.S. as ''mickey mouse'' courses in order to obtain better grades with very little effort. The semester system involved frequent tests and hard work, and one's grade depended very much on the instructor, who gave a certain percentage of marks for classroom participation and performance on the periodic tests. Faced with growing social and political pressure to give better grades, the system collapsed.

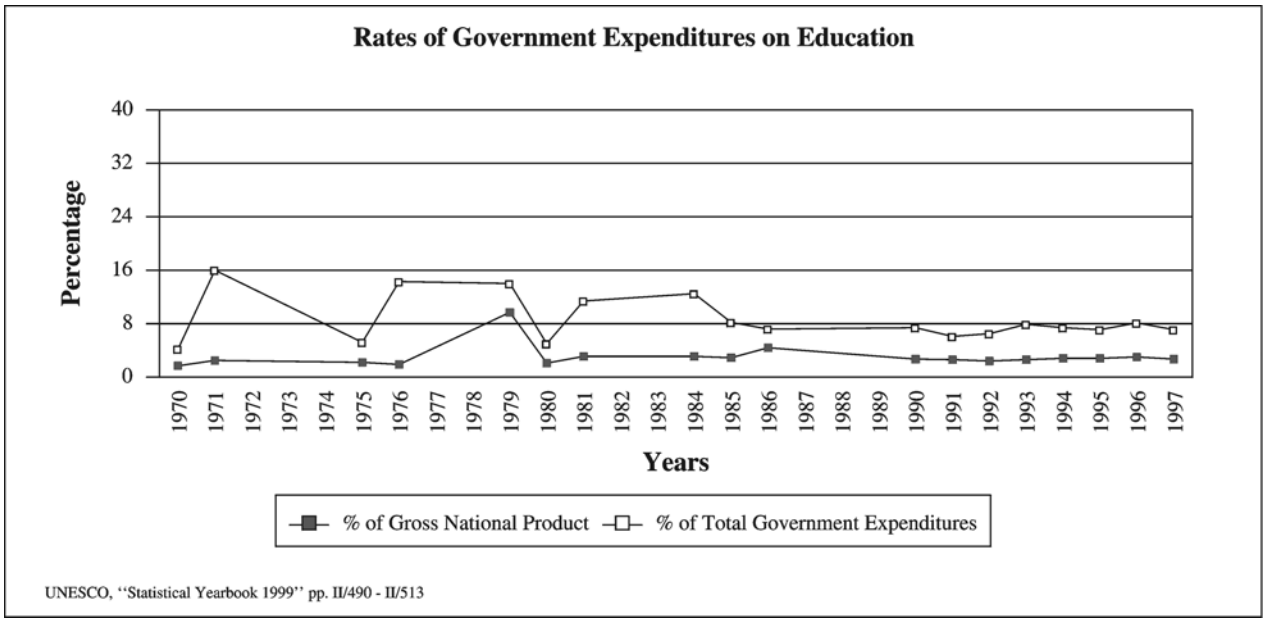
ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Throughout the history of Pakistan, at least until the 1990s, relatively limited resources were allocated to education. In 1960, the public expenditure on education was only 1.1 percent of GNP; by 1990, the figure had risen to 3.4 percent, though it compared quite unfavorably with expenditures on defense, which stood at 33.9 percent of GNP in 1993. In 1990 Pakistan was tied for fourth place in the world in the ratio of military expenditure to health and education expenditures.

Education at all levels falls primarily under the jurisdiction of the provincial governments. However, the federal government has, throughout the history of Pakistan, taken a leadership role in devising a national policy of education and research. Moreover, all universities, centers of excellence, and area study centers are funded by the federal government through the University Grants Commission. The educational institutions of all levels located in the ''federal territory'' are administered by the federal government.

The federal Ministry of Education is headed by the minister of education, assisted by the education secretary, who is a senior member of the bureaucracy. The provincial education departments are likewise headed by the education ministers assisted by education secretaries in charge of separate divisions such as primary, secondary, vocational, and higher education. The provinces are divided into regions and districts for administrative purposes. Primary education at the district level is administered by a district education officer, while secondary education is headed in each region by a regional director. The colleges in each province are under the administrative control of a Directorate of Education located in the provincial capital.

The three federal public universities are headed ex-officio by the President of Pakistan, while the provincial universities, following the colonial precedent, have the provincial governor as ex-officio chancellor of all universities in the province. The day-to-day administration is headed by the vice chancellor, appointed by the chancellor from a short list approved by the University's Syndicate or Executive Council and the minister of education of the province. In practice, the bureaucrats in the Education Department wield considerable influence, both through manipulation of the names submitted to the chancellor as well as through an official from the ministry appointed to ''advise'' the Chancellor on the various matters referred to him by the vice chancellors of the universities in the province.



Each university has an Academic Senate, whose membership, unlike that of Western universities, which limit it only to faculty, is drawn from principals of colleges, heads of professional colleges, elected heads of faculties, elected representatives of alumni graduates, heads of university departments (ex-officio), and representatives of the Ministry of Education, Chamber of Commerce, trade unions etc. Purely academic matters such as appointment of search committees for recruitment of faculty and of Ph.D. ''guides'' and endorsement of changes in curriculum and of suggested names of paper-setters and examiners for the university-held examinations after their prior approval by Boards of Studies are the charge of the Academic Council. It consists of deans, department heads, and representatives of teaching staff. Both the Senate and the Academic Council meetings are chaired by the vice chancellor. A Board of Studies for each discipline consists of an elected chairperson and members drawn from the heads of the corresponding department in the affiliated colleges. Changes in syllabus in a particular discipline are first discussed and approved by the respective Board of Studies, which also draws up a list of paper-setters and examiners and submits it to the dean of the faculty concerned for presentation to the Academic Council. Presiding over the university bureaucracy is the registrar, who works closely with the vice chancellor.

The regular or ''current'' expenditure on faculty and staff salaries, laboratories, and libraries in provincial universities is met through tuition fees (which often cover less than five to seven percent of the total expenditure) and government grants from the provincial and federal governments on an almost fifty-fifty basis. Since 1974, federal grants are funneled through the University Grants Commission (UGC), which often funds capital expenditures on physical plant such as buildings, major additions to laboratories or libraries, research and travel grants to faculty, and innovative additions to the curriculum. The dependence of the university administrations on three bureaucracies—state, federal, and UGC—have stultified creativity and bred a measure of irresponsibility. To quote from a World Bank Report of 1990:

> This divorce of administrative from financial responsibility means that neither federal nor provincial, nor university authorities can be held to account for the overall management of the university system. Especially in an environment where tough decisions are required, nothing significant can be accomplished to improve the universities until this duality of management control is ended.

There has been no change in the system since publication of the World Bank Report.

NONFORMAL EDUCATION

The foremost institution for reduction of adult illiteracy and opportunity for those who cannot afford to join regular academic institutions has been the People's Open University, founded in 1974 and renamed Allama Iqbal Open University (AIOU) in 1977. It provides nonformal learning and distance education ranging from minimum literacy all the way to the award of baccalaureate, master's, M.Phil., and Ph.D. degrees. A student enrolled in AIOU is taught ''with the help of printed course books, media programs and tutorials,'' completes the assignments according to the schedule laid down by the Open University, and takes a final examination administered by it.

In 1998-99 the AIOU offered 204 different courses, mainly in the humanities, social sciences, Arabic, Pakistan studies, Islamic studies, women's education, home economics, teacher education, technical education, and business management to 907,834 students who could not leave their homes or jobs but had a desire to learn and improve their lives. The AIOU ran programs in 30 cities, and through the use of ''appropriate media mix and latest electronic communication techniques,'' its experts—105 regular faculty and 2,500 part-time tutors—reached out to students scattered all over the country. AIOU operates on the semester system, April to September and October to March.

In late 2000 the AIOU took a major initiative in the field of computer education. It signed a Memorandum of Understanding (MOU) with the U.S.-based Oracle Corporation of the U.S. whereby the AIOU will offer low-cost training in Oracle software through its existing facilities in 30 cities all over Pakistan. The AIOU already runs BCS, BCS Honours, MCD, and PGD programs. The addition of Oracle will help it to boost its computer training nationwide.

There were 285 vocational institutions with an enrollment of 12,113 in 1988-89. They were administered by the federal Ministry of Labor, Manpower, and Overseas Pakistanis as well as by the departments of labor of the provincial governments. Part of the economic rationale for these institutions, which produced skilled workers such as plumbers, carpenters, welders, machinists, masons, electricians, etc., was the growing demand for such labor from the Gulf States and Saudi Arabia. There are separate vocational training institutions for females in shorthand and typing, sewing and cutting, embroidery, knitting, handicrafts, leatherwork and woodwork, and food preservation, only some of which were related to labor demand from the Gulf states. Additionally, there are other government agencies such as the Directorate of Social Welfare, the Small Industries Corporation, the Directorate of Agriculture, the Directorate of Mineral Development, and NGOs such as The Overseas Pakistanis Foundation, which also funded and/or operated vocational training institutions. In 1988-89 these numbered 2,924 with an enrollment of 92,737, far larger than those under the Labor Departments or the Ministry of Labor.

TEACHING PROFESSION

The teaching profession, by and large, does not attract the best talent in Pakistan. Those considered bright either join the professions such as medicine and engineering and try to migrate to the West or are attracted by higher-level civil service positions, which open avenues for enormous graft and corruption. A few exceptions would be some highly respected university faculty and those scientists working at the highest levels of the country's research establishment, especially those involved in missile and nuclear technology.

Among the reasons for the reluctance to join the teaching profession at the primary and secondary levels are relatively low salaries, unattractive working conditions, and the high teacher-student ratio, which is around 1:40 at the primary and 1:36 at the secondary level. In the early 1990s there were 87 elementary teacher-training institutions offering a one-year program leading to the Primary Teaching Certificate (PTC) for teachers in grades one to five or the Certificate of Teaching (CT) for teachers in grades six to eight. While the PTC course needs 10 years of education for admission to it, the CT course requires 12 years and an FA/FSC certificate. The Allama Iqbal Open University also offers distance education courses for its PTC and CT programs.

There are three types of programs for training of teachers in Pakistan. The first is the one-year primary school teacher-training program in basic subjects and methods of teaching, including child psychology. The secondary school teachers are required to join one of the numerous teachers' training colleges or a university department of education either for a one-year program leading to the Bachelor of Education diploma or a three-year program leading to a Bachelor of Education degree. The admission to either program requires a bachelor's or master's degree in any discipline from any university. The higher-level work leading to degrees in education at the master's or the doctorate level is done in the departments of education in the universities, which produce specialists as well as academic administrators. There are also several in-service training programs for ''untrained'' teachers or for upgrading the curriculum. Teachers sent to such programs are nominated by the school principals and approved by the district officer and generally receive full salary during the in-service training.

Science and technical teaching has been given special emphasis by the federal government. Thus, Islamabad's Institute for the Promotion of Science Education and Training (IPSET) and National Technical Teachers Training College (NTTTC) have been doing excellent work in upgrading the knowledge base of secondary school and junior college science teachers as well as instructors in technology colleges and polytechnics. For educational administrators there is the Academy of Educational Planning and Management (AEPAM) at Islamabad, providing courses and in-service training for school and college principals, district education officers, and regional directors.

There are few facilities in Pakistan for special education. The first to start courses leading to a master's degree in special education were the University of Karachi, the

National Institute for the Handicapped at the University of Islamabad (NIHUS), and the Allama Iqbal Open University. With the establishment of the office of Director-General of Special Education within the Ministry of Health, Social Welfare, and Special Education in 1985, special education attracted a national focus. In 1989 NIHUS received a major boost with the opening of 45 centers for special education with a combined enrollment of 3,500. Additionally, a National Training Center for the Disabled and a national Mobility and Independence Training Center for producing teachers in special education were established in Islamabad. Most of these projects were made possible with funds, overseas training, and technical guidance from WHO, UNICEF, UNESCO, and UNDP. Programs were instituted for training fellowships abroad as well as for visits by experts from Europe and the United States.

SUMMARY

At the dawn of the new millennium, Pakistan's educational establishment had reason to be proud of its academic architecture, which in a span of a little over a half century since the country's birth had grown exponentially in the number of universities, colleges, and schools and in student enrollment. Its weak points are the less than adequate opportunities to women for education and employment. Pakistan has been infected by Islamic fundamentalism since the late 1970s, and it has adversely affected the role of women in its society. It stands contrary to the wishes of its erudite founder, Mohammed Ali Jinnah, who said to his Muslim brethren in 1940: ''No nation can rise to the height of glory unless your women are side by side with you; we are victims of evil customs. It is a crime against humanity that our women are shut up within the four walls of the houses as prisoners. There is no sanction anywhere for the deplorable condition in which our women have to live.''

The other threat that portends to be deadly for education arises out of overemphasis on religion and may lead to the collapse of the edifice of education so assiduously constructed in Pakistan. Militant Islam has appealed to the youth of Pakistan in the same manner as in neighboring Afghanistan. The values of the Taliban have dictated the curriculum in Pakistan's madrassahs since the 1990s. Hopefully, this is a passing phase that will not hinder the march of the country to a glorious intellectual and material future for its men—and its women.

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—D. R. SarDesai

PALAU

BASIC DATA

Official Country Name:	Republic of Palau
Region:	Oceania
Population:	18,766
Language(s):	English, Palauan, Sonsorolese, Tobi, Angaur, Japanese

Literacy Rate:	92%

Palau consists of approximately 200 islands of volcanic and coral limestone, near Indonesia and southeast of the Philippines, with a land area of about 178 square miles; eight islands are permanently inhabitable. Spain colonized Palau and sold the islands to Germany in 1899. Japan occupied Palau during World War I and was granted political control by the League of Nations in 1920. The United States seized the islands from Japan during World War II; Palau became a United Nations trusteeship territory in 1947, administered by the United States. Palau became a republic and signed a Compact of Free Association with the United States in 1994.

The population of Palau is about 18,766 people (2000 estimate). More than an estimated 5,000 people live outside the country, with many on Guam. The executive branch of government is ministerial, with the president choosing a cabinet; the national legislature is bicameral, with a House of Delegates and a Senate. Each state has a governor, some elected by popular vote and some appointed in accordance with tradition.

Languages spoken are part of the Malayo-Polynesian family, and there are dialectal differences among the islands. English is widely spoken, and older people often speak Japanese. About 40 percent of the population is Catholic, 25 percent Protestant, and 25 percent Palauan ''traditional'' religion.

Education is modeled after the U.S. system, and it is compulsory between the ages of 6 to 14; the public school system consists of 25 elementary schools and one high school with enrollments of 2,565 students and 780 students, respectively. School facilities are deteriorating and lack furniture and other basic equipment. The languages of instruction are Palauan and English. School funding comes from the U.S. Department of the Interior and from the U.S. Office of Education. Palau Community College, in the capital of Koror, enrolls about 450 students.

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—Richard E. Mezo

PANAMA

BASIC DATA

Official Country Name:	Republic of Panama
Region:	North & Central America
Population:	2,808,268
Language(s):	Spanish, English
Literacy Rate:	90.8%
Number of Primary Schools:	2,849
Compulsory Schooling:	6 years
Public Expenditure on Education:	5.1%
Foreign Students in National Universities:	708
Educational Enrollment:	Primary: 371,250 Secondary: 221,022 Higher: 80,980
Educational Enrollment Rate:	Primary: 105% Secondary: 69% Higher: 32%
Teachers:	Secondary: 12,239 Higher: 4,979

HISTORY & BACKGROUND

Panama has a total area of 30,420 square miles and, as of 1998, a population of 2.77 million. The four largest cities are Panama City, San Miguelito, Colón, and David. The country is located between Costa Rica in Central America and Colombia in South America. The Spaniards first arrived in Panama in 1501, and Balboa discovered the Pacific Ocean when he visited the country in 1513. In 1821 Panama became free from Spanish rule but chose to be part of Colombia. In 1903 Panama won independence from Colombia with the help of the United States, which wanted to construct a canal linking the Pacific and the Atlantic oceans. From 1880 to 1900 the French had unsuccessfully tried to build a passage between the two oceans but the Americans succeeded, and the canal was opened on August 14, 1914. Panama signed a treaty with the United States, giving it rights to administer an area 10 miles wide and 50 miles long. The Canal Zone, as this strip of land was known, would play an important and controversial role in the country for most of the twentieth century. In 1977 General Torrijos signed two treaties that would determine the future of the Canal Zone. The canal was finally transferred to Panama on December 31, 1999.

Although the Panamanian governments operated under a constitutionally democratic framework from 1903 to the late 1960s, the military took over in 1968 and deposed elected President Arnulfo Arias, installing the commander of the National Guard, Omar Torrijos, as president. Torrijos died in 1981 and his notorious military successor, General Noriega, was indicted in 1988 for drug trafficking. In fact, Noriega surrendered to the United States and was sent to prison in Florida, where, as of 2001, he still serves a 40-year sentence.

The majority of the population (70 percent) is *mestizo* (a combination of Indian and Spanish). But there are sizeable numbers of whites (10 percent) and West Indian Blacks (14 percent). Among the indigenous populations (6 percent) there are seven distinct groups, which have pride in their separate languages and cultures and constitute nearly ten percent of the population.

Education began in Panama with the arrival of the Jesuit priests in 1519, the year the city of Panama was founded. Jesuits were in charge of the primary schools, and they founded a high school in 1744 and the University of San Javier in 1750. But this Institution of higher learning did not last long because in 1767 the Jesuits were expelled from the country. Education, as a national and governmental endeavor, did not prosper until after 1903. Panama was economically and politically dependent on the United States, and, as a result of American influence, education was given a national priority.

Primary and secondary education as well as adult literacy programs flourished during the twentieth century. Panama has one of the highest literacy rates in Central America. While the literacy rate was less than 10 percent at the beginning of the twentieth century, it grew to over 90 percent by the 1990s. In the 1990s more than 83 percent of students aged 10 to 14 attended schools.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The 1972 constitution, which, has been revised several times, establishes compulsory (and free) education between the ages of six to fifteen (article 91). While recognizing the right to private education, it grants the State the prerogative to supervise the curriculum and to intervene in private schools in order to help fulfill cultural and social goals and promote the best human, intellectual, moral, civic, and physical development of the students (article 90). Article 103 allows the teaching of the Roman Catholic religion in public schools, though students are not compelled to attend or participate in religious activities and ceremonies. Article 96 specifies that only Panamanian citizens teach national history and civic education in both public and private schools. Article 87 gives the right to parents to take an active role in their children's education. Articles 99 to 101 deal with University governance. Universities enjoy autonomy and academic freedom; they receive a generous budget, which, in turn, allows for a very low tuition. Article 102 recognizes the need for, and support of, special education programs while article 104 provides for educational programs for indigenous groups. Article 93 establishes State support for vocational educational programs, aimed at the working sector (*educación laboral*).

EDUCATIONAL SYSTEM—OVERVIEW

The school year runs from April to December, and Spanish is the language of instruction. The duration of compulsory education is 11 years, including preschool education from four to five years of age. Panama has a high rate of literacy, exceeding 93 percent of the total population in the year 2000, though a high percentage of the indigenous people (four times as much as the national average) were illiterate in the 1980s. The educational budget is normally larger than the one allotted to other ministries.

After students successfully complete all six grades of primary school, they register for secondary school. The grading system is one to five and three is passing. If students do not pass a course, they must repeat it the next year. If they fail four or more courses within the same year or if they fail the same course twice consecutively, they cannot be promoted to the next level and are transferred to another school or to another class section within the same school.

Retention rates have been one of the biggest challenges facing the Panamanian educational system. Many students drop out when, after making progress in the primary grades and the first cycle of secondary education, they are forced to pay tuition to register for higher studies.

As stipulated in the 1972 Constitution, the government (and in practice, the Ministry of Education) regulates the school curriculum. In primary education students are taught science and mathematics, language and social studies as well as some elements of art and technology. The Ministry is in charge of writing the course syllabi and the textbooks.

The Panamanian government has established special education courses for handicapped children. The most well known special education center is the *Instituto Panameño de Habilitación especial.* This institution is vocational in nature and offers courses that help the handicapped pursue useful activities and acquire job related skills. There they learn activities that include, but are no limited to, sewing, cabinet making, binding, horticulture, and office work.

PREPRIMARY & PRIMARY EDUCATION

Students can attend school after attaining the age of three. Parents can choose from either public or private kindergartens but must pay fees. Preprimary school is not obligatory; it includes, and besides kindergartens, daycare centers. Some of the most well known preprimary centers are run by the Methodist affiliated *Instituto Panamericano* and by the Roman Catholic La Salle and Javier schools. The most popular centers are the daycare centers (*Centros de Orientación Infantil Familiar*—COIF), which help students develop all areas of their personalities. An overwhelming percentage (over 80 percent) of the children who attend COIFs come from urban areas. The number of preprimary schools grew dramatically from 130 in 1970 to 1086 in 1996, while the number of students in preprimary education increased from 6,921 to 46,245 during the same time period.

Primary education lasts six years (ages 6 to 12). In the primary schools (2,900 of in 1999) students must learn natural sciences, social studies, Spanish, and English (compulsory). But the curriculum includes practical subjects as well, such as hygiene, agriculture, and artistic and manual studies. After successfully completing their studies they are awarded a certificate, which allows them to enter the first stage of secondary school or common cycle (*ciclo común*). At the beginning of the 1990s there were 351,000 students who attended primary school.

SECONDARY EDUCATION

The *ciclo común* (ages 12 to 15) is equivalent to the American junior high school. In 1996 the number of students who attended the first level of education rose to 371,250. In 1997, over 31 percent of the education budget was earmarked for preprimary and primary education.

After completing the common cycle, students take an exam that allows them to enter a secondary school or academic cycle (*ciclo académico*). The most well known secondary school at this level is the National Institute in Panama City. At the secondary school they spend three years (ages 15 to 18), after which they are required to pass a final examination to get a high school degree (*bachillerato*). According to the chosen curriculum, students are awarded one (or more) degrees: sciences, arts, or business. Between 1990 and 1996 the total number of students enrolled in the second level of education rose from 196,000 to 221,022. In 1997 almost 20 percent of the education budget was used for secondary education. The government agencies in charge of secondary education are the Directorate of Professional and Technical Education and the Directorate of Secondary Education.

HIGHER EDUCATION

The first Panamanian University (the Royal and Pontifical University of San Javier) offered a curriculum heavily dependent on religion and theology. But this situation did not last long because the Jesuits, who founded the University in 1749, were expelled from Panama by royal order in 1767. The next institution of higher learning was the College of Istmo, founded in 1824 and closed in 1903, as Panamanians won their independence from Colombia. The University of Panama started in 1935 and was the only full fledged University until 1965, when the University of St. Mary started. By 2000 there were more institutions of higher learning: the Technological University of Panama, Nova University, University of Florida, Panama Canal College, Chiriquí Autonomous University, and the University of Istmo. The total number of institutions of higher learning is 14, and the number of students who attended them surpassed 91,000 in 1998.

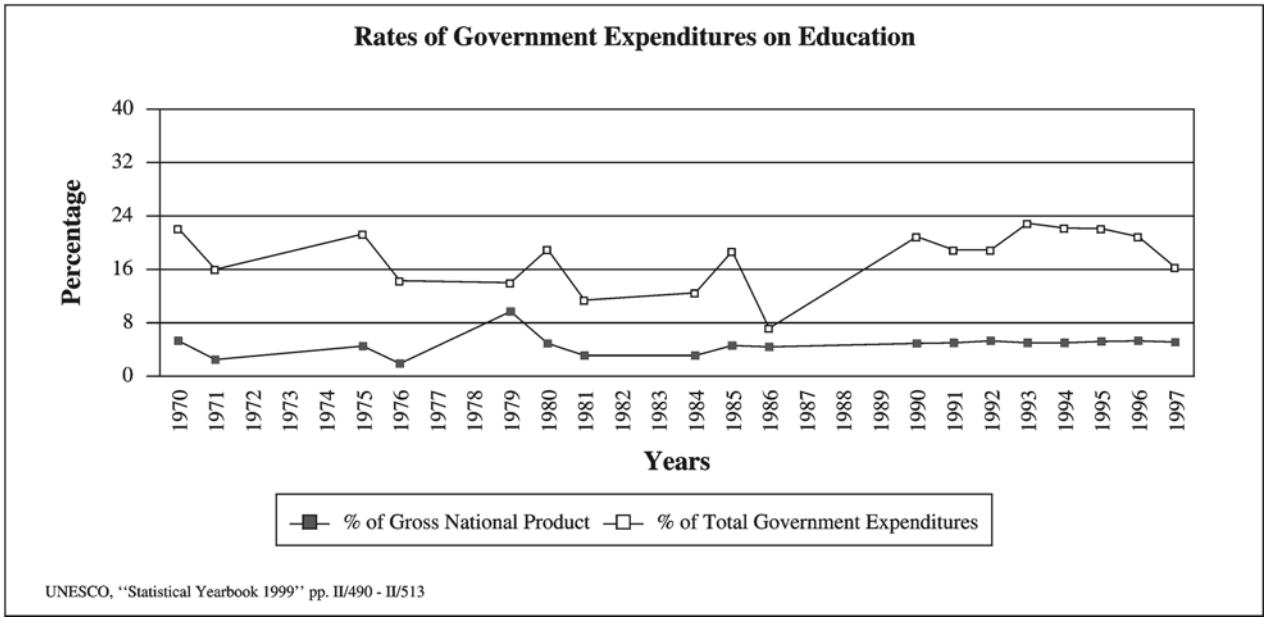
The University of Panama is the leading institution of higher learning. It is composed of faculties, which are divided into schools; degrees are offered in medicine, law, architecture, education and other subjects. To enter the university students must have completed high school (*bachillerato*) and passed entrance examinations. Students register for courses that apply to their chosen career; they have already fulfilled general education requirements in high school. After four year of studies, University students are awarded a bachelor's degree (*licenciatura*). Further studies and the approval of a thesis enable students to obtain a Ph.D. (*doctorado*).

As in many other countries, higher education in Panama does not guarantee job placement nor does it train students to master their chosen fields. Therefore, many students are opting out from the universities, either dropping out to get employment or registering for short-term vocational education programs.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The overseeing body, the Ministry of Education, is divided into directorates that not only supervise primary and secondary programs but also regulate educationally related activities in the fields of adult and vocational studies, fine arts, planning, and teacher training programs. The Ministry has a complex bureaucratic structure that includes directorates for supervising vocational, literacy, adult, and technical education. In addition, it contains directorates of a more administrative nature that control budget and auditing activities. The state monitors private education and exercises control over its curriculum. Since 1975 public education has been radically decentralized and much authority has been shifted to the ten provincial directorates.

The constitution gives education budgetary priority, and the government allows certain taxes to be used for educational programs. In the 1930s one-fourth of the gov-



ernment budget went to education and in 1998 the government spent 7.1 percent of the GDP on education. In 1997 expenditures were distributed as follows: preprimary and primary education (31.1 percent), secondary (19.8 percent), and higher education (26.1 percent).

Besides the Ministry of Education, other institutions play a key role in the administration of public education. They include the National Institute of Culture, the Institute of Special Rehabilitation, and the Institute for Training and Development of Human Resources as well as the National Institute of Sports.

Academic and scientific research is not a high priority in Panama. The Ministry of Education encourages research to upgrade the curriculum and to introduce new methodologies and technologies in the classroom. However, politics and the bureaucracy that permeate these efforts thwart implementation.

NONFORMAL EDUCATION

Panama boasts the best literacy rate in Central America (90 percent in the late 1990s). Adult education serves those who could not finish primary or secondary school and/or those who are functionally illiterate. It provides training by offering vocational courses. Panama's aggressive adult education programs are offered in over five hundred centers, including penitentiaries. Courses for workers (*educación laboral*) are very popular and give incentives for professional development and promotions. Also, adults can enroll in schools and institutes that offer technical and vocational studies. After spending from two and a half to three years in school, graduates become technicians (*técnicos*) and are qualified for better jobs. Or adults can take courses that enable them to get jobs sooner, rather than later, in the fields of banking, commerce, or office work. Older students can take advantage of distance education by enrolling in University programs. The *Universidad Interamericana de Educación a Distancia* offers distance education. The *Instituto Nacional para la Formación Profesional* was created during the Pérez Balladares government and offers vocational training with funding from private businesses.

TEACHING PROFESSION

Normal schools for secondary teachers started when Panama was becoming an independent country (1903). Currently, prospective teachers obtain their teaching certificate (*Certificado de Maestro Normal*) after successfully completing a three-year program. They attend a teaching training college (*Escuela Normal*) after finishing their secondary education. Secondary teachers must attend a university for four to five years and, if successful, after a year of further study, will be awarded a secondary teaching degree (*Título de Profesor*).

The Ministry of Education evaluates teacher performance annually. The evaluators include the principal, the supervisor, and the provincial director. Teachers themselves submit self-evaluations.

SUMMARY

The 1970s educational reforms yielded positive results as literacy rates increased, the dropout rate decreased and more educational opportunities became available in the rural areas where many students were exposed to agricultural technology and the business market.

In the 1980s and 1990s the forces of reform took a back seat as conservative politics dominated the country. In the immediate future, Panama has to attract better teachers and offer more educational opportunities for students living in the rural and poorest areas. It has to provide more technology and promote the use of the Internet in the classroom.

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—Jorge Rodríguez-Florido

PAPUA NEW GUINEA

BASIC DATA

Official Country Name:	Papua New Guinea
Region:	Oceania
Population:	4,926,984
Language(s):	English, pidgin English, Motu
Literacy Rate:	72.2%
Number of Primary Schools:	2,790
Compulsory Schooling:	6 years
Foreign Students in National Universities:	281
Educational Enrollment:	Primary: 516,797 Secondary: 78,759 Higher: 13,663
Educational Enrollment Rate:	Primary: 80% Secondary: 14% Higher: 3%
Teachers:	Primary: 13,457
Student-Teacher Ratio:	Primary: 37:1 Secondary: 24:1
Female Enrollment Rate:	Primary: 74% Secondary: 11% Higher: 2%

HISTORY & BACKGROUND

Papua New Guinea occupies 462,840 square kilometers of land and water off the coast of Southeast Asia. The island nation, roughly the size of California or Thailand, includes the eastern half of New Guinea, the second largest island in the world, and about six hundred smaller islands between the Coral Sea and the south Pacific Ocean. Papua New Guinea's 4.9 million people (July 2000 estimate) speak more than 715 different languages. The government recognizes English as the nation's official language, but only between 1 percent and 2 percent of the population speak it. Pidgin, a mixture of English, German, and other languages, is spoken throughout the country.

Papua New Guinea remained fairly isolated from Western influences until the nineteenth century, although infrequent contacts were documented as early as the 1500s. The Dutch annexed the western half of New Guinea between 1828 and 1848. The British and Germans divided the eastern half in 1885; Great Britain took the south and Germany took the north. Great Britain transferred control of the southeastern portion of New Guinea to Australia in 1902, which renamed it Papua. Australia seized the northern region during World War I and assumed complete control of eastern New Guinea under a League of Nations mandate. The Japanese occupied most of the colonized areas of New Guinea during World War II. However, after the war, control of the island reverted to Australia as a United Nations trusteeship. Australia maintained control until Papua New Guinea claimed its independence in 1975. Australia remains one of Papua New Guinea's primary trading partners.

Since independence, Papua New Guinea has functioned as a parliamentary democracy, with a capital in Port Moresby and 19 other administrative provinces. About 15 percent of the population live in major urban areas. The country's national currency is the Kina (K1.00 equals about US$.31 as of February 2001.)

CONSTITUTIONAL & LEGAL FOUNDATIONS

Although Papua New Guinea's constitution does not address education directly, the document still provides

the base for the nation's educational goals and philosophy. The constitution outlines five national goals and directive principles in its preamble, and the two most applicable to education focus on integral human development and equality and participation. These directives, according to the Department of Education, call for an education system ''based on mutual respect and dialogue. . .to promote awareness of our human potential and motivation to achieve our National Goals through self-reliant efforts'' (Department of Education 1991, 15). In addition, the constitution guarantees all citizens, regardless of their sex, color, creed, political opinion, or origin, equal access and participation in the country's development. Consequently, under its education philosophy, the government promises to educate all citizens.

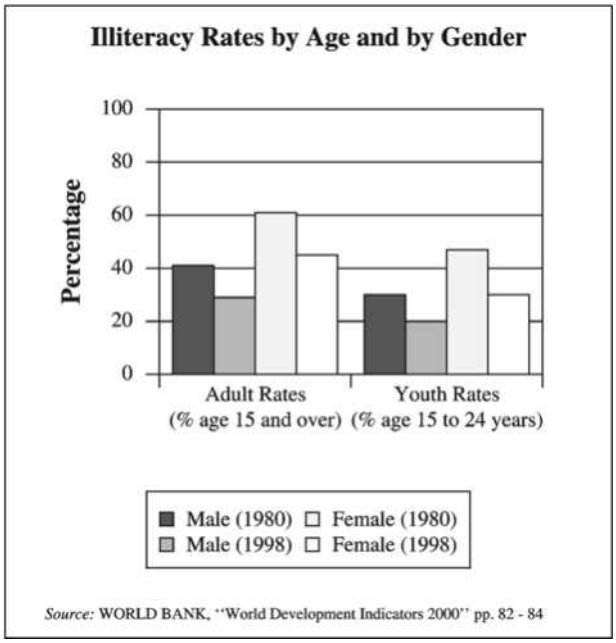
Several education laws outline the structure and operation of the system. The Education Act of 1970 integrated the existing church and government education activities. Under the provision, the government assumed control for teacher salaries, staff employment, and curriculum development.

In 1977, the Organic Law on Provincial Government divided education responsibilities between the national and provincial governments. The national government controlled curriculum development, the minimum age for school entrance, the length of the school day and year, language of instruction, maximum pupil-teacher ratio, major exams, teacher conditions of service, teacher training, and the universities. Therefore, the provincial governments controlled preschool education, the location and number of primary and secondary schools, nonformal education, noncore primary curriculum, criteria used to select students for secondary school, and vocational schools.

The Education Act of 1983 established a national education plan and called on provincial governments to develop local plans. However, the government has had problems outlining the national components of the plan, while many provincial plans remain out of date.

EDUCATIONAL SYSTEM—OVERVIEW

Before the European colonization, the adults in each tribal society in Papua New Guinea educated their children on practical skills, social behavior, and spiritual beliefs. In 1873, the London Missionary Society established the first school to teach islanders to read scripture. After 1884, German and English missionaries established primary schools to teach Western concepts of morality, the German and English languages, arithmetic, and Christian doctrine. During the early 1900s, the British government encouraged missionaries to develop vocational education programs in Papua New Guinea to produce better farmers, crafts people, and skilled laborers. In 1914, Australia took control of the German colony in northeastern New Guinea. With Papua and New Guinea under its reign, Australia established English as the official language of instruction and laid the foundation for modern education in Papua New Guinea.



Source: WORLD BANK, ''World Development Indicators 2000'' pp. 82 - 84

The Modern System: Papua New Guinea's education system has three levels: primary, secondary, and tertiary. The academic year runs from January to December.

The primary schools, or community schools, provide six years of instruction for children 7-12, although attendance is not compulsory. Most instruction still occurs in English. However, in 1989, the National Department of Education adopted a language and literacy policy designed to encourage communities to start local language literacy preschools, convert first grade into a local language year or a bridging year from local language literacy to English literacy, or have noncore subjects (subjects other than language, math, science, and social studies) taught in the local languages. The 1989 Language and Literacy Policy also supported local language and cultural instruction at secondary and tertiary schools and local language literacy programs for adults.

Since 1993, many provinces have established village schools that focus on local language literacy. The village schools provide a preprimary level for children as young as five years of age that teaches the children in their native language. The schools also encourage the children to become literate in their local language before learning English.

About 70 percent of Papua New Guinea's school-age children receive some formal education, but only two-

thirds of those who enter the first grade complete the sixth.

Students who reach the sixth grade must pass a national exam to continue their education. Papua New Guinea maintains two types of secondary schools: the four-year provincial high schools, for grades 7-10, and the two-year national high schools, for grades 11 and 12. Large towns generally have their own secondary schools, but students from rural areas often attend provincial boarding schools. English is the language of instruction at the secondary level.

About 35 percent of pupils who reach sixth grade ultimately transition to the seventh grade. The low transition rate does not reflect the number of students who achieve the level necessary to move to the provincial high schools; but rather, it reflects the limited number of places available to incoming seventh graders (Department of Education 1991). The provincial high schools base their acceptance on exam scores and provincial quotas and accept an equal number of sixth graders from each primary school. Students who do not attend secondary school can enter two-year vocational schools or continue their education by mail through the government-operated College of Distance Education.

Of those who continue to seventh grade, about 67 percent complete the tenth grade. In the tenth grade students must pass a second national exam to receive a Secondary School Leaving Certificate. Most end their education after tenth grade, but about 20 percent enter one of the four national high schools. The retention rate for the national high schools is about 95 percent. Students who complete twelfth grade face a third national exam that determines which higher educational opportunities go to which students. Regardless, most grade twelve graduates pursue some form of higher education. Students also can enter a two-year vocational or technical school after tenth grade. Those who complete the upper secondary level earn a Sixth Form Certificate or a High School Certificate, depending on the school they attend. A few of the best tenth graders enter a one-year university preparation program at the University of Papua New Guinea, but most students gain university acceptance by passing the National High School Examination at the end of twelfth grade.

As of 1996, a total of 500,000 children were enrolled in primary and secondary schools. About 70 percent of primary school-aged children attended school, but only 12 percent of secondary school-aged children were enrolled. Enrollment ratios vary widely between provinces and regions. In large cities and towns virtually all children attend school; but, in some remote highland areas, fewer than 7 percent of children receive any formal education. According to the 1990 census, 23 percent of the rural population completed sixth grade, 4 percent of the rural population completed tenth grade, and 24 percent of the rural population could read English. By contrast, the census showed that 56 percent of the urban population completed the sixth grade, 22 percent completed the tenth grade, and 58 percent could read English.

Many children, especially in poor, rural areas, never enroll because their families cannot afford the school fees, which can equal more than 50 percent of some families' earnings. Some primary and most provincial high schools charge fees, while the national high schools and most postsecondary institutions are free or subsidized with government scholarships. In 1993, the national government abolished some of the school fees traditionally paid by parents.

Female Education: Although schooling is open to all citizens, female enrollment lags behind male enrollment at most levels. In 1995, about 80 percent of children between seven and twelve years were enrolled in primary education. But 87 percent of boys in that age group were enrolled compared to 74 percent of girls. That same year, 14 percent of 13-18 year-olds enrolled in some form of secondary education. Enrollment included 17 percent of the boys and 11 percent of the girls in that age bracket. Girls account for about 38 percent of all high school students, but only 29 percent of the national high school students. In 1995, girls represented 32 percent of the students enrolled in all higher education institutions, but only 25 percent of the students in one of the nation's four universities. That same year, women made up 66 percent of the preprimary teaching staff and 36 percent of the primary-level teaching staff. Figures for the secondary and tertiary levels were not available. Literacy rates for women also fall short. About 62 percent of women age 15 and older could read and write in 1995, compared to 81 percent of men.

Private & Religious Schools: The International Education Agency is the largest independent education provider in Papua New Guinea. It was created in 1977 to manage the schools operated by the Australian and United Nations administrations before Papua New Guinea's independence.

The agency operates 24 independent schools and serves more than 5,000 students in preschool through the twelfth grade. All schools, except for one, offer preschool through grade six and most continue to grade eight. Only three schools, though, in Lae, Port Moresby, and Mount Hagen, offer ninth through twelfth grades. The schools do not have a religious affiliation, although, at the community's request, some offer nondenominational scripture classes on a voluntary basis.

More than 300 teachers from Papua New Guinea and other parts of the world work for the international

schools. The International Education Agency also provides consultant services on school development and review, curriculum development, and professional development.

Tuition ranges from K 3,000 to K 20,000 per year. The amount depends on the training of the teachers at each school, and the general quality of resources. Between 75 and 80 percent of agency students are Papua New Guinea citizens, although percentages range from 50 to 100 percent within individual schools. The remaining students come primarily from Australia, New Zealand, and the Philippines.

Churches also play a significant role in Papua New Guinea's educational system. In 1995, churches operated 20 training schools for nurses and other community health workers. The Catholic Church was the leading provider of educational services, running one-quarter of the community schools and one-sixth of the provincial high schools. The Evangelical Alliance, the United Church, the Lutheran Church, the Seventh-Day Adventists, and the Anglicans also provide educational services.

The National Department of Education estimates that the government provides about 68 percent of lower secondary education services, churches provide 29 percent, and the international schools provide about 3 percent.

Educational Resources & Materials: The National Department of Education has provided textbooks to students since the 1990s. Before then, teachers relied on syllabi and teaching guides from the Department of Education's curriculum unit, which outlined what teachers should teach and how they should teach it. The production of education materials improved, though, during the last quarter of the twentieth century, as a result of two loans from the World Bank. The loans helped pay for primary textbooks in English, math, health, and community life; and secondary textbooks in English, math, science, and social studies. Most textbooks still are published in English; however, the Department of Education has explored producing resource materials that can be translated and adapted to the local languages. In addition, the curriculum unit provides curriculum statements, teachers' guides, in-service packages, radio broadcasts, videos, posters, science kits, practical skills and home economics kits, sports equipment, agricultural tools, and expressive arts equipment. As of the early 1990s, computers were not available to schools.

PREPRIMARY & PRIMARY EDUCATION

Early primary education was based on the Australian primary school curriculum. Missions operated village schools and boarding schools, usually for boys. After World War II, the Australian administration appointed a director of education and took control of the educational system. From 1946 to 1956 an average of 10 administration schools opened each year. All instruction was in English and, during the 1950s, most teachers were Australians or of other Caucasian ethnicities. During the 1960s Papua New Guinea pushed to localize its teaching service, and by 1970 most primary school teachers were Papua New Guineans. The number of primary schools increased after the country's independence in 1975, and the curriculum branch of the Department of Education took steps to make the school curriculum suit local needs.

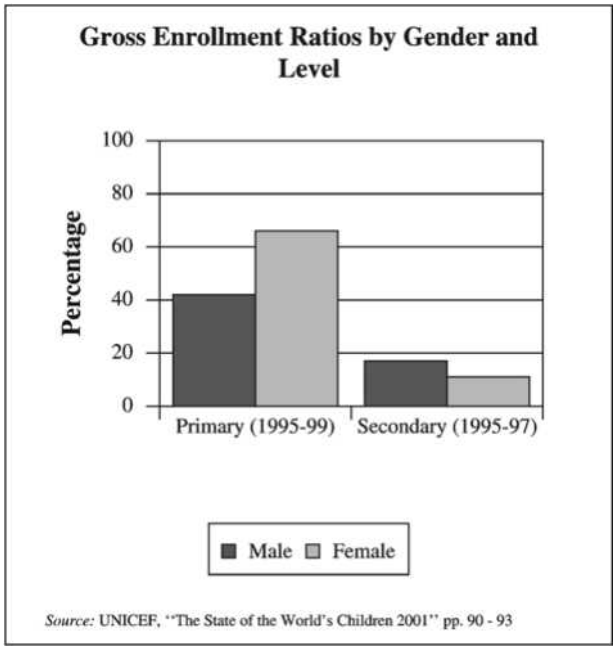
Modern primary education, which includes grades one to six, focuses on basic skills in reading, writing, and arithmetic. Seven is the official entrance age, but older children enroll. Some provinces also offer preprimary programs to children as young as five years of age. Primary instruction occurs in English; however, the preprimary programs, and some first grade classes, provide lessons in the students' native languages.

Instructors also teach science, community life, agriculture, health, expressive arts, pastoral care, and physical education. Meanwhile, some education officials want more social, spiritual, ethical, moral, and vocational lessons in primary education. Attempts to integrate practical skills have been hampered by the strict certification and exam process students must complete. Students must pass the sixth grade exam to proceed to secondary school. As a result, teachers rate the importance of any subject taught based on the extent to which it appears on the exam. Consequently, practical skills, which do not appear on the highly academic exam, receive little instructional time.

Since the early 1990s, primary schools have received free textbooks at a rate of one textbook for every two students. However, many teachers do not incorporate them into their teaching styles or cannot access them because of distribution problems. Community schools also lack sufficient reading materials.

In 1995, Papua New Guinea had 2,790 public primary schools and 13,457 teachers serving 516,797 students. That same year, the nation had 29 preprimary schools with 53 teachers and 2,528 children. About 80 percent of primary school-aged children were enrolled.

Universal primary education remains a national goal, but the Department of Education has encountered several problems trying to achieve it. The primary school system suffers from a lack of teachers and funds (Department of Education 1991.) Moreover, not all provinces support the national goal or see the need to provide basic education to all citizens. Consequently, many provinces have focused on expanding their secondary schools and not their primary ones.



Source: UNICEF, "The State of the World's Children 2001" pp. 90 - 93

SECONDARY EDUCATION

During the 1940s and 1950s, the Australian administration in Papua New Guinea focused on developing the country's primary schools. In the 1960s, however, the policy changed under international pressure to expand the secondary school system, create an education elite, and prepare the country for independence. By 1972 the expansion movement had established lower secondary high schools in all of the provinces. Later, two national high schools, for grades 11 and 12, and two international high schools, mainly for expatriate children, were established. Between 1975 and 1985 Papua New Guinea had 32 provincial high schools and 3 national public high schools. The expansion efforts increased enrollment by 70 percent. Still, less than one-third of the pupils who completed primary school were offered places in a secondary school. In 1992, about 12 percent of children received secondary education, with about twice as many males as females enrolled. In 1995, some 68,818 students receivedgeneral secondary education.

Lower Secondary Education: The provincial high schools educate students in seventh through tenth grades on academic and practical skills. This prepares them for the national grade ten exam, which students must pass to earn a Secondary School Leaving Certificate. Students need a Secondary School Leaving Certificate to proceed to the national high schools, tertiary vocational and technical programs, teacher training colleges, and the preuniversity program at the University of Papua New Guinea.

About 35 percent of grade six students enroll in a provincial high school; provincial quotas limit the number of students accepted. Once they are enrolled, about 67 percent of students complete grade 10. Students are promoted automatically from seventh to eighth grade, but provincial high schools lose the greatest number of pupils between eighth and ninth grades. Female enrollment in the provincial high schools has increased since 1981; however, women still account for only 37 percent of the total enrollment. About 65 percent of girls complete tenth grade, compared to 72 percent of boys. Completion rates for women also vary by province and range from about 55 to 86 percent. Some provinces have seen a decrease in their percentage of women graduates. Papua New Guinea had about 130 provincial high schools in 1991, with 53,494 students. About 10,000 students graduate from tenth grade each year.

Upper Secondary Education: At the national high schools students in grades 11 and 12 receive a general, non-vocational education that prepares them to enter a university, a tertiary institution, or go directly to work. About 95 percent of students who enter the national high schools complete the twelfth grade. Students who reach twelfth grade must complete a national exam that determines which higher educational opportunities students receive. The exam also governs most curriculum decisions. Those who pass earn the National High School Certificate, and most pursue higher education.

The four national high schools enroll about 2,000 pupils and produce about 1,100 graduates each year. About 29 percent of the students enrolled are women. In 1990, the National Executive Council approved the Education Access and Expansion Act with the intent of doubling the number of national high school graduates by 1999. Meanwhile, the National Higher Education Plan of 1990 called for increasing the number of grade twelve graduates to five thousand during the same period. But the limited number of qualified teachers has hampered the expansion. In 1991, the four national high schools had 103 teachers; 58 of them were not Papua New Guineans. To produce 2,000-5,000 graduates each year, the national high schools needed an additional 100, up to 600, teachers. Many education officials believed the goal was unrealistic since the University of Papua New Guinea, the country's only training center for national high school teachers, did not produce enough teachers to meet the expansion demands of the early 1990s.

Alternate Forms of Secondary Education: Students who do not enroll in provincial high schools can continue their education in two-year vocational programs or through the College of Distance Education. Vocational centers provide basic vocational education to those who

have left school and have not found employment or secured places in secondary school. In 1996, Papua New Guinea had 114 vocational centers that served more than 11,000 students who left grades six and eight. Many nongovernmental agencies, such as churches, the Young Women's Christian Association, and volunteer groups, also run vocational education programs without government aid. Some reports show that students prefer enrolling in the vocational centers to enrolling in the provincial high schools because they face more employment opportunities after graduation.

The Department of Education created the College of Distance Education in the 1980s to provide an alternate form of secondary education to students who could not attend the provincial high schools because of cost or lack of access. Students in the College of Distance Education complete their work by mail and through regional study centers. Students pay for lesson materials and grading, while the government maintains facilities and equipment. Most courses emphasize academics, although some officials want to include more vocational training. Students have encountered some problems though. Many complain that the material and courses are out of date and not relevant. In addition, they say the grading and processing of exams takes too long, and some papers get lost. Nonetheless, in 1992 the College of Distance Education had 10,469 students. It granted 876 certificates for grade 10 and 622 for lower grades.

HIGHER EDUCATION

Until 1963 the Australian colonial administration neglected higher education, but a visiting United Nations mission criticized the policy and urged the administration to establish institutions for higher education. So, in 1964, the administration created a college to train Papua New Guineans for administrative and clerical jobs. In 1966, the government established the country's first university, the University of Papua New Guinea, in Port Moresby. The first class graduated in 1970. The government also established the Institute of Higher Technical Education in Port Moresby in 1966. However, the university later moved to Lae as a result of public objections to having both of the country's universities in the National Capital District. In 1967, the Institute of Higher Technical Education became the Papua New Guinea University of Technology. The university awarded its first diplomas in 1971 and its first degrees in 1975.

In addition to the two universities, the government also established smaller specialty colleges during the 1960s. By 1970, the country had about a dozen small teachers' colleges, with the most important ones located in Port Moresby, Madang, and Goroka.

The National Higher Education Plan of 1990 sought to improve the quality and cost effectiveness of higher education. The plan proposed merging institutions and transferring programs to reduce duplicate services. Education officials also have pushed for a uniform accreditation policy to require higher education programs to conform to national qualifications.

As of 1996, Papua New Guinea had two public universities: the University of Papua New Guinea and the Papua New Guinea University of Technology, and two private ones: the Divine Word Institute and the Pacific Adventist College. The government pays most higher education costs and provides stipends for books, supplies, equipment, and even travel home for students who attend public institutions. The government also provides scholarships to approved academic programs at the Divine Word Institute and the Pacific Adventist College. The Divine Word Institute offers course programs in business studies, journalism/communications, and Papua New Guinea concerns. The Pacific Adventist College offers courses in education, business, agriculture, and theology. Some university students also study abroad. In 1993, some 435 students studied in Australia, the most popular choice for Papua New Guinea university students. New Zealand, the United Kingdom, and the United States also are popular destinations.

University of Papua New Guinea: At the University of Papua New Guinea students can study the liberal arts, sciences, commerce, journalism, social work, library and information services, education, health sciences, medicine, law, creative arts, agriculture, business, secretarial services, police studies, and psychology. The university enrolls 2,000 full-time students and 100 part-time students and provides extension services to another 3,000 islanders. Most of the faculty still consists of expatriates, mainly from Australia, Great Britain, and other commonwealth nations; however, they are slowly being replaced by Papua New Guineans.

The university has a main campus and a separate medical campus in Port Moresby. There also are branch campuses at Goroka and Waigani, primarily for teacher training, and 11 extension centers throughout the country. The government offers scholarship support to about two-thirds of the students admitted.

Students can earn certificates, diplomas, bachelor's degrees, or postgraduate degrees. Certificate programs, available in the visual and performing arts, require two years of full-time study. Students can enroll in the fine arts program after completing tenth or twelfth grade and demonstrating artistic ability. Students who complete the certificate program can earn a diploma with two additional years of full-time study.

Admission to the bachelor's programs requires a passing score on the National High School Grade Twelve

Examination, or the Adult Matriculation Examination. The University's Institute of Distance Learning and Continuing Education, operated through the External Studies Department, administers the Adult Matriculation Exam. The University established the extension studies program in 1976 to provide upper secondary and university-level education to geographically and economically disadvantaged people. Instruction occurs face to face during the university's summer session and by mail at other times. Tutorial sessions at local extension centers supplement the correspondence courses. The extension studies program qualifies a large segment of the population for university entrance and provides in-service students a way to upgrade their skills. A select group of students enroll in the University of Papua New Guinea's preparatory program after the tenth grade. The university also accepts students based on the Australian and New Zealand University Entrance Examination scores.

Students in most bachelor's programs complete one year of foundation studies followed by three years of full-time study in their major. An initial medical degree requires five years of study. In most degree programs, students can earn an honors degree with one additional year of study.

Diplomas and bachelor's degrees in education, as well as in library and information services, are available at the main campus in Port Moresby in cooperation with the Goroka Teachers' College.

The university also offers some master's and doctoral programs. A master's degree takes one to three years of full-time study after earning a bachelor's honors degree. Most master's degrees also require a thesis. Doctorates are available in most fields, and require three to four years of additional study after obtaining a master's degree, in addition to a research thesis. The university does not offer any external or correspondence degrees.

Papua New Guinea University of Technology: The Papua New Guinea University of Technology enrolls 1,500 full-time students and a few part-time students. The university offers a two-year diploma program and four-year bachelor's degrees. The diploma programs include computing, building technology, surveying, and applied sciences. The diploma programs require students to complete tenth or twelfth grade for admission. The bachelor's degree programs include agriculture, architecture, business, engineering, forestry, languages, math, and applied sciences. Admission to the degree programs requires a National High School Certificate. The university also offers some one- and two-year master's programs and three- to five-year doctoral programs. First semester begins in January and goes until June, while the second semester runs from July to November.

Other Higher Education Opportunities: In addition to the four universities, Papua New Guinea also has smaller, specialty colleges that cater to specific fields of study. Most technical colleges accept students after tenth grade. The government provides scholarships to these institutions. Technical colleges train about twenty-three hundred students each year in thirty different trade areas. Most students usually complete one to two years of academic work, followed by an apprenticeship. Higher level certificate and diploma courses also are available.

The Pre-Employment Technical Training program offers one year of training in eight vocational areas: mechanical, electrical, vehicular, building, catering, printing, clerical, and laboratory. Students who complete a Pre-Employment Training course can enroll in an apprenticeship training program offered by the technical colleges. Apprentices also must have a training contract with an employer. After two years students can earn a Certificate of Higher Technical Education in architecture, building, catering, hotel administration, civil engineering, commerce, electrical engineering, laboratory techniques, and mechanical engineering. In 1990, 325 students completed certificate courses. Non-university postsecondary institutions served more than 5,000 students in 1996.

Papua New Guinea has more than 60 single-purpose institutions that offer training in primary school teaching, nursing, paramedical training, primary industries, technical education, banking, police studies, agriculture, law, and public administration. Several theological schools and seminaries also are available. In 1995, about 14,000 tenth grade graduates and 2,000 twelfth grade graduates applied for places in higher education institutions. Of the applicants, about 2,500 tenth graders and 1,400 twelfth graders were admitted. A total of 13,663 students, 32 percent of whom were women, were enrolled in higher education or pursued it through distance-learning opportunities in 1995. Education was the most popular field of study among the non-distance learners.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Administration: The Ministry of Education oversees the universities, the Commission for Higher Education, the National Department of Education, and the Teaching Service Commission. Papua New Guinea has 20 ministers of education: one at the national level, who also oversees the National Capital District, and one in each of the 19 provinces.

The universities handle their own administration because, unlike other tertiary institutions, they were established by an act of Parliament. They receive funds directly from the national budget, not through the Depart-

ment of Education, and report to the national government through the Minister for Education. The Commission for Higher Education oversees all other tertiary institutions.

The Department of Education manages education for the entire nation under the direction of the National Education Board. The Department has some responsibility for primary and secondary education, and full responsibility for higher education. Provincial divisions of education and their corresponding education boards manage education at the local level. The Teaching Service Commission oversees all matters related to the terms and conditions of teacher service. Teachers who work for the International Education Agency are not part of the Teaching Service.

Finance: Even though education has been a priority for the Papua New Guinea government, it has suffered historically from a lack of funds. Between 1978 and 1988 education received a 39 percent decrease in real public expenditures. Between 1983 and 1991 education received no increase in funds and the allocation hovered around K 100 million per year, despite increases in student enrollment.

At the end of the twentieth century things seemed to improve. In 1999, the National Charter on Reconstruction and Development outlined five development priorities and primary education topped the list. Meanwhile, the government promised to provide basic education to all citizens, to increase access to higher education, and to improve access for women. The 2001 national budget seemed to reflect these objectives. The Department of Finance and Treasury appropriated K 596.3 million (20 percent of the 2001 budget) to education, more than any other area excluding debt service. The allocation represented an almost 18 percent increase in funding from 1999. The 2001 education budget also included a 9 percent increase in teachers' salaries. The total 2001 budget for Papua New Guinea was K 2.96 billion.

Educational Research: Three institutions conduct most of the educational research in Papua New Guinea: the Research and Evaluation Unit of the National Department of Education, the University of Papua New Guinea, and the National Research Institute. To a lesser degree, research also takes place at the Goroka Teachers' College and other higher education institutions.

The Research and Evaluation Unit, established in 1981, originally evaluated World Bank projects in Papua New Guinea. It expanded in 1984 to include an existing research branch of the Department of Education. Today it provides research and evaluation activities requested by the Department of Education and the provincial divisions of education. Most educational research focuses on curriculum development; staff training and development; planning, management, and administration; literacy; higher education; and vocational and technical education.

NONFORMAL EDUCATION

Nonformal education in Papua New Guinea includes village-based literacy programs for adults and children, agriculture and health programs, provincial and community libraries, and some distance-learning opportunities. Government support for nonformal education has been sporadic and disorganized; however, nongovernmental organizations have supported the effort.

SIL International (formerly the Summer Institute of Linguistics) is the largest nongovernmental organization involved in literacy. Church groups, the Young Women's Christian Association, and the Peace Corps also provide literacy services. In 1990, there were 79 literacy programs with a total of 258 classes. Since the 1990s the number of literacy programs offered in local languages has increased and communities have expressed a greater interest in non-English literacy materials. In 1995, approximately 72 percent of the population age 15 and older could read and write.

Papua New Guinea also has two distance-learning programs. Students can complete their secondary studies for grades 7-10 through the College of Distance Education or pursue upper secondary and university-level courses through the University of Papua New Guinea's Institute of Distance Learning and Continuing Education. Both distance-learning programs operate by mail. The Institute of Distance Learning also offers face-to-face instruction during the University of Papua New Guinea's summer session.

Community schools use radio broadcasts to supplement instruction, but most broadcasts are out of date and unrelated to the modern curriculum. Many areas have poor reception as well, which makes the broadcasts unavailable to a number of schools. In 1998, Papua New Guinea had 8 AM stations, 19 FM stations, and 28 shortwave stations. The country had about 410,000 radios. Television is available, but on a limited basis. The country had three broadcast stations in 1997 and about 42,000 televisions. Schools with access to televisions and video players use educational videos to supplement instruction, but the videos are limited. Papua New Guinea had two Internet service providers in 1999.

TEACHING PROFESSION

The lack of qualified, local teachers has limited the expansion of Papua New Guinea's education system. While enrollments in teacher training programs continue

to increase, the number of new teachers produced does not meet the number needed to increase student enrollment at the primary and secondary levels. The attrition rate for teachers in 1991 was about 9 percent.

Primary teachers train in community-based teachers' colleges. Students enter after tenth grade and enroll in a three-year training course. In 1991, some 1,419 students were enrolled in one of Papua New Guinea's eight community teachers' colleges. Church organizations operate seven of the colleges, and the government operates one.

Training for secondary education teachers occurs at the Goroka Teachers' College and on the University of Papua New Guinea's Waigani campus. The Goroka Teachers' College is the primary source for provincial high school teachers. Students enroll after tenth or twelfth grade. They complete a three-year training program of general subject knowledge integrated with lessons on teaching skills. The Teachers' College also requires all students to study at least one core discipline (English, social studies, science, or math.) However, many students are uncomfortable with the requirement and ultimately drop out of the program. Graduates earn a diploma in secondary school teaching. The Goroka Teachers' College also offers several university extension programs and in-service training for teachers.

The education program at Waigani prepares teachers for the provincial high schools through a four-year program. During the first three years students study the arts and sciences, working toward a specialization in two subjects. Students spend their fourth year learning educational techniques and reviewing the provincial high school curriculum, teaching methods, and teaching practice. The Teachers' College at Goroka tends to produce teachers with better teaching skills, while the program at Waigani produces teachers with stronger subject knowledge.

The University of Papua New Guinea's Waigani campus also prepares teachers for the national high schools through a one-year postgraduate diploma program. The prospective teachers specialize in one or two subjects of the National High School curriculum and learn about teaching methods. Pre-service teachers at this level also practice their teaching at a national high school.

Prospective secondary high school teachers can also pursue a bachelor of education to meet their training requirements. At the University of Papua New Guinea, a bachelor of education takes four years to complete. Graduates of the program also lecture at teachers' colleges and can serve as school administrators at the national and provincial levels.

The University of Papua New Guinea also offers a bachelor of education in-service and a two-year bachelor's program for experienced teachers who wish to upgrade their skills and subject knowledge. Students also can pursue postgraduate diplomas, master's degrees, and doctorate degrees in education at the university.

Technical and vocational education teachers need a combination of schooling and experience in their field. Teachers for the Pre-Employment Training courses must complete tenth grade and have five years of industrial or commercial experience before enrolling in a one-year teacher training program. Teachers for the technical colleges train at Goroka Teachers' College. Teachers of courses for the Certificate of Higher Technical Education have university degrees or a Certificate of Higher Technical Education and three years of field experience. Teachers at the secondary vocational centers generally are tradesmen with four years of trade experience. They also must complete a one-year pre-service course at the Port Moresby In-Service College. Vocational teachers also come from the secondary teacher education program at Goroka Teachers' College. But, according to the National Department of Education, about half of all vocational instructors are unqualified.

Since the 1970s, the National Department of Education has provided in-service training to teachers at the school level and through National In-Service Training Week. National In-Service Training Week is a compulsory event held at the end of the first school term. Activities address administrative and organizational procedures and professional and curriculum development. Practicing teachers can also pursue education degrees through the University of Papua New Guinea's Extension Department. Secondary teachers who have assumed library responsibilities can pursue an advanced diploma in education studies/teacher librarianship through a two-year part-time summer program offered by the University of Papua New Guinea.

The Papua New Guinea Teachers' Association is the largest ''white-collar'' union in the country. The association represents about 80 percent of the teachers employed by the Teaching Service Commission. The organization promotes professionalism among its members and assists with educational development in Papua New Guinea. By legislation, the association has representation and voting rights on all national, provincial, and school-level education boards.

SUMMARY

The expansion of Papua New Guinea's education system will not continue until the country produces a greater number of qualified teachers. Still, the nation is working to improve student retention rates, especially in the community schools, and to increase the transition rates into the secondary schools. Providing instruction and literacy materials in the local languages will help the country achieve these goals.

Yet, Papua New Guinea will face several education dilemmas as long as most of its population remains tied to the agricultural economy. Education officials must find ways to provide a relevant education to the 85 percent of students who remain in their rural and semi-rural communities and prepare the remaining 15 percent who find paid employment in government, business, and service industries. In general, the education most children receive does not lead to formal employment; at the same time, it alienates them from the skills they need to contribute in their home communities (Department of Education 1991). But, if the government can maintain its financial commitment to education, then Papua New Guinea's educational system most likely will continue to progress.

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—Kristen Loschert

PARAGUAY

BASIC DATA

Official Country Name:	Republic of Paraguay
Region:	South America
Population:	5,585,828
Language(s):	Spanish, Guarani
Literacy Rate:	92.1%
Academic Year:	March-November
Number of Primary Schools:	5,928
Compulsory Schooling:	6 years
Public Expenditure on Education:	4.0%
Educational Enrollment:	Primary: 895,777 Secondary: 327,775 Higher: 42,302
Educational Enrollment Rate:	Primary: 111% Secondary: 43% Higher: 10%
Teachers:	Primary: 41,713
Student-Teacher Ratio:	Primary: 21:1 Secondary: 12:1
Female Enrollment Rate:	Primary: 109% Secondary: 45% Higher: 11%

HISTORY & BACKGROUND

A relatively small, poor, under populated, subtropical, landlocked country located near the geographical core of South America, Paraguay was originally inhabited by numerous Amerindian tribes, semi nomadic peoples linked by the Guaraní language. The modern country traces its origins to sixteenth-century settlements by Spanish explorers, accompanied by Catholic priests; these two groups introduced the Spanish language and early patterns of parochial education that have remained influential throughout Paraguay's history.

Juan de Salazar founded Asunción, the capital and major city, in 1537. Independence from both Spain and Argentina, Paraguay's larger neighbor to the southeast and southwest, came in 1811. During its postcolonial epochs, Paraguay has struggled with social, political, and

economic problems that have inhibited the establishment of an effective educational system. The coup of 1989 that ended dictatorial government has brought the promise of reform, but unsettled politics have delayed substantive improvements in an underdeveloped educational system.

Economic & Demographic Influences: Paraguay, with no coastline, has commercial access to the outside world only by means of the Parana-Paraguay River system. The country's historical backwardness reflects in part its geographic isolation. In addition to Argentina, Paraguay's other contiguous neighbors are Brazil, to the north and east, and Bolivia, to the west and northwest. Other important towns are Encarnación, Ciudad del Este, Pedro Juan Caballero, Concepción, Coronel Oviedo, and Villarrica.

Slightly smaller than California, the country has geographic borders that are mainly rivers. The Paraguay River divides it into two dissimilar regions—the Oriental (East), or Paraguay proper, and the Occidental (West), a mostly inaccessible region called the Chaco, inhabited by 5 percent of the population. With just 6 percent arable land, Paraguay is 55 percent pasture and 32 percent forest. It remains one of South America's least populated areas, second only to Bolivia; historically its rate of urbanization (35.7 percent in 1965) has also been the continent's second lowest. Over half the economically active population in 1950 was involved in agriculture, and about 70 percent of the land was in holdings of small plots, 10 hectares or less. A tiny 1.1 percent of the population, as large landholders, held 87 percent of utilized land at midcentury. By the late 1990s, with a labor force of 1.8 million workers, 45 percent of the workers were still involved in agriculture. The only large city, Asunción, had by then a population of over a half million. Urban and rural population in Paraguay were roughly equal, and migrations into and out of the country roughly canceled each other out.

About 60 percent of the people still live in small country villages, but about 70 percent of all citizens reside within 120 miles (193 kilometers) of Asunción—a pattern of population clustering that assures the city's cultural dominance and has made it the natural site for the country's universities and major high schools.

During much of the twentieth century, Paraguay of all South American countries recorded the lowest rate of auto possession, the fewest miles of road, the second fewest miles of railroads, the lowest rate of telephone ownership, and the lowest use of electrical energy. Parts of the country are still inaccessible by phone or auto. In the 1990s, modern urban systems of waste disposal were still not fully adequate, and water pollution remained a problem. A 1996 estimate of urban unemployment was 8.2 percent, and rural unemployment was a great deal higher.

Paraguay's deficit economy, agrarian with a large informal sector including active traffic with Argentina and Brazil in illegally recycled imported goods, and with the prevalence of various kinds of underground micro businesses, has also hindered educational progress—as has economic dependence upon neighboring Argentina. In earlier eras Europeans and Argentines acquired vast land holdings, and before 1930 foreign owners had drained off money. At the time of World War II Asunción had no water or sewer system, no fire department, and no paved streets.

The feudal system of ownership, with fewer than one half of one percent of landholders holding three-quarters of the farmlands, has retarded democracy and progress.

The Populace: Historically, at various times, the government of Paraguay has encouraged the settlement of Mennonites from Canada and the United States and of Germans, Russians, and Middle Europeans. Nonetheless, Paraguayans have remained remarkably homogeneous, with at least 90 percent being mestizo (a mixture of Spanish and Guaraní-speaking Amerindian) and the rest mostly a mix of other white and Amerindian backgrounds. The country's estimated population of 5,300,000 in 1998—up from 4,120,000 in 1989 and 1,817,000 in 962—comprised 39 percent children ages 1 to 14; 56 percent adults ages 15 to 64; and 5 percent seniors ages 65 and older. The population growth rate in 1998 was 2.68 percent annually, with 32 births and 5 deaths per 1,000 people—and with an infant mortality rate of about 37 deaths per 1,000 live births. Average life expectancy in the country was 72.23 years in 1998, when the average Paraguayan female bore 4.26 children. This high birth rate and relatively young population, statistically speaking, have strained resources for schools.

During the period 1870-1928, between the wars, a debilitated country that had lost much of its male population and had many orphaned children withstood a succession of about 40 mostly corrupt dictators. The egregious numeric gender imbalance after 1870 triggered a pattern of family organization that put women in charge of households, with few marriages; though a numeric balance of the sexes has been restored, the country still has a 50 percent illegitimacy rate, with many unstable family structures.

Political History: Though independent since 1811, Paraguay has endured nearly two centuries of political instability marked by intermittent civil strife. Until 1870 dictators controlled the country, and thereafter, into the 1930s, elite cadres, both Conservatives and Liberals, ruled. Since 1939, a succession of autocratic presidents holding five-year terms has governed. This pattern of personal rule lasted until 1989. General Alfredo Stroessner,

the durable ''elected'' chief of state after 1954, was a virtual dictator who saw Paraguay as defenseless and thus in need of constant military readiness. As an ardent opponent of Communism—a label that he used to brand almost any opposition—Stroessner had the economic and political support of the United States. President Nixon praised him in 1958. During his regime, the government in the name of anticommunism restricted personal freedoms and largely isolated Paraguay from the outer world. The Stroessner government censored the press but did allow opposition papers wide latitude. More than half the public treasury went to support the military, with the education budget running a distant second.

A 1989 military coup ended Stroessner's 34-year period of control. The military itself remained a strong force throughout the 1990s, and an attempted military coup was suppressed on May 18, 2000.

The Stroessner regime did make some material progress, building some schools as well as stabilizing the currency, increasing exports, and improving public services and roads. Most rural areas in Paraguay still had no effective formal patterns of public education as late as the 1960s, when one scholar called the state ''a poor and frightened land.'' Perhaps a quarter of its people were then still unable to read or write at even a minimal level.

Overshadowed by the country's militarism and confused politics, the educational history of Paraguay has always effectively been pushed into the background.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Early in the twentieth century the twin legal foundations of public education in Paraguay were the law of 22 July 1909 and Article 8 of the Constitution, both mandating compulsory primary instruction for all children ages 5 to 14. That pattern has nominally persisted.

Under the constitution of 1967 as amended in 1977, the country was divided into 19 administrative departments with little autonomy, especially because the Paraguayan national government held the purse strings. Subdivisions of the departments are municipalities and rural districts called partidos. A national bureaucracy dominates public education, which has a heavily centralized administration.

The traditional ruling party in Paraguay, the National Republican Party or Colorado Party—has been the one to which all civil servants belonged and has remained a component of Paraguay's government even after the 1989 coup. Opposition parties have participated in elections since the 1980s. In 1999, peacefully elected President Luis Gonzalez Macchi presided over Paraguay's first coalition government and promised ambitious economic and institutional reforms that would, if enacted, benefit education. But the constitution of 1992 did not end intermittent chaos at the highest government levels.

Since the 1960s the universities have enjoyed autonomy, so that the government or army cannot seize a university, and students have immunity from arrest. Though such protection is largely technical because university funding is from the government itself, leaders throughout South America have tended to respect and to some degree fear student power as far back as the student revolt at the University of Córdoba in Argentina just after World War I, an incident that had far-reaching effects throughout the continent.

EDUCATIONAL SYSTEM—OVERVIEW

In Paraguay at the beginning of the millennium, perhaps as few as 28 percent of the children will advance to secondary school, and one percent will earn university degrees. Some democratic mobility through education does occur.

During the colonial era, the upper class had sole access to formal education. Wealthy families hired tutors or sent children abroad. A few private schools operated after 1811 but hardly thrived during the nineteenth century.

Early establishment of public education in Paraguay came after 1840 under President Carlos Antonio López, who, with Mariano Roque Alonso, overthrew the dictatorship of Rodriguez Francia (1814-1840). Joint-consuls López and Alonso promoted public education by establishing a secondary school in Asunción; they also freed the children of slaves born thereafter. But López proved dictatorial, and his son and successor hapless, plunging his weak country into a bloody war (1864-1870) with Argentina, Uruguay, and Brazil. Boys of 12 fought in a Paraguayan army outnumbered 10 to 1. The war almost extinguished the male population of Paraguay and reduced the population from a half million to fewer than a quarter million people.

In 1870, in a devastated country, the literacy rate in Paraguay was perhaps as low as 14 percent.

Though education has been compulsory for children to age 14 since 1909, illiteracy was still high at midcentury. Official figures about literacy, which often conflict, gloss over the truth by counting anyone who attended primary school as literate. The literacy rate in 1962—counting citizens age 15 and over who could read and write—has been reported at just under 75 percent, though some figures suggest an illiteracy rate closer to half the population.

In any case, recent decades have shown some progress. During the 1970s and early 1980s, overall enroll-

ment in schools grew at all levels. Reforms during the 1980s tried to improve the school systems, especially in rural areas, where inadequate facilities and materials and a lack of trained teachers were common. These reforms instituted multigrade programs to try to make better use of limited resources. In the early 1980s, more than 2,000 multigrade programs were reaching more than 55,000 students.

Such efforts seem to have had some effect. Official figures show that the literacy rate rose from 60 percent in 1960 to 80 percent by the late 1980s. Still, a mere one third of elementary students finished the first six grades, so functional literacy may not have been very high. The urban literacy rate, at an estimated 90 percent, was somewhat higher than it was outside the cities. The estimated rate in 1995 had increased to 92.1 percent, with the percentage for males (93.5 percent) being slightly higher than for females (90.6 percent).

In South America generally, where a tradition of a tripartite class structure operates, education has been the often-elusive means of the advancement of people out of the lower and into the middle class. Since the 1960s, somewhat improved education has fostered the emergence of a new ''technical elite'' class and has progressively moved some women into the educated and professional classes. By the 1960s women comprised a third of the work force in South America, and female university students had become commonplace. Paraguay, though relatively backward, has reflected these continental patterns.

Also on the favorable side, a tradition of respect for culture and education has existed throughout South America during the twentieth century, even among uneducated classes. In the 1960s, South American presidents included four military men, six intellectuals—lawyers, doctors, professors—and no professional politicians.

Church & State: As a country that is only 2 percent Protestant and that in 1998 was about 90 percent Roman Catholic, Paraguay has never embraced the principle of separation of church and state but does allow other religions to be practiced and to run schools. The constitution of 1870 designated Catholicism as the national religion; the Ministers of Justice, Worship, and Public Instruction were government officials; and conversion of the Indians to ''Christianity and civilization'' was a state-sponsored venture. In this parochial context, schools typically served jointly with churches as instruments of Catholic instruction. Several English Episcopalian missions operated in Paraguay by 1909 as part of the state-sponsored program of conversion.

As elsewhere in South America, Catholic priests—Franciscan Fathers—had accompanied the first conquerors in Paraguay. The earliest schools in the country, complements to the proselytizing efforts of the Fathers, date from the second administration of provincial governor Domingo Martinez de Irala (1542-57). The Jesuits gained official recognition in Paraguay from King Philip II of Spain in 1608 as part of the mission work of the disciples of Loyola; the expulsion of the Jesuit Fathers in 1767 under orders from Charles III ended a period of relative success at instructing the natives of the Chaco in Christianity. After 1811 and independence, the Church was firmly established, and throughout the nineteenth century—as elsewhere in South America—it became the primary educational agency in Paraguay. Even today, because of the strong and pervasive Church influence in government and social institutions, the distinction between state and church education in Paraguay is almost completely blurred. Private schools in Paraguay are likely to be Catholic.

With a traditional stranglehold on primary and secondary education, the Catholic Church in the 1960s extended its power to the university level in Paraguay and elsewhere. In the 1980s, in advance of the 1989 overthrow, a Paraguayan Peasant Movement and Catholic leaders both criticized Stroessner (who was in alliance with the Colorado Party). Pope John Paul II's visit in 1988 set up an occasion for antigovernment demonstrations in which intellectuals and poor farmers united to demand reform.

Guaraní & Spanish: The Bilingual Problem: Paraguay claims to be the only truly bilingual country in South America. Traditionally a large number of Paraguayans have spoken Guaraní, the indigenous tongue, rather than Spanish. In rural areas through the 1980s, an estimated 90 percent of children entered primary schools speaking Guaraní, which, especially outside Asunción, is the medium of daily exchange. Thus bilingualism has contributed to educational difficulties including widespread failure of students to complete Spanish-based educational programs, especially in the rural contexts.

In the late 1970s, the Ministry of Education and Worship recognized a crisis in rural education and responded by initiating a bilingual program to help native Guaraní-speaking children progressively gain oral and written skills in Spanish after entering school.

Literature in Guaraní remains available at the secondary and university levels, and materials printed in the indigenous language are available in the country.

PREPRIMARY & PRIMARY EDUCATION

In this poor country, preprimary education has not traditionally been a priority. For the most part, other needs that have seemed more pressing have taken precedence.

Slow but gradual progress in primary education has been the pattern during the late twentieth century. Student absenteeism and grade repetition have been common patterns, more so in rural than in urban schools.

At the beginning of 1909, when compulsory education in Paraguay started, 344 primary schools employed 756 teachers and served 40,605 pupils. Concurrently, private schools enrolled 2,000 to 3,000 students. Under the direction of the Ministry of Education and Worship, the primary program, free and compulsory for children ages 7 to 14, comprised one six-year cycle.

In the early 1970s, fewer than 5 percent of elementary school students in Paraguay finished the full six-year course of study, compared with 30 percent of urban students.

From 1975 to 1980, rapid growth occurred, with the number of students in attendance in primary schools increasing by about one-quarter. Much of this increase occurred in rural areas, where between 1972 and 1981 a one-third increase occurred. A 1980 study showed improvement in the percentage of students completing the elementary school cycle, with about 38 percent of all students finishing the program; the figure for rural students, 25 percent, remained well below that registered by urban students. In theory, six years of education was compulsory in Paraguay in 1982, as earlier, but many remote rural areas still lacked schools.

By 1984, a total of 560,000 students attended primary schools in Paraguay. But the proportion of enrolled school-age children actually declined or remained constant from 1965 to 1985. Statistics for 1989-1990 showed 4,411 schools and 31,590 teachers employed at the primary level (ages 7-12). A total of 656,877 students generated a student/teacher ratio of 20.8 to one.

Finding adequately trained teachers has long been a problem, especially in rural areas, where many teachers have been uncertified. Statistics for 1992 show only 28 percent of Paraguayans pursuing education past primary school.

SECONDARY EDUCATION

After independence in 1811, a secondary school was established but closed in 1822. Modest efforts in the mid-nineteenth century toward public education amounted to little. After 1877, when the first secondary school system was inaugurated, public education grew, producing a supply of graduates that justified the founding of the National University in 1889 and the first teacher-training school in 1896.

By 1909, five national ''colleges'' providing secondary instruction were located in Asunción, Villa Concepción, Villa Rica, Villa Encarnación, and Villa del Pilar. Additionally, two normal schools offered teacher training.

At the time of the Chaco War against Bolivia in the 1930s and 1940s, Paraguay had several teachers' colleges, a number of high schools, and a few technical schools. Before World War II, the educational system expanded, with enrollments nearly doubling. Expansion continued at the secondary level faster than at the primary level.

Secondary education was organized as two three-year programs, each leading to a baccalaureate degree. Students anticipating university admission or teacher training pursued the diversified program, with a focus in the humanities. Those with more limited academic abilities or more practical interests—including the pursuit of advanced training at one of a number of postsecondary schools offering programs in agriculture, commerce, or industry—took a three-year technical program in high school.

In the 1970s fewer than 1 percent of rural children finished secondary school programs, compared to 10 percent of urban students. From 1975 to 1980, the number of students in the basic secondary cycle grew from about 49,000 to about 76,000. By 1988, about one out of four children in Paraguay went on to secondary school: in that year, 165,373 students ages 13-18 enrolled in 812 schools. (Included in these figures are vocational students and those in teacher training.) These students were taught by 9,444 teachers, so that the student/teacher ratio was a bit better than that at the lower levels. Twenty-eight percent of students went to high school in 1992.

By the late 1980s, women made up fully half of all high school graduates. Paraguay has three Jesuit high schools, two in Asunción and one in Santa Rosa.

HIGHER EDUCATION

Larger numbers of graduates of both sexes since the 1980s have brought about relatively rapid growth in the universities. Paraguayan universities, like those in neighboring countries, have traditionally enjoyed prestige and a kind of power.

Because private endowment of higher education has been essentially nonexistent except from the Catholic Church, state support has been necessary—and inadequate. The public, tuition-free university has tended to be poor, with professors underpaid and students often having relative power. In North American terms, students have little campus life, with no fraternities or sororities. Higher education is serious in that students are grooming themselves to be members of professions. Examinations weed out all but a tiny handful of students, so that a small

fraction of those who attend secondary school get into the two colleges. Thus holders of a university degree make up less than 1 percent of the total population and are guaranteed a place at the top of the political or economic hierarchies. Women now comprise about half of the university graduates.

Church universities increased numerically in South America in the 1960s: there were 13 such universities in the 1950s and 31 ten years later. Parochial schools generally enroll students from the better-off families. At such schools the teaching standards are higher, the discipline is more severe, the curriculum more rigorous, the professors better paid, the ambience more conservative. Though their orientation is sectarian, such schools have accepted Protestants and Jews since the 1960s and have had some non-Catholic teachers.

Predictably, of the two significant institutions of higher education in Paraguay, one is Catholic, the other, public. Both universities have main locations in Asunción, operate in Spanish, and require as qualifications for admission a *bachillerato* (secondary school certificate) or its equivalent plus an entrance examination. Both universities also have had branches since mid-century in several interior locales. The Catholic University charges tuition, while the state school is free.

The Universidad Católica ''Nuestra Señora de la Asunción'' (Catholic University of ''Our Lady of Asunción''), which enjoys recognition by the federal government on the same basis as the public National University, was founded in 1960. The school's origins coincide with the widespread emergence in South America during the 1960s of specifically Catholic universities run by the church, a pattern fostered by the Church's general view that the public universities were leftist, unruly, and ineffectual. In the early 1990s, the school enrolled nearly 11,000 students and engaged an academic staff (including professors) of about 1,230. Degrees and diplomas offered included the Licenciado in philosophy, history, psychology, sociology, political science, diplomatic studies, accountancy, letters, mathematics, pastoral studies, business administration, education, and nursing and midwifery. The program in law requires six years. Postgraduate degrees include one in obstetrics, as well as the Máster en Administración de Empresas and the Doctorado.

Subdivisions in Catholic University's organization include the faculties of philosophy and human sciences (including political science and education), law and diplomatic studies, accountancy and business administration, science and technology (including architecture), and science and letters. An Institute of Theology, a School of Nursing, and four research centers complete the organizational system. Faculties of science and letters operate not only in Asunción but also in Villarrica, Encarnación, Concepción, Ciudad del Este (where the theology and nursing facilities also operate), and Pedro Juan Caballero. In addition, the University cooperates internationally with the Universities of Milan (Italy); Brussels (Belgium); Kansas (U.S.); La Plata (Argentina); Frankfurt-am-Main (Germany); and with Université catholique de l'Ouest (Angers). The Central Library of Catholic University housed 45,000 volumes in 1993. The University has its own press, the Publications Center of Catholic University (CEPUC, Centro de Publicaciones de la Universidad Católica) and in the early 1990s sponsored two publications, Revista del Centro de Estudios Antropológicos and Estudios Paraguayos (Revista de la Universidad).

The National University of Asunción, roughly double the size of Catholic University and more than twice as old, was founded in 1890 and granted autonomous status in 1919. By 1991 it had nearly 20,000 students and 1800 members on its academic staff, including professors. The organization of National University, which offers more advanced professional work than Catholic University, subdivides a dozen faculties under these rubrics: law and social sciences; philosophy (including communication sciences, education, and psychology); medicine; physics and mathematics (including civil, industrial, and electromechanical engineering); economics (including administration and accountancy); dentistry; chemistry (including pharmacy and food technology); agriculture; architecture; veterinary science; polytechnic; exact and natural sciences; and library science. Offering specialized study are the Institutes of Social Work (including nursing and midwifery), geographical sciences, electronic engineering, and languages (including English, French, Guaraní, and German). The University Library housed only 16,641 volumes in 1991 and was thus only about one-third the size of the Central Library of Catholic University, which itself had relatively limited holdings.

The National University offers degrees and diplomas that include the Licenciado in philosophy, mathematics, education, letters, history, exact sciences, physicochemistry, natural sciences, public administration, and economics. Advanced programs and degrees requiring four, five, or six years of study beyond the Licenciado include those in education, dentistry, medicine, biochemistry and industrial chemistry, economics, law and social sciences, veterinary medicine, law, architecture, agronomy, civil engineering, and industrial engineering.

In the 1970s, both National University and Catholic University began offering various short-term degree programs to try to meet the increased student demand for admission and to reduce pressure on traditional professional courses of study.

The fastest growth of educational institutions in Paraguay during 1965-1985 occurred at the postsecondary level. In the early 1980s, the two universities together employed 2,694 teachers and enrolled 28,677 students, with about 20,000 of them at the National University. By 1984, some 33,000 were recorded as being enrolled on both campuses. National University had 19,400 and 3,200 teachers in 1987, whereas Catholic University had 10,400 students and 1,100 teachers.

Both universities operate on a March through November (or December) calendar, with a division into two terms: March through July and August through late fall.

In 2001, universities advertising on the Internet as accepting international students from abroad include not only the National University and Catholic University but also Universidad Autonoma de Asunción and Universidad del Norte, both also in the capital city. Photographs on various Internet web sites show up-to-date computer labs that are indicative of the entrance of Paraguay's institutions into the modern technological mainstream.

The ''Seminario Conciliar,'' which was founded in Asunción in 1881 and graduated 60 priests before 1911, represents another type of institution that has long existed in Paraguay for the primary purpose of educating Catholics for service in church roles.

Administration, Finance, & Educational Research

Catholic University and National University enjoy equivalent federal recognition.

Catholic University, founded in 1960 by the Conferencia Episcopal del Paraguay, was later reorganized by the Sacred Congregation of Seminaries and University Studies. Heading Catholic University as its Grand Chancellor is the Archbishop of Asunción; the University's jointly governing bodies are the Consejo Universitario and the Consejo Administrativo. The National University, founded in 1890 and granted autonomous status in 1919, is financed by the State Governing Body and governed by the Consejo Superior Universitario—a group comprising the Rector, the dozen or so faculty deans, one alumnus, and one student.

The tradition of private economic support for mass education by means of personal or corporate endowment has never been generally established in Paraguay. Private schools, primarily Catholic, charge tuition. Government funds, supplemented by various user sources, have supported public education in the past, and still do. In the early 1980s, the budget of the Ministry of Education and Worship, which supervised elementary and high school education, was barely 15 percent of total government expenditures.

National Funding and national control of education—not regional or local funding—is the norm in Paraguay. Heavy percentages of federal allocations have traditionally gone toward primary schooling. Urban schools in Paraguay typically get 90 percent of their support from government funds. Public secondary schools have received from half to three-quarters of their support from the national government, with the rest coming from various sources including users and locales.

Primary and secondary public schools have throughout the twentieth century remained under the supervision of the Ministry of Education and Worship, a central agency.

No indicators in 2001 suggest more than nominal developments in areas such as distance learning. Under funding and conservative patterns persist. Few substantive scientific activities exist except class instruction at the National University. The small size of the university libraries is telling, though the era of the Internet does now provide global access to resources in the more up-to-date schools.

Nonformal Education

The Academy of the Guaraní Language and Culture is one of two important institutes devoted to preserving the native culture. Many songs, folk poems, and publications use the indigenous language.

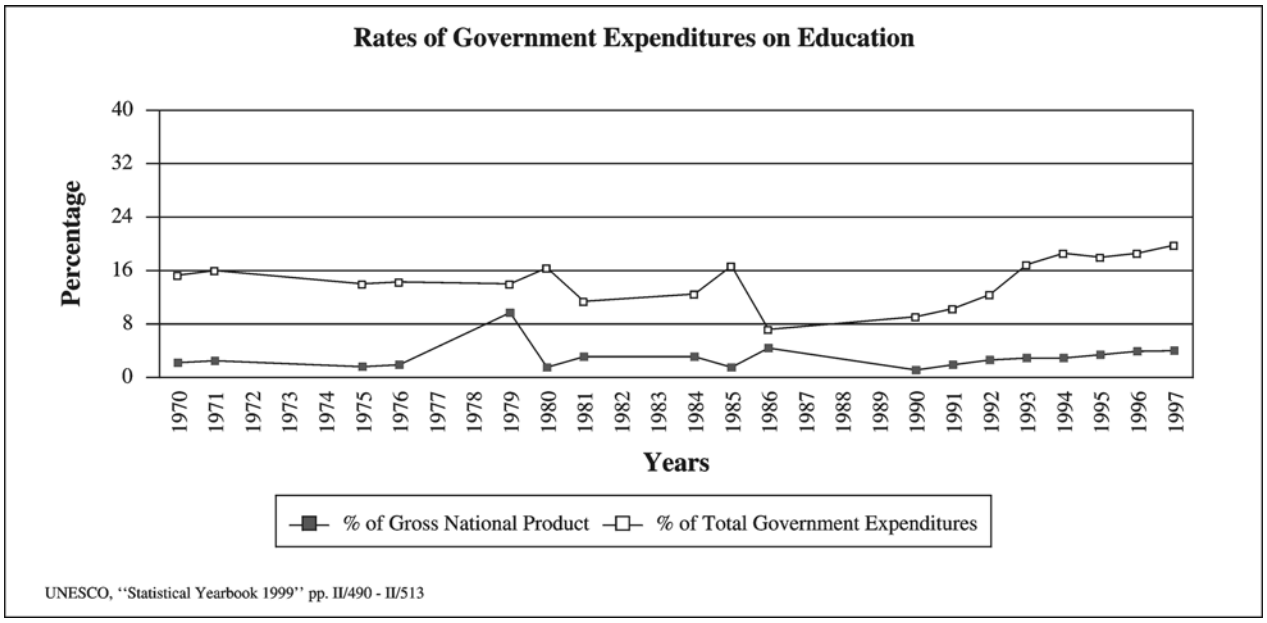
Educational exchanges are aspects of the educational system, both at the high school and college levels. In 2001, high schools listed as accepting international students for study included Centro Cultural Paraguay, Colegio Internacional, and Centro Cultural Paraguayo-Americano. Others were the American School of Asunción, Grace Educational Center, Asunción Christian Academy, Pan-American International School, and Centro Cultural Paraguay-Estados Unidos.

The Centro Cultural Paraguayo-Americano (BNC) sponsors cultural activities and has a 10,000-volume library with titles in both Spanish and English, including major Paraguayan authors. The Center teaches 1,500 students English and offers educational activities including lectures and seminars.

In 1997, Paraguay had 10 television stations. In 2001, the U.S. Peace Corps had some 180 volunteers working in Paraguay, some as teachers.

Teaching Profession

The first postsecondary facility for teacher training in Paraguay dates from 1896, and two normal schools for that purpose existed by 1909. A two-year postsecondary program in teacher training has been required for primary teachers, and an additional two years of specialized training for secondary teachers.



Retraining programs have been available through the Higher Institute of Education and in several regional centers.

Statistics commonly lump teacher training programs in Paraguay with other postsecondary enrollments and activities. Some teacher training occurs within regular university programs, especially for work as university professors in academic specialties.

SUMMARY

Education in a poor country with scant native middle and upper classes is a primary means of achieving social mobility. Paraguay's long history of authoritarian government—with three dictators during the period 1814-1870, frequent changes in the presidency from 1870 to 1954, and Stroessner's political stranglehold on the country until 1989—has stunted progress in public education. The effect has been circular: a lack of democratic control has suppressed the cultivation of strong public school systems, and the absence of such systems has, in turn, kept down democracy by failing to train leaders and productive, engaged citizens. Political, geographical, ethnographic, and economic factors have all worked against education in Paraguay.

Five constitutions dated 1844, 1870, 1940, 1967, and 1992 chart the country's successive efforts toward self-determination. The June 1992 constitution, in the wake of the 1989 coup, has held out hope for educational reform, but ongoing problems have delayed implementation.

In a 1996 article in *International Higher Education,* Vincente Sarubbi argues that in Paraguay's post-1989 efforts to move toward democracy, a ''true educational revolution will be necessary.'' A founding member of the Advisory Council of Education Reform in Paraguay and a former university teacher and newspaper director, Sarubbi notes the contemporary inadequacies of higher education in particular: ''insufficient coverage, low levels of performance, insufficient and dated functions of the university, highly bureaucratized administration, inadequate moral and intellectual development of students, lack of professional teaching standards, and irrelevance of the curriculum for the purposes of production, government, and life in general.'' Specifically he calls for better scientific and technological education, for broader access to higher education, for more research and a ''scientific culture'' in universities, and for the development of inclusive and democratic attitudes within.

Many of Sarubbi's negative phrases might also describe the larger education picture in Paraguay at the beginning of the millennium. Still, in a more democratic and open climate than the country has ever enjoyed, the government now promises to broaden educational opportunities as a means of alleviating social deprivation and improving the quality of life in the country.

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—Roy Neil Graves

PERU

BASIC DATA

Official Country Name:	Republic of Peru
Region:	South America
Population:	27,012,899
Language(s):	Spanish, Quechua, Aymara
Literacy Rate:	88.7%
Number of Primary Schools:	33,017
Compulsory Schooling:	6 years
Public Expenditure on Education:	2.9%
Educational Enrollment:	Primary: 4,163,180 Secondary: 1,969,501 Higher: 657,586
Educational Enrollment Rate:	Primary: 123% Secondary: 70% Higher: 26%
Teachers:	Primary: 153,951 Secondary: 106,614 Higher: 45,443
Student-Teacher Ratio:	Primary: 27:1 Secondary: 19:1
Female Enrollment Rate:	Primary: 121% Secondary: 67%

HISTORY & BACKGROUND

Spanning a 2,400 mile length of the Pacific coast, Peru constitutes the third-largest country in South America at 1,285,216 square kilometers. At least as significant as the country's size, however, is its geographical and climatic diversity. The bulk of the nation's population of 22 million inhabits the arid but accessible coastal region west of the Andes, which creates a formidable barrier between the coast and the tropical rainforests that fill nearly 60 percent of Peru's land area east of the mountains. Since the time of Spanish colonization, the coastal region has enjoyed economic privilege over the inland areas, largely due to accessibility. The climate across the country ranges from tropical to glacial, with vast differences in the productivity of the soils and accessibility to transportation.

Peru's population has been historically split just as its geography, yet this division has been more fluid. After their sixteenth-century conquest of Peru, the Spanish placed themselves at the head of a strongly hierarchical existing population, subjugating the previously dominant Inca leaders but allowing them to retain a place of dominance over their subjects. Even after independence from Spain in 1825, race has continued to play a major role in Peruvian society. As in many other Latin American nations, a three-tiered hierarchy has emerged over time with those descended from the Spanish at the top, the native groups at the bottom, and mixed race or *mestizaje,* occupying a position of some respectability in between.

The formation of the contemporary Peruvian education system began with the arrival of significant numbers of Spaniards in the sixteenth century. The development of schools for the growing Spanish population was driven almost exclusively by the clergy, who gathered in greatest density at Lima, constituting as much as 15 percent of the capital city's population by the seventeenth century. Due to this concentration of clergy, Lima became established early in Peru's modern history as the center of education with many Spanish students migrating from outlying districts for their education. Eventually this migration extended to *meztizos,* those of mixed race, and most recently to the indigenous peoples of the nation. Only during the latter half of the twentieth century were provincial educational facilities developed that could compare with those in Lima. While education during the colonial period focused exclusively on those of the ruling class, the 1821 war of independence, led by San Martín, sought to enfranchise the entire population and opened educational opportunities to a wider segment of society. After three centuries of Spanish oppression, however, the Native Americans came to this opportunity largely illiterate, poor, and Monolingual; therefore, they were ill-prepared to advance into the higher levels of the new

republic's society. Cultural biases in favor of the established educational centers and against the Native American and *mestizo* populations coupled with economic limitations to slow the expansion of the educational system. It took more than a century of slow progress to create an educational infrastructure that reached all the significant population centers across the nation. Secondary *colegios* were founded in Ayacucho and Huaráz in 1828, in Chiclayo in 1832, and in Trujillo in 1854. The effect of these and other provincial *colegios* was to reduce the need for educational migration to the major centers of Lima and Cuzco.

In the years following independence, the Peruvian governments that resulted from the series of 10 constitutions placed into effect between 1823 and 1993 have consistently accepted responsibility for universal education. In order to remedy the slow pace of progress in achieving this objective, governments initiated a series of significant and more or less successful reforms that marked the most important progress of the nation's first century. In 1855, a reform movement created the primary and secondary levels of the public schools. In 1866, the Prado government's Minister of Justice and Education, José Simeón Tejeda, worked to create the nation's first uniform secondary school curriculum, orienting studies more toward vocational training than toward the traditional college preparatory curriculum. At the same time, Tejeda labored toward gender equality, attempting to provide equal access to education for women and allowing women to teach in the nation's primary schools. An 1867 law called for a secondary school for each sex to be established in each provincial capital, although the full implementation of these reforms would only be accomplished many years later. Tejeda also worked to effect university reform, abolishing the colonial *Colegio de San Marcos* as an independent unit within the San Marcos University and creating faculties in sciences, letters, law, and theology. An 1875 movement introduced *lycées* modeled on the French system into the nation's secondary schools. Finally, in the first decade of the twentieth century, the administration and finance of the nation's schools were centralized under the auspices of the Ministry of Education. During that same period the ministry saw its budget doubled—to reach 17.2 percent of the national budget.

Despite these and other less celebrated efforts, the goal of universal, equal education suffered due to the strict social stratification still prevalent throughout the country and enforced by conservative cultural, political, and religious forces. Only in the post-World War II period was significant progress achieved in spreading education to the majority of school-age children in Peru. During the years of 1944 through 1962, a joint organization of educators from Peru and the United States created and funded the *Servicio Cooperativo Peruano-Norteamericano de Educación* (SECPANE), which aimed to increase educational access for Peru's Andean Native Americans. During its 18 years of existence, SECPANE instituted many initiatives, including the creation of central resource schools, well-provided with both equipment and staff, which served as hubs for a network of smaller schools. Despite the gains, however, upon SECPANE's termination in 1962, much of the progress was lost. The demise of SECPANE has been ascribed to various forces, including a lack of understanding of Peruvian social dynamics on the part of the administrators and teachers from the United States and their failure to more integrally involve Peruvian educators and administrators in the reforms so as to make the process more self-replicating.

A more successful reform came in 1972 when the Ministry of Education resolved to use education to prepare citizens for the workplace in ways that would help develop society, effect structural reforms in the culture, and make Peru more powerful and independent within the international community. This reform, which included a revival of many of the techniques used during the SECPANE years, was accompanied by a significant increase in educational funding and a renewed commitment to provide free and equal education for students from the primary schools through the university. During the 1960s and 1970s, considerable progress was attained in extending the reach of the educational system, with those termed ''uneducated'' by the government reduced from 32.8 percent to 13.5 percent between 1961 and 1981.

An economic crisis that culminated in 1990 with Peru having the world's highest inflation rate (7000 percent), an effective unemployment rate of 94 percent in Lima, and a nationwide poverty rate of 50 percent resulted in dramatic cut-backs in real-dollar funding for Peruvian education and a consequent deterioration of the school system. The succeeding government committed itself to a restoration and eventual expansion of education funding. At about the time that funding rose above pre-crisis levels, the Ministry of Education moved to reorganize and reform the entire educational system through a series of structural and curricular initiatives beginning in 1997 and aiming for complete implementation by 2007.

An understanding of Peru's educational culture cannot be complete without an awareness of the ethnic and social divisions within the nation. Historically, Peruvian society has been structured in such a way as to reinforce the existing hierarchy that placed Europeans at the top. Education has been seen, in the earliest days and, to a less obvious degree, up to the present as a tool for the maintenance of this hierarchy. Education has thus followed a two-fold philosophical program in effecting this mainte-

nance, serving to underscore the innate superiority of the privileged classes while at the same time serving to assimilate indigenous people into the thought patterns and values of conformity. From a practical standpoint, cultural indoctrination has followed a three-part strategy for assimilation and control. First, religious instruction was used as a main goal of the education system, and the efforts to bring Catholicism to the indigenous people held strong for many years after the conquest. Second, education was called upon to train clergy and bureaucrats from among the lower classes, creating collaborators in their practice of assimilation. Third, education aimed to train the lower classes in the economic and social standards of the ruling class so that they might take their place as functioning, productive members of the society. Peru, in 1997, began a 10-year process of modernization and restructuring of the educational system, aimed at addressing many of the inequities of the past and better preparing students for the future.

Besides ethnic divisions, Peru has a long-standing division between urban and rural residents. The 1990 census located more than 70 percent of Peruvians as urban dwellers with a full 30 percent residing in the capital, Lima. Virtually all quality-of-life statistics, including income, literacy, and educational achievement demonstrate the relative advantage that urban dwellers hold over their rural counterparts. Of the improvements in educational performance between 1961 and 1981, most were sited in the urban areas. Language divisions persist despite long-standing attempts, only recently abandoned, to enforce Spanish as the universal language. Indigenous languages are spoken by approximately 25 percent of inhabitants, with Quechua being the primary language of some 80 percent of this group. Spanish remains the official language with Quechua and Aymara granted a semi-official status in some regions. During the twentieth century, Peru's already complex population became complicated by a large number of immigrants, especially Japanese immigrants, who arrived mostly as farm workers. The most prominent of these *Nikkeijin,* as the descendents of these Japanese immigrants are called, Alberto Fujimori, served as Peruvian President from 1990 through 2000.

CONSTITUTIONAL & LEGAL FOUNDATIONS

Peru's 1993 constitution devotes several articles to the topic of education. In article 13, education is presented as a core factor in personal development to be protected by the state and encouraged by the family. The specific provisions that follow this affirmation provide for academic freedom; academic professionalism; limited local control of education; compulsory preprimary, primary, and secondary education; university freedom and autonomy; and assorted other educational rights. The education articles of the constitution also establish the authority of the national government, specifically the Ministry of Education, over curricular and administrative matters of education nationwide. While the constitution includes important provisions for higher education, most of these rights were stated earlier and more completely in the 1982 General Law of Education Year. This law was followed in 1983 by the University Law, which further established the rights of the institutions, academics, and higher education students. The 1995 higher education law, provides for the establishment of the *Consejo Nacional para la Autorización de Funcionamiento de Universidades* (CONAFU), which serves as a coordinating council for the nation's growing number of higher education institutions.

The 1997 reform documents the dramatic change in educational philosophy that Peru has planned for the years 1997 through 2007 when it suggests that the existing concepts of education were designed to function in a learning environment diametrically opposed to that actually in existence. The old educational philosophy is typified as the acquisition of a list of concepts and acts while that which the Ministry of Education seeks to create is presented by way of four areas: learn to be, learn to coexist, learn to become, and learn to learn.

EDUCATIONAL SYSTEM—OVERVIEW

The Peruvian educational system serves young people from shortly after birth until the completion of university studies, although many limitations and exclusions make this system far from universal. A developmental preprimary system attempts to prepare students for primary education during their first six years of life. According to the legal standards of the nation, Peruvian children have access to equal and compulsory primary education from the ages of 6 to 11. Upon completion of primary education, students proceed to a unified two-year program of secondary education in a general secondary school from ages 12 to 14. At the end of the general secondary program, students are divided into two tracks for a three-year program from ages 14 to 16. The more academic of these tracks is the *Ciclo Diversificado Científico-Humanista,* which awards a *Bachillerato Academico* upon completion. The second track, the technical secondary school, awards its completing students a *Bachillerato Técnico.* Aside from the three-tiered program of traditional education, the nation also provides special education services for nearly 300,000 students annually. These students include those with cognitive and physical disabilities as well as emotional instability. Education in Peru is compulsory from the ages of 6 through 16. The academic year runs from April to December for 38 school weeks each year. In the secondary schools, each week includes 36 class periods.

Peru in 1999 supported 56,671 schools and 284,511 classrooms nationwide, serving a total of 7,553,011 students. The 2000 statistics showed an increase to 7.8 million students, of whom 6.7 million attended free state-funded schools. Of these students, slightly more than half (50.5 percent) are male. Of the nation's 351,441 teachers, females outnumbered males by a rate of 57 to 43. Ministry of Education statistics estimate that 96.9 percent of primary-age children and 85.9 percent of secondary-age children were enrolled in school in 1999, up from 88.0 percent and 79.4 percent respectively in 1993. Throughout all levels of education, students in rural schools were considerably more apt to be older than the prescribed age for their current level of school, reflecting the relative weakness of the early-childhood programs in rural areas. Similarly, rural students are much more likely to receive scholastic assistance than their urban counterparts.

Although slightly underrepresented in the primary and secondary schools, the status of women in Peruvian education has improved dramatically since the Tejeda Ministry of Education began opening the way to full participation for women. The inclusion of minorities, most notably Native Americans, in the education system remains a work in progress. The history of Peruvian education can be outlined using the series of initiatives attempted since independence at integrating the Native Americans into the system. In the 1960s, the government instituted a new basic education law, which dictated that any community building its own schoolhouse would be assigned a teacher by the government. In the wake of this, hundreds of peasant communities worked together to bring a school into their midst. The Ministry of Education made good on the promise of teachers, greatly raising the enrollment rates of eligible students. Although recent reforms and practices suggest that the educational system is moving toward a less assimilationist attitude, historically, Native American students were viewed and were encouraged to view themselves as distinctively and defectively ''other.'' Many indigenous people viewed the educational system as a means toward reducing this difference, thus forcing them to blend with the dominant culture. Education has, even in recent years, taken an active role in disparaging Native American culture, including encouraging students to discard their traditional clothing and not to speak the vernacular language.

In 1990, a total of 72 percent of the population reported speaking only Spanish, compared with 60 percent in 1961. Roughly 18 percent of the total population is bilingual in Spanish and a native language, while around 10 percent report being monolingual in a native language. This number, while only 50 percent of the non-Spanish-speaking population reported in 1960, still represents a significant portion of the nation's potential students. Although Spanish remains both the official language of the nation and the primary language of instruction, earlier efforts at suppressing native tongues have ended. In recent decades, the government has reversed its Spanish-only policies, processing through a period of neutrality, to current promotion and support for both bilingual education, mostly Spanish-Quechua and Spanish-Aymara, and study and preservation of various native languages. Recent initiatives utilizing bilingual education in the Andean and Amazon regions of the nation have resulted in pronounced progress in literacy and educational achievement among those peoples. Despite efforts at linguistic inclusion within the government at large and the education establishment in particular, literacy and fluency in Spanish remain a virtual requirement for participating within the national life and exercising rights as a citizen.

Between 1950 and 1990, the number of students enrolled in private schools declined from 34 percent to 14 percent. This decline can be traced to two conflicting forces. First, the overall rate of matriculation among all eligible students increased significantly over this period. With virtually all of these new students moving into the public schools, the private schools' proportion of the total student population declined without an actual decline in headcount. Second, the economic crisis of the 1980s caused a slight reduction in enrollments in private schools, although this force was by far the less significant of the two.

All private schools operate on a non-profit basis with state oversight and regulation. Private schools are generally self-funding, although some receive a subsidy from the government that assists in the payment of teacher salaries. Fees levied by private schools are set by a fees and scholarships committee within the individual school, composed of the school's director, its principal (or a designated representative), a member of the faculty, and a representative of the parents. The fees assessed range from $15 to $300 monthly. Roughly 25 percent of private-school students attend schools provided by religious bodies.

All curricular materials, syllabi, and course outlines are created and provided by the Ministry of Education. These materials, once created, are required by law to remain in place for at least six years before revisions can be effected. Local control is allowed for decisions concerning the details of content delivery and teaching methodologies in order to provide flexibility in accommodating the variations in language. While the first years of primary curriculum are tightly scripted by the Ministry of Education, teachers in grades five and six are given relatively more freedom in allocating time dedicated to the required classes. In the lower grades, teachers are restricted to variations in the actual delivery but are given very little flexibility in terms of content. Teachers are required

to prepare an annual plan, before the beginning of the school year, through which they coordinate their proposed pedagogy with the personal and regional needs found in their classes. While content is tightly controlled by the government, teaching methods are largely left up to the individual teachers, who are encouraged to take into account the maturity levels and learning habits of their students, their own particular teaching styles and strengths, and the resources available in and around the school.

From the beginning of the republic to the present, Peruvian leaders have seen education as a vital force in economic development. The nation's ability to effect recovery from the economic crisis of the 1980s can be traced not just to sound economic policies on the part of the government but to the expansion of both the educational infrastructure and the proportion of highly educated people within the society. Economic development in the Amazon and trans-Andean regions have followed closely behind the establishment and expansion of education services in those areas.

Aside from its role in economic development, education has been a major force in political and social development. Early reformers like San Martín saw education as a means toward guaranteeing the survival of an independent state. The nation's history of military dictatorship and government corruption can be traced to some degree to the failure of a century-long series of initiatives toward universal education. Conversely, the nation's recent relative political stability, especially in the light of such potentially devastating forces as economic disasters, political corruption, and the Shining Path movement, suggests that progress toward the expansion and improvement of the education system have begun to fulfill San Martín's hopes.

A final area in which education fosters development is in national identity. In the wake of the devastating War of the Pacific, which resulted in Peru losing wealth, prestige, and territory, education became the primary means by which the government inculcated a nationalistic vision within students. Although the curricula of the 1997 reform seems headed away from this tendency, textbooks and classroom objectives in the schools have traditionally been laden with nationalistic and sometimes jingoistic materials, which laud the heroes of the past and at the same time vilify two long-time enemies, Chile and Ecuador.

PREPRIMARY & PRIMARY EDUCATION

The existence of a primary school and teacher in a village is seen as the first step out of poverty and disrespect by most poor and rural citizens. Preparatory education begins as early as the child's first year of life and continues up the point at which the student enters primary school at age six. The first four of these preparatory years focus on involving the parent in the development of the child, while the final two years constitute a kindergarten program with the aim of preparing the child for the more structured primary curriculum. Among the goals of the preparatory education system is the early diagnosis of learning disabilities, as well as family education regarding standards of hygiene, nutrition, and other environmental factors that predict student success. One of the most important goals for the Ministry of Education is to reach all four- and five-year-old children with preparatory education services. In 1999, the Ministry estimated a coverage of 63 percent of four-year-olds and 82.4 percent of five-year-olds, up significantly from 56.6 percent and 78.5 percent, respectively, in 1993 but still considerably below a level of coverage that might be termed universal.

Primary education serves students from ages 6 through 11 and is divided into two portions. The first of these portions lasts four years followed by a two-year second portion. The goals stated by the Ministry of Education for the primary years include the fostering of an independent and critical mind in the student along with basic education in the areas of science, the humanities, and technology; citizenship development; and vocational readiness. Toward that end, the government prescribes a curriculum including the study of mathematics, language, social studies, science, physical education, art, religion, and practical arts. Primary school enrollment in 1999 was reported at 3.3 million.

In 1998, the Ministry of Education presented a new curriculum for basic education, which was to be put into effect in 2000. This curriculum, while not a drastic departure from the curricula of the past, presented objectives and methods in a more consistent and competency-oriented manner. The basic education curriculum has been divided into five major areas: communication, including oral, written, and visual; mathematics and logic; personal and social studies; science and environmental studies; and religion. For each of these areas the curriculum provides fundamental disciplinary assumptions, specific competencies, and suggested methods for achieving these competencies.

The curriculum and educational objectives of the primary schools for both traditional and non-traditional students are established by the Ministry of Education. Completion is based on the mastery of objectives, not on time, although this flexibility does have limits. Students are evaluated four times each year using a progressive evaluation instrument. A cumulative evaluation is performed at the conclusion of the academic year in order to determine the readiness for promotion of the student. This instrument is aimed at an overall measurement of the

facts, processes, and activities included in the previous year's work. The examination is graded on a scale from 0 to 20. An average in all areas of 11 with passing grades in both language and mathematics is required for promotion to the next grade. Those students failing are allowed to retest in March, a month before the beginning of the school year, in order to remain at their appropriate age-grade level.

Students failing to achieve either the overall score on the annual examination or failing the mathematics or language component are not allowed to advance to the next grade in the primary sequence. Also, students who are absent for 30 or more days during the school year will be required to repeat the grade level. For those students aged 15 and older who have not already completed the basic education requirements of the primary school, the schools provide a separate but parallel program of study in the evenings, allowing these students to work while completing their studies. Since the 1970s, the government has expanded such non-traditional study programs by funding vocational training centers for students who have not excelled in academic settings. These centers, often working in partnership with private industry, strive to adapt instruction to the particular needs of the learner.

SECONDARY EDUCATION

Secondary education covers the 5 years from the ages of 12 through 16 and is divided into two phases. The first phase comprises two years of general studies followed by the second phase, which includes three years of specialization. In this second phase, each pupil may choose between academic and vocational options. The academic students are allowed to sub-specialize in either liberal arts or science, while the vocational students choose between commercial, industrial, and agricultural courses of study. Upon successful completion of the second cycle, pupils are awarded with a *certificado* for the specialization they have studied. After receiving their *certificado,* students before the 1997 reforms were eligible to sit for the university entrance examination immediately, although most have opted to engage in a one-year preparatory course of study before taking the examination. The 1997 reforms, reacting to this need, established a new level of education, two years in duration, to be placed *post certificado* and post-compulsory education. This study leads to the achievement of the *bachillerato,* and is considered indispensable for success in higher education and for the accomplishment of the three stated goals of secondary education: To prepare the student to exercise the rights and responsibilities of a citizen in a democratic nation, to prepare the student to effectively enter the working world, and to equip the student with a skills sufficient for successful entrance and pursuit of higher education. Secondary enrollment was reported at 2.3 million students in 1999.

The 1997 reforms organized the secondary education curriculum into five areas of emphasis: science (including mathematics) and technology, communications, economics and management, human development (including philosophy and history), and professional development. This curriculum is designed to be interconnected with the subject matter in each discipline reinforcing the lessons learned in the others. The grading system is generally on a 20-point scale with 11 as the passing point. The average age at which students leave the public secondary schools was 16.8 years in 1996, with an average of 16.7 in private schools. With the imposition of the 1997 reforms, this number has risen and become much closer to the average age of university entrance. At the completion of the *bachillerato* course of study, students may sit for the nation-wide *Bachillerato* examination, which provides a standardized entrance examination for all institutions of higher education that opt in the system.

Like the primary schools, Peru's secondary schools test students several times each year in order to ensure adequate progress. Annually, students take a cumulative examination focused on the year's studies. The examination is graded on a scale from 0 to 20 with an 11 required for passage. A failing score in either mathematics or language is a secondary grounds for failure on the examination and for repetition of the grade level. More than 500,000 students of primary schools, or nearly 15 percent of the total student population, failed to achieve the necessary credentials for advancement and were required to repeat a grade level in 1998. Approximately 17 percent of students in urban areas have repeated at least one grade level, and this figure rises to 26 percent among students in rural areas; this high rate of failure is attributed to a low number of hours effectively dedicated to core subjects in many schools. Studies have suggested that on average, urban students spend 450 hours annually in such studies compared with only 226 hours per year among rural students. These numbers compare most unfavorably with the average of 1,000 hours of studies for Chilean students. Besides the problem of grade-level repetition, Peru is experiencing an increased level of school drop outs. An April 2000 report, although presenting promising numbers regarding overall matriculation, noted a growing rate of premature school leaving on the part of, especially, secondary students. The exact number of drop outs is not obtainable from government statistics as these statistics reflect many students who have been officially enrolled but who have stopped attending classes. One study suggested that as many as 200,000 students, both from primary and secondary schools, abandon their education mid-year but are still counted in the government statistics.

Given Peru's hierarchical heritage, which has emphasized the education of the privileged class and others

who could fare well in a competitive academic setting, vocational training became a national educational priority rather late. Since the early 1970s, increased attention has been placed on this area of education, especially in the area of technology. In the intervening decades, local governments have joined the national government in opening a series of vocational training institutions, although the quality of these new schools has been uneven. Along with the efforts to provide sites for vocational education have come attempts to make this training accessible for citizens from the poorer and traditionally less well-educated segments of the society. Along with the secondary-level vocational educational facilities, the nation has created several higher-level training sites, including the Higher Technological Institute and the Peruvian Institute of Business Administration. These institutions not only provide more advanced instruction to their population but provide training and resources for lower-level vocational schools.

HIGHER EDUCATION

The year 2001 marked the 450th anniversary of the founding of Peru's oldest and most prestigious university, *Universidad Nacional Mayor de San Marcos, Universidad del Perú* (UNAM). At the other extreme, the nation has recently created universities both in the depths of the Amazon region and in urban areas in an attempt to broaden the availability of higher education to all citizens. These foundational stories describe the past and present of Peruvian higher education. Despite a history of economic and political difficulties, the proportion of the population that attain any given level of higher education compares favorably with the nations of Western Europe and considerably outstrips many nations with a stronger educational infrastructure.

University enrollment in 1900 totaled only 1,000 students; by 1970 that number had risen to 128,000. The period from 1960 to the present reflects enormous growth in the higher education system. In 1962, only seven universities served the nation—liberal arts schools at Trujillo, Cuzco, and Arequipa, as well as the venerable San Marcos in Lima; an engineering school; an agricultural school; and the Pontifical Catholic University of Lima. The need for new institutions brought about a quadrupling of the number of schools during the mid-1960s. With the establishment of new universities and increasing enrollments, the higher education student population of the nation doubled between 1961 and 1965. By 1970 the number of universities had been increased to 34, with an increase to 51 in 1990. Much of this growth came initially in Lima in the form of private universities but, under the demands of a greatly increased population of secondary graduates, the government began to found new institutions in provincial cities, including an agricultural college at Tingo María on the eastern side of the Andes and a university in the Amazonian city of Iquitos.

Peruvian higher education, provided by universities, both public and private; higher institutes; and postgraduate centers, is regulated by the 1993 Constitution, the General Law of Education of 1982, and the University Law of 1983. These laws provide for a good deal of latitude in the functioning of higher education. The funding for state universities comes from government sources, and government funds also subsidize the operations of private universities, teaching institutes, and technological institutes. Universities function autonomously, each one administered by an assembly composed of the rector, the vice-rectors, the deans of the faculties, the director of the graduate school, and representatives from teaching and student groups. This assembly holds the ultimate authority over university policy and practice, including the election of the rector and the vice-rectors. Although students are represented on these boards in significant numbers—four students for every three professors—many students feel that the combination of the complicated methods for selecting their representatives and the sweeping powers of the rector to ignore the decisions of the assembly combine to leave the assembly as an ineffective organ of government and the rector as a virtual academic dictator. The ongoing administration of the university falls to an executive committee composed of the vice-rectors, the deans, and a student body representative, and presided over by the rector. The nationwide community of universities is coordinated by a national assembly of rectors, which acts to provide the objectives of university activities, to ensure inter-school coordination, and to oversee university economic development. The *Consejo Nacional para la Autorización de Funcionamiento de Universidades* (CONUFA) was created in 1995 in order to oversee the creation of new and the continuation of existing universities, as well as to assist with the problems of private universities. CONUFA has charged Peru with the task of creating a new university dedicated to serving indigenous peoples of the Northern Amazon region, drawing on both public and private funding sources to offer programs especially aimed at the needs and life of the Amazon Basin, including forestry management and medicinal plants. In order to provide accessibility to indigenous students, the languages of instruction at the new school will include *Aguarana, Ashaninka,* and *Shipbio-Conibo.* The site for the new university will be the grounds of the Summer Institute of Linguistics.

Five types of higher education facilities serve the nation. The *universidad pública* (public university) is a government-funded comprehensive institution comparable to U.S. universities. The most prominent of these is UNAM, the National Autonomous University of San Marcos, which is also the oldest and most prestigious. The second

category is the *universidad privada* (private university), also a comprehensive institution, which receives funding either from non-profit sources, such as the Pontifical Catholic University of Peru, or strictly from student tuition. The *instituto superior tecnológco* (technical higher institute) offers specialized instruction in one or more technologies such as agriculture or engineering. The fourth category is the *instituto superior pedagógico* (higher pedagogical institute), which is a teacher training facility. Scores of these smaller institutions serve the nation. The final category is the *centro superior de postgrado* (higher postgraduate centre), a general higher education institution that might be compared with a university branch facility.

The average age of students entering public higher education is 19.7, while private schools average 19.6, reflecting the national tendency for students to take time between secondary and higher education. Admission to vocational training typically requires the student to hold at least the *Bachillerator* diploma, although some vocational students hold the *Certificado de Educación secundaria común completa.* Entering students have traditionally been required to sit for either the *Concurso* or *Examen de Ingreso* entrance exams. For admission to university level studies, the *Certificado de Educación secundaria común completa* is required, along with an entrance exam. Increasingly, since 1997 the national *bachillerato* examination has replaced the examinations provided by individual universities. The number of students failing these examinations each year typically stands at nearly 50 percent. Each university is permitted to determine a *numerus clausus* for their various departments. Peruvian students pay a maximum of $3,600 tuition for higher education. A 1996 survey indicated that 33.2 percent of students work while studying in the public universities. The number of working students in private universities is 28.1 percent.

Foreign students seeking to attend Peruvian universities must hold the secondary school completion credentials corresponding with their Peruvian counterparts. They are eligible to receive assistance in the form of scholarships and financial aid, as well as being granted employment on campus. Foreign students from countries with which Peru has established articulation agreements can obtain credit for their studies, degrees, and diplomas earned at home, while those from other countries must petition for such recognition. All foreign students are expected to be conversant in Spanish.

The lowest level certification given to students in Peruvian higher education, the *Certificado de Educación Secundaria Común Completa,* actually represents the completion of secondary schooling. Beyond that, students may earn a *Diploma de Aptitud Profesional,* which represents a short-term course, averaging one year in duration, focused almost exclusively on a particular professional skill. For more technical fields, the degree of *Técnico* is awarded. As mentioned, the *Bachillerato* designation represents a new level of secondary education designed to bridge the gap between secondary education and the university, a gap that has previously resulted in students taking from one to two years between those levels to prepare for the entrance examination. The universities grant the designation of *Licenciatura* denoting legal licensing in a controlled field. The title *Profesor* is reserved for those certified to teach in the nation's school system. The highest degrees granted by these universities are *Maestría* and *Doctorado,* which are equivalent with the Masters and Doctoral degrees of other countries.

The curriculum leading to these degrees is divided into several stages. The first level of study at the university is termed *pregrado* (undergraduate) and involves a two-year course of study devoted to general studies. Access to this course of study is based on the competitive entrance examination, either the institution-specific examination or the national *Bachillerato* examination. Students need to score at a prescribed level on this examination and follow this achievement during the *pregrado* studies by earning a prescribed number of credits to enter the faculty for their specialization. The period of specialization is two to five years and leads to the title of *Bachiller,* the equivalent of a bachelor's degree. Successful submission of a thesis, which normally takes six months to one year, leads to the *Licenciatura* or a professional title such as *Ingeniero, Médico, Abogado,* or *Economista.* Achievement of the *licentura* enables the student to enter professional life. Most of the courses building to the *Licenciatura* require about five years for completion.

The second level of course work in the university is *postgrado* (postgraduate). The minimum duration of studies leading to postgraduate degrees is four semesters for the *Maestría* and an additional four semesters for the *Doctorado.* Candidates for either degree are required to complete and defend original research work. *Maestría* candidates must demonstrate proficiency in one foreign language while *Doctorado* candidates must show proficiency with two. In the Faculty of Law, the professional title is awarded after the completion of three years of study after the *Bachiller,* while medical students must complete five years of study before earning their degree. Universities also award professional titles of *Segunda* and *Ulterior Especialización.*

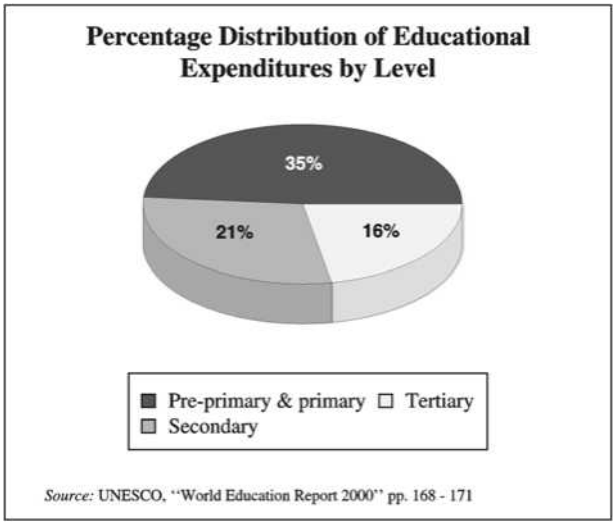
Higher technical and vocational education is offered in the *institutos superiores tecnológicos,* which focus on technological courses of study, and the *institutos superiores pedagógicos,* which provide the bulk of the nation's teacher training. Other education is offered through na-

tional schools in various disciplines. As of 2000, the nation had established a National School for Public Health, a National School for Public Administration, and the Diplomatic Academy, as well as separate Academies of Fine Arts and Music. These institutions do not enjoy the autonomy of the universities and are responsible to the Department of Higher Education of the Ministry of Education, as well as to the relevant ministries of their subject area. They offer professional training requiring three, four, or five years for completion. Upon completion, the student is awarded the professional qualifications of *Técnico* and *Experto* in the appropriate field.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Oversight of Peruvian education is the responsibility of the Ministry of Education and Culture, which is based in Lima. The Ministry's mission is to provide education through the nation's public schools and to provide oversight to private schools and those under the jurisdiction of other agencies. This mission comprises two major responsibilities: the development of standards and curricula for all schools and the direct administration of those schools under the ministry's jurisdiction. While educational policy created in Lima is in force across the entire country, each of the nation's regions or departments maintains its own budget authority and directs its own administration to provide primary, secondary, and technical education to its students. The Ministry of Education is headed by an appointed minister. Beneath the minister are two vice- ministers. The vice-minister of educational management oversees national directors for initial (preprimary) and primary education, secondary and technical education, teacher training, and adult education and literacy. The vice-minister of institutional management oversees offices of educational quality, administrative support, educational infrastructure, and international cooperation. Universities do not fall under the direct control of the Ministry of Education. Each university and other institution of higher education (excluding the teacher training institutions) retains considerable autonomy within the context of the series of laws controlling higher education. The universities coordinate through but do not yield control to a representative body, the *Asemblea Nacional de Rectores* (Rectors National Assembly), which is composed of the rectors from all the member universities. This group serves to coordinate university activities, as well as to oversee and facilitate their economic development.

The national constitution dictates that education should receive no less than 20 percent of the overall government budget. National educational expenditures have varied considerably under the various administrations of recent decades. As a percentage of GNP, education expenditures amounted to 3.82 percent in 1970, but had fallen to 2.93 percent in 1980 and 2.21 percent by 1989. In 1997 dollars, total expenditures between 1968 and 1990 ranged from a high of more than $1.5 billion in 1987 to a low of $750 million in 1990, the year in which Alberto Fujimori took office. Under Fujimori's administration, the trend in education budgets was dramatically positive, reaching more than $1.8 billion dollars by the end of the decade—a figure that represented a $255 expenditure per student, an increase in real dollars of 39 percent over the early 1990s. Perhaps more significantly, capital expenditures during the 1990s averaged 12.6 percent of the overall budget, dramatically outstripping the 3 to 5 percent capital outlays of previous decades. Even during budgetary crises during the mid-1990s when the overall budget declined slightly, capital investment continued strongly. Of the 87.4 percent of the budget dedicated to current expenditures, 45 percent went to primary education, 28 percent to secondary, 15 percent to universities, 8 percent to preprimary, and 3 percent to non-university higher education.



NONFORMAL EDUCATION

Accompanying the nation's resurgent interest in education during the 1990s has come an expansion in nonformal education directed at the adult population. Lifelong learning courses in a wide variety of topics are organized to provide less structured vocational training for the workforce and to provide basic education and cultural enrichment to the community. A *Certificado de Asistencia* is awarded upon the successful completion of each course. Vocational training—especially that focused on an industry with significant, concentrated employment, such as business administration, commerce, and industrial production—is frequently a collaborative effort between the education system and the industry. Trade

training is offered to the industries through such arrangements, allowing employees to improve job skills while maintaining a work schedule. Part-time education is offered in both day and evening classes to establish or enhance competencies in the areas of teaching, accountancy, law, computer science, and economics. Adult education authorities also take responsibility for the provision of in-service courses to teachers. Finally, summer classes provide regular students with the opportunity to earn additional educational credits during the summer, while January and February classes provide the same opportunity for teachers.

TEACHING PROFESSION

Teachers enjoy considerable privileges in the culture of Peru, especially in the areas farther away from the major population centers where a teacher is likely to be the only person with postsecondary education within an area. Traditionally, teachers fulfill a role as educators and town advisers in the smaller centers of population. Because of their great influence, teachers were, until recent years, prohibited from holding public office due to the belief that they, like a priest, might hold excessive power within the community. Because of the opportunities for advancement afforded by a career in teaching, many have sought this path, especially those from the lower and middle classes who find in teaching a richer opportunity for achievement than might be found elsewhere. Given Peru's limited career opportunities for women, it is not surprising to find that teaching has proven an especially attractive path for women, a fact that is reflected in their representation within the profession.

One of the challenges facing the education system has been the recruitment of sufficient numbers of qualified teachers. Of 110,000 candidates presenting themselves for entrance into the profession in 1999, a total of 29,256 were selected for consideration, yet only17,000 of these candidates passed the test. Only 1 percent of those passing the test managed to score a 14 or higher on the 20-point scale where 11 is the lowest possible passing grade.

Eighty-five pedagogical institutions and more than 50 university education programs provide the initial and continuing training for Peru's 350,000 teachers. While the pedagogical institutions provide a very consistent program of instruction, the university programs vary widely. The training of both initial (preprimary) and primary school teachers is a responsibility of both the nation's universities and non-university institutions. This training typically consists of a course of study spanning 10 academic semesters. Secondary school teachers (*professores*) receive their training through the *Institutos Superiores Pedagógicos* through a five-year course of study. Some secondary teachers are also trained in the universities. Secondary teacher studies culminate with the granting of the professional qualification of *Profesor.* This certification also includes the mention of the teacher's educational level and disciplinary specialization. Teachers serving the institutions of technical education receive their training at the *Institutos Superiores Tecnológicos,* completing a three-year course of study before being granted the title of *Profesional técnico* (technical professional).

The training of teachers for the nation's institutions of higher education is conducted by the universities. Candidates advance through a series of categories of teaching and learning in their given discipline. Educational councils operating independently within each university appoint qualified teachers to one of the professional categories, making their selections through open competitions. The time required for the granting of tenure in each category and the requirements for promotion to a higher level varies both between departments and between universities. The most common model of teacher assessment is for an academic evaluation to be conducted every three years for auxiliary professors, every four years for associate professors, and every six years for principal professors.

Most Peruvian teachers are represented by the *Sindicato único de Trabajadores de la Enseñanza del Perú* (SUTEP), the Trade Union of Education Workers of Peru. Serving 280,000 teachers of initial, primary, secondary, adult, and special education, SUTEP is governed by a national executive committee composed of 24 members elected at the biannual National Congress. The union was founded in 1972, unifying in the process a wide group of different unions serving different levels of education and diverse geographic territories. In the intervening years, SUTEP has experienced persecution and lack of legal recognition by various governments. In recent years the union's most important objective has been the resistance of a move proposed by various government representatives to privatize education. SUTEP also successfully fought a proposal in 1992 to fire all teachers and rehire them to temporary contracts. Membership in the union is voluntary.

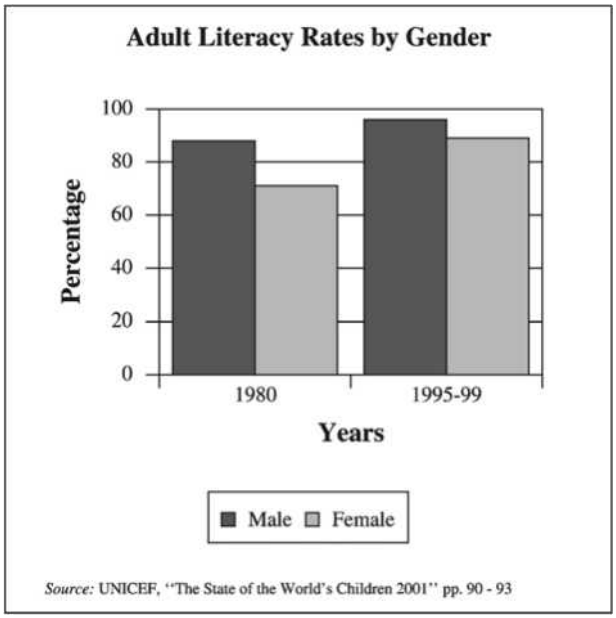
SUMMARY

The recovery and advances in the educational system of Peru between the years 1990 and 2000 were remarkable, not only in terms of budgetary outlays but also in curricular and school quality programs. One of the primary challenges for current and future governments will be to be continue the trajectory of progress begun during the Fujimori years. Where success in meeting that challenge depends largely on economic prosperity coupled with po-

litical will, success in other areas presents more complex obstacles. Historically, the most significant impediment to universal quality education in Peru has come from the deep social divisions that have existed for centuries along racial, geographic, economic, and linguistic lines. Although progress has been achieved in addressing these divisions, creating an education system far more fair and open than existed a half century ago, considerable progress remains to be made to allow each student the opportunity to fully explore his or her potential.

According to the Ministry of Education, one of its principal obligations is to develop an ability to respond to new situations in a useful and relevant manner. Progress on the ten-year reformation of education started in 1997 has been a significant attempt to develop that ability; however, more progress is needed to achieve the Ministry's goals. Among those goals are the extension of preprimary education to all children aged 4 and 5, and the elimination of illiteracy among all Peruvians under the age of 40. Despite the progress suggested by curricular changes, centuries-old cultural impediments continue to challenge the education system. In 1999, UNESCO recognized Peru's efforts in the area of literacy, noting their achievement in dropping the rate of illiteracy from 13 percent in 1993 to 6 percent in 1999. Also in the area of illiteracy, a 1999 study by the National Institute of Statistics and Information placed the number of illiterate Peruvians older than the age of 15 at more than 1.9 million, more than 10 percent of the adult population. Of this number, three times as many were women, with the preponderance coming from lower social classes and traditionally deprived regions of the country, illustrating the power and persistence of some of the cultural impediments to equality.

The dream of universal and equal education can only be realized if barriers between races and classes can be breached. Perhaps the most intractable of these barriers is that between the Spanish-speaking majority and the significant indigenous-language-speaking minority found mostly in the Amazonian area east of the Andes. Although progress has been achieved in reaching this population, this challenge promises to remain for many years to come.



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—Mark Browning

PHILIPPINES

BASIC DATA

Official Country Name:	Republic of the Philippines
Region:	Southeast Asia
Population:	81,159,644
Language(s):	Pilipino, English
Literacy Rate:	94.6%
Academic Year:	June-March
Number of Primary Schools:	38,631
Compulsory Schooling:	6 years
Public Expenditure on Education:	3.4%

Foreign Students in National Universities:	4,864
Educational Enrollment:	Primary: 12,159,495 Secondary: 4,979,795 Higher: 2,022,106
Educational Enrollment Rate:	Primary: 114% Secondary: 77% Higher: 29%
Student-Teacher Ratio:	Primary: 35:1 Secondary: 32:1
Female Enrollment Rate:	Primary: 113% Secondary: 78% Higher: 33%

HISTORY & BACKGROUND

The Republic of the Philippines consists of 7,107 tropical islands on the Western rim of the Pacific Ocean. Only 4,600 of the islands have been named and only 1,000 have been inhabited. Although the total area of the country is 300,000 square kilometers, the islands are 65 percent mountainous. The inhabited portions are densely populated.

The Philippines is the thirteenth most populated country in the world. The country's capital of Metro Manila has a population of well over ten million people. The Filipinos, are the strongest assets of the country. With the country's literacy rate at 95 percent, the Philippine manpower provides a large pool of English-speaking, well educated, and highly trainable workforce with recognized management, computer, and design skills. The Philippines came in first in a survey of Asian countries on literacy conducted by Asiaweek in 1996. In a similar survey of 46 countries, Filipino skilled workers ranked first while Filipino managers were ranked second among their counterparts. Analysts maintain that it will take other emerging countries of Southeast Asia, a generation to reach the educational advantage of the Filipinos especially for the production of high quality technological products. There are an estimated 4.5 million Filipinos working overseas. In 1997, they sent US$4.5 billion back home. These foreign remittances have helped the Philippines weather the Asian financial crisis better than other affected Asian countries.

Eleven languages and 87 dialects are spoken in the country. Of these 11 languages, 8 are derived from the Malay-Polynesian language family. No two of these are mutually comprehensible. The country has two official languages, Filipino (derived from Tagalog) and English.

As far back as 30,000 years ago, the Aetas (aboriginal people of the Philippines) arrived through land bridges that connected the archipelago to other landmasses. A 22,000-year-old fossil skullcap was discovered in the Tabon caves of Palawan by archeologist Robert Fox. A document dating back to 900 A.D. was discovered at Laguna, Philippines. Mention was made in the document of names of places that exist to the present.

Trade occurred between the tenth and the sixteenth centuries, mostly with the Chinese and Islamic people. These two groups have remained and continue to influence the Filipino culture, including the educational system.

As evidence of the high level of pre-Hispanic culture, native literature is illustrated by the Ilocano (language spoken in Northern Luzon) ballad-epic narrating the life and bravery of Lam-ang in his conquest of the various indigenous groups in the main island of Luzon. Education, of an informal type, was taught during the years prior to the arrival of the Spanish colonizers. An oral tradition was handed down from generation to generation, in the form of poetry, ballads, songs, and dances. Oral literature carried through the ages show an informal and unstructured form of education, including training. Songs, poetry, dances, whether they be religious, festive, heroic, folk, seasonal, or about harvest, love, or war, represent high aspects of a culture. Parents and tribal tutors most likely provided the oral tradition, instruction, and other vocational training.

On March 16, 1521, Ferdinand Magellan arrived and claimed the islands for Spain's king, Charles I. His claim was the forerunner of over three centuries of Spanish colonization of the Philippines.

Prior to the arrival of the Europeans, the inhabitants of the archipelago were literate and had their own system of writing that they used for communication. This writing system is often erroneously referred to as *Alibata* (the first three letters of the *Maguindanao* version of the Arabian alphabet: alif, ba, ta). It is more properly named *Baybayin,* which in Filipino means ''to spell.'' Baybayin has seventeen basic symbols, three of which are vowel sounds. This writing system was used extensively by the inhabitants of the islands, as witnessed by the Spanish upon their arrival. Father Pedro Chirino, a Jesuit chronicler and historian for Miguel de Legazpi (an explorer and the first royal governor of the islands), reports in *Relaciones de las Islas Filipinas* that when he arrived in the islands in 1565, all the islanders, both men and women, were reading and writing. Another witness and recorder of this fact was Antonio Morga, the Senior Judge Advocate of the High Court of Justice and Commander of the galleon warship *San Diego.* He noted in *Sucesos de las Islas Filipinas* that almost all the natives, men and women alike, wrote in the Baybayin language and that there were few who did not write it excellently or correctly.

When the Spanish found that the islanders were educated and literate, the missionaries among them published several books to propagate the Catholic religion among the islanders. The *Tagalog Doctrina Christiana* (1593) and its Chinese version, based on the catechism teachings of Cardinal Bellarmino, were released a couple of months apart. In 1610, the first Filipino author Tomas Pinpin published a book in Baybayin entitled *Librong pagaaralan nang mga Tagalog ng uicang* Castila (Book for Tagalogs to Study the Castillian Language). Clearly, the title of the book indicates that education, whether formal or informal, was taking place during this period. In 1620, a fourth book was published. Father Francisco Lopez produced an *Ilocano* version of the *Doctrina Cristiana* (spelling changed from the 1593 version) using the Baybayin language. Between 1620 and 1895, this book was reprinted several times. The Baybayin language can still be observed since a form of it is still in use by two indigenous Filipino groups, the *Mangyans* of the island of Mindoro and the *Tagbanuas* in the island of Palawan.

The origins of the Baybayin language are unknown, but various theories abound. The Mainland Origin Hypothesis by Peter Belwood stipulates that the language originated from South China and Taiwan. The Island Origin Hypothesis by Wilhelm Solheim suggests that the language originated in the islands of northern Indonesia and Mindanao and then spread northwards. Another theory by David Diringer states that the language derived from Kavi or old Javanese. Fletcher Gardner suggests that the writings came directly from Indian priests who were familiar with the Brahms scripts.

During the entire period of Spanish rule, education was controlled by the Catholic Church. In the place of tribal tutors, Spanish friars and missionaries educated the natives through religion. Upon their arrival, their main goals were to govern the islands, obtain a foothold in the spice trade, and to convert indigenous populations to the Catholic faith. The early friars learned the Baybayin script to allow for better communication with the islanders, particularly in the religious aspect. Religious education then took place using this language. By royal decree the friars were required to teach the Spanish language to the natives, but this was not enforced. This suppression of literacy in the language of the administration kept the inhabitants in ignorance and in subservience for more than 300 years. From 1565 to 1863, there was no specific system of instruction. Worse still, the Baybayin script was replaced by the Roman alphabet since using this gave the indigenous people more leverage dealing with the local Spanish colonial administrators. The Baybayin script was neglected and was not used by succeeding generations.

The San Carlos University was founded in Cebu in 1595. It was initially called the *Colegio de San Ildefonso.* On April 28, 1611, the University of Santo Tomas was founded in Manila. These universities, along with secondary education schools, were used mainly for Spanish locals.

In 1863, some 342 years after Magellan first arrived in the Philippine islands, Spain promulgated the Education Decree, stipulating compulsory primary education in the Philippines. Education served mainly for catechism purposes. Spanish was used as the language of instruction. Toward the end of the nineteenth century, some 200,000 students (all levels) were in school.

Although secondary and higher education were made available to the local inhabitants by virtue of the 1863 Education Decree, it was only the *ilustrados* (wealthy locals) who could afford to send their children to study. Some of them even ventured to Europe to complete their studies. This access to higher education and exposure to the liberal trends in Europe crystallized the idea of fighting for independence in the minds of the ilustrados. The education of the ilustrados indirectly fuelled the nationalist spirit of the locals toward a reform movement, and consequently a revolution against Spain.

The Education Decree of 1863 provided for two parts: first, the establishment of at least two free primary schools, one for boys and another for girls, in each town under the control of the municipal government; and second, the creation of a normal school to train men as teachers, supervised by the Jesuits. The teaching of Spanish was compulsory. On June 12, 1898, the revolutionary movement headed by Emilio Aguinaldo declared independence from Spain. Even before the Philippine islands were ceded to the United States by the Treaty of Paris, the revolutionaries had already drafted the main principles of the Malolos Constitution written mainly by Apolinario Mabini in his Constitution Program for the Republic published in July 1898. The Malolos Constitution mandated a free and compulsory system of elementary education. Three other schools of higher learning were established by this constitution: The Burgos Institute of Malolos; the Military Academy of Malolos; and the Literary University of the Philippines. Tagalog was the language used and taught at all levels during the revolution.

On December 10, 1898, the Treaty of Paris was signed. It stipulated that the Philippines, Guam, and Puerto Rico be ceded to the United States in exchange for the sum of US$20 million. The people of the Phillipines were not consulted regarding this matter and were outraged. The brutal Philippine-American war ensued. Approximately 250,000 Filipinos died in the war in less than three years. Aguinaldo was captured by the Americans on March 23, 1901, and swore allegiance to the United States.

The first decade of American rule in the Philippines witnessed a marked improvement in education. The First

Philippine Commission, also known as the Schurman Commission (created on January 20, 1899), was appointed by President McKinley of the United States. Schurman, previously the president of Cornell University, recommended a system of free public elementary schools as a major component of his report to the president. The Second Philippine Commission (the Taft Commission) on March 16, 1900, enforced this recommendation. Under the leadership of William Howard Taft, free primary education became the method by which locals were instructed of their duties as citizens. English became the language of instruction since most of the teachers were non-commissioned American military officers and military chaplains. From September 1900 to August 1902, the Taft Commission issued 499 laws, one of those being Act No. 74 which took effect on January 21, 1901. Through Act No. 74, a centralized public school system was installed under the Department of Public Instruction.

The creation of a public school system resulted in a shortage of instructors. The Taft Commission, through the Secretary of Public Instruction authorized the importation of teachers from the United States. More than one thousand American educators arrived in the Philippines from 1901 to 1902. Most of them arrived in the ship *S.S. Thomas,* thus their reputation as *Thomasites.* This marked a blossoming of education from only about 150,000 students enrolled in 1901 to about one million in primary schools after two decades. This total raised to over two million students in all levels by 1941. The Department of Public Instruction also created the Philippine Normal School to train more teachers. In 1902, the Second Philippine Commission also established a high school system supported by provincial governments. Other institutions of learning were established: special education; marine institute; school of arts and trades; agricultural; and commerce schools.

America's democratic emphasis on public, nonreligious education of the masses was quite a contrast to the Spanish educating only the elite in a system completely under the control of the Catholic Church. Education, the American way, became instilled into the Filipinos as a chance for upward social mobility. For the Filipino, earning a diploma ensures a good job and acceptance in society with a chance for a better future. Despite the initial friction between the mostly Protestant American teachers and the Catholic Filipinos, the American system of education prevailed. All through this tumultuous period, the institutions of learning created during the Spanish period (San Carlos University and the University of Santo Tomas) continued to offer degree programs. Act No. 1870 of the Philippine Legislature in 1908 established the first baccalaureate degree granting institution, the University of the Philippines. Like the other institutions of higher education in the Philippines, the organization of this university was European in style, but the language of instruction was English.

In 1916, during the governorship of Francis Harrison, the United States Congress passed the Second Organic Law, more frequently referred to as the Jones Act. This Act replaced the 1902 First Organic Law and was a reorganization act providing for rapid Filipinization of the government. The entire cabinet, other than the Department of Public Instruction, was composed of Filipinos. The legislative branch also came under Filipino control. Nine years after the Jones Law, a committee headed by Paul Monroe surveyed the state of education and found a very problematic and disappointing scenario. The problems included inadequate textbooks, poor budgetary/finance situations, a lack of trained educators, and high dropout and failure rates. In 1934, the U.S. Congress passed legislation for the establishment of the Commonwealth of the Philippines. It took effect in 1935. The new Commonwealth was provided with a transition period of ten years before full independence was achieved.

The Commonwealth government passed the Education Act of 1940, but this did not solve much of the problems still plaguing the Department of Public Instruction. As Filipino officials practiced self-governance, World War II suddenly ensued. The Japanese launched a surprise attack on the Philippines on December 8, 1941, merely ten hours after Pearl Harbor. On June 11, 1942, the Japanese Executive Commission issued Military Order No. 2, renaming the Department of Public Instruction into the Commission of Education, Health, and Public Welfare. In 1943, the Japanese-sponsored Philippine Republic created the Ministry of Education. The Japanese emphasized dignity of labor and love for work. Philippine History, Character Education, and the Filipino language were some of the classes permitted by the Japanese regime for Filipino students. Despite efforts by the Japanese to maintain public education, the education of the young Filipinos was disrupted by this war. In 1944, close to the end of the Japanese regime, the Ministry of Education, Health, and Public Welfare was again renamed to the Department of Public Instruction.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Philippine traditional value of stressing the importance of education has been codified and incorporated into the constitutions and laws of the country. The first Philippine constitution, or the 1899 Constitution (also called the Malolos Constitution), expressly provided in Article 23 of Title IV that ''public education shall be free and obligatory in all schools of the nation.'' Section 5 Article XIV of the 1935 Constitution, which was enacted for the Commonwealth government, stated that the ''Gov-

ernment . . . shall provide at least free primary instruction, and citizenship training to adult citizens.'' The provision for free public elementary education was retained under the 1943 Constitution adopted by the Provisional government during World War II. This was carried over to the 1973 Constitution that took effect during the regime of the dictator Ferdinand Marcos. The 1987 Constitution took effect during the presidential term of Corazon Aquino. Several significant provisions on education were embodied in this constitution. Public elementary education was declared to be free and compulsory. Public high school and secondary education were also to be provided for free. Moreover, it was categorically stated in Section 5(5) of Article XIV that the ''State shall assign the highest budgetary priority to education and ensure that teaching will attract and retain its rightful share of the best available talents through adequate remuneration and other means of job satisfaction and fulfillment.''

The constitutional provisions on education are creditable considering that the various constitutions of the Philippines have been forged during times when the nation was on the verge of crucial political changes. When the 1899 Constitution was written, the Philippines was embroiled in the Philippine-American War. The 1935 Constitution was written when the Philippines was poised for independence from the United States of America. The 1943 Constitution occurred when Japan occupied the Philippines during World War II. By that time, the Filipinos were fighting for independence against a third foreign colonial power in less than fifty years. When the 1973 Constitution was declared ratified, the dictatorship of Marcos was in full swing. He and his cronies had engineered political and civil unrest to justify the declaration of Martial Law and the indefinite extension of his term in power. Marcos was ousted during the peaceful EDSA Revolution of 1986. The 1987 Constitution was drafted as the country struggled to recover from three decades of Marcos' economic plunder and dictatorship. Political stability has not gained an enduring foothold in the Philippines. The term of office of President Aquino was marked by several attempted coups d'état.

The next president, Fidel V. Ramos, forged peace with the Muslims in the Southern part of the country and brought economic growth. However, his accomplishments were curtailed by his successor, Joseph Estrada. Estrada was elected into the presidency by popular vote in 1998. Conflicts with the Muslims re-ignited after the Muslims kidnapped Filipino citizens and foreigners. Allegations of corruption on a massive scale were filed against Estrada in October 2000. Confidence in his leadership quickly eroded as government officials, prominent political leaders, the military, and his cabinet successively called for his resignation. The people again took to the streets in peaceful protest. In January 2001, he resigned his post and handed the reigns of government to his Vice-President, Gloria Macapagal Arroyo. An impeachment trial was ongoing when he resigned. Political instability dramatically and adversely affected education. Economic adversity quietly caused systemic educational instability.

Despite the categorical affirmation in the 1987 Constitution for the State to assign the highest budgetary priority to education, this was not followed. The economic plunder of the country by some of its leaders and their cohorts (both Filipino and foreign) left the Philippines with a huge foreign debt that amounted to over US$45 billion in 1997. Annual interest payments alone exceeded US$4.5 billion. Deficits in needed classrooms, textbooks, and salaried teacher positions have accumulated over the years. As of April 2000, the public education system had a deficiency of 37,000 classrooms, 10 million textbooks, 29,000 salaried teacher positions, and 2.6 million desks. These backlogs were not met and spilled over to the succeeding school years. Despite the desperate need for more textbooks, classrooms, teachers, and learning materials, debt servicing takes up the bulk of the fiscal budget every year.

EDUCATIONAL SYSTEM—AN OVERVIEW

Three government organizations handle education in the Philippines. These are the Department of Education, Culture, and Sports (DECS), the Commission on Higher Education (CHED) and the Technical Education and Skills Development Authority (TESDA). In 1999, the Department of Education, Culture and Sports, which governs both public and private education in all levels, stated that its mission was ''to provide quality basic education that is equitably accessible to all by the foundation for lifelong learning and service for the common good.'' The Department also stipulated its vision to ''develop a highly competent, civic spirited, life-skilled, and God-loving Filipino youth who actively participate in and contribute towards the building of a humane, healthy and productive society.'' All these ambitions were embodied in the development strategy called ''Philippines 2000.''

The academic year in the Philippines is patterned after its wet/cool and dry/hot seasons. The hottest months of the year are from March to May, thus making them the ''summer break.'' The wet season starts in June, which also marks the beginning of the academic school year. Beginning 1993, DECS increased the number of school days from 185 to 200. The school year ends during the first few weeks of March. The Philippines, a Catholic country, has a two- to three-week break during Christmas in December and a four- to five-day break at the start of November to celebrate the Day of the Saints and the Day of the Dead.

The language of instruction has been a much debated topic. For a country dispersed over 7,107 islands, with 11

languages and 87 dialects, colonized by Spain for more than 300 years, and educated by the Americans, the decision to pick a particular language of instruction has been very controversial. The languages used for instruction have switched from Spanish to *Tagalog,* to English to the local vernacular, including some Chinese languages, and Arabic, which is used in the southern part of the country.

According to an official publication of the U.S. Library of Congress, the Philippine census reported that during the 1990s a total of 65 percent of Filipinos understood English. During the last four decades of the twentieth century, education in all levels had vastly improved. In the compulsory elementary level, from 1965-1966, there were a total of 5.8 million students enrolled, 4.5 percent of which were in private institutions. In 1987-1988 these numbers grew to 9.6 million enrolled, 6.6 percent of which were in private schools. By school year 1999-2000, 12.6 million were enrolled with 7.1 percent in the private sector. This level is for grades 1 through 6—ages 7 to 12. The various Philippine grade levels are referred to with cardinal numbers (one, two, three) rather than ordinal numbers (first, second, third). Secondary education is taught for 4 years from ages 13 to 16.

Primary and secondary schools are taught from Monday to Friday, starting at 7:30 A.M. The school day begins with a flag raising, national anthem, and pledge of allegiance. Students usually have an hour for lunch. School cafeterias are mostly non-existent and those that exist are largely inadequate. Students either go home for lunch or pack their lunch. Some parents, usually mothers, come to school to bring warm lunch for their children. Classes resume for the afternoon, until about 4:30 to 5:00 p.m. In some areas, due to lack of facilities, certain schools are forced to have double shifts, minimizing the hours children spend in school.

Access has been a problem for certain sectors of the population and DECS has made this the number one priority. In the secondary level for 1965-1966, approximately 1.17 million students were enrolled with 62.3 percent in the private sector. In 1987-1988, there was a total of 3.49 million students enrolled, 40.8 percent of whom were in private schools. By 1999-2000 there was an overall total of 5.1 million students, with 24 percent in private schools.

Higher education in the Philippines is strongly in the private sector. Most bachelor degrees are for four years. Students are usually from 17 to 20 years old. In 1985, the private sector of higher education was close to 80 percent of the student population. Of these institutions one-third are considered non-profit, while two-thirds function for monetary gain. This has lead to the reputation of certain schools as ''diploma mills'' and to the more serious problem of producing unqualified, unemployed, and underemployed graduates.

During the 1970s, there was a wide discrepancy in the literacy rates of the various regions of the country. The capital region of Metro Manila had a 95 percent literacy rate; the Central Luzon area had a 90 percent literacy rate while the Western portion of Mindanao had a 65 percent rate. Three principal indigenous languages in the Manila area are *Cebuano* in the Visayas, *Tagalog* and *Ilocano* in the northern portion of Luzon. In 1939 Philipino (which is based on the Tagalog language) was made the national language. Philipino later evolved to Filipino which is based on the languages used in the Philippines. English still remains the most important non-indigenous language used by media, higher education, private, primary and secondary schools, government administration, and business. Only a handful of families have maintained speaking in Spanish. The multiplicity of languages used in the Philippines has not affected its literacy rate of 94.6 percent, one of the highest in East Asia and the Pacific region.

Technology use is starting to gain momentum in the overall education of the Philippines. In 1999, there were 93 Internet Service Providers (ISP) in the country. By the beginning of 2001, the participation of nongovernmental organizations and the private sector in education was evident with the donation of 1,000 personal computers for use during school year 2001-2002 in 1,000 public high schools of 16 regions. The program, called One Thousand PCs, has four major components, namely: curriculum development with the creation of a one year course on computer education as a specialization in entrepreneurship; teacher training for recipient schools; courseware development through the creation of Information Technology materials; and the purchase of hardware from the private sector through the Adopt-A-School Program. The Department of Trade and Industry chaired this project.

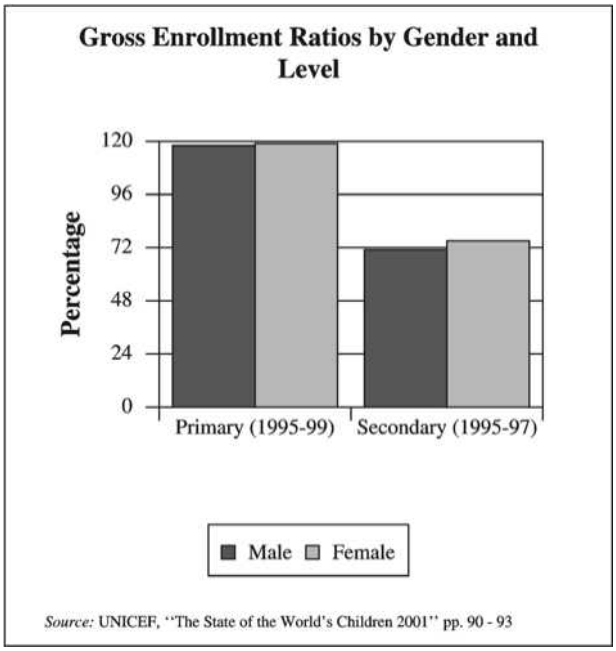
Curricular development is under the jurisdiction of the DECS. Authority slowly trickled down to the municipal/local levels as the system shifted to decentralize decision-making and empower local schools. Despite these efforts, much of the important decisions, such as the purchase of all public school textbooks, is done by DECS.

Important curricular changes needed to respond to emerging student needs are limited due to budgetary constraints. Three tests are administered to students, the preparation for which must be addressed through further curricular development. These tests are the National Elementary Aptitude Test (NEAT), the National Secondary Aptitude Test (NSAT), and the National College Entrance Examination (NCEE).

The Philippine population grows at a rate of 2.07 percent per year. In July 2000, the estimated population was 81,159,644 people. About 37 percent of this popula-

tion was from birth to 14-years-old. A 2 percent yearly population growth translates to about 1.6 million children born every year. This growth rate strains the resources of the educational system. During 1999-2000, a 2 percent increase in the number of students meant 8,000 more classrooms needed. The deficit was 29,000 since DECS was able to build only 6,000 new rooms for the year. More teachers required (total lack of 21,000 since the budget allowed for hiring only 4,700 new teachers) 400,000 more desks (of the 2.2 million needed, only 500,000 were purchased) and 10 million additional textbooks with a ratio of 2 students per book. To alleviate this strain, certain schools hold double sessions (one in the morning and another in the afternoon) in elementary schools. Some high schools even have triple sessions due to space and resource problems.

As for gender distribution in the elementary level, male and female students are almost equally represented, while there are more females students at the secondary and higher education level. In rural areas, men are expected to do work while women are allowed to pursue education. Males have a higher rate of failure, dropout, and repetition in both elementary and secondary levels.



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

PREPRIMARY & PRIMARY EDUCATION

Preprimary and primary educational matters are handled by the Bureau of Elementary Education (BEE), under DECS. Preprimary is available in the Philippines for children below the age of six. From age three to five, students first attend nursery school, and then they attend kindergarten. Most private schools offer these programs, particularly in religious schools. Several Montessori schools are available. The Philippine Education for All Assessment Report 2000, an independent evaluation of the education system from 1991 to 2000, stated that the preprimary services had reached only 19.5 percent of the 11.5 million children aged zero to six.

There was, however, an 82 percent increase in the number of public day-care centers from 1993 to 1999. This translates to 32,787 centers. These constructed day-care centers had been able to reach less than half of the 3.2 million who had to have preprimary care by the year 2000.

Six years of primary education is compulsory and is provided free of charge in public schools. In 1998, almost 30 percent of grade 1 entry-age children entered school, an increase of 10 percent since the equivalent rate in 1990 was 20 percent.

The Philippine Education for All Assessment Report of 2000 also stated that a ''huge population of children were either over-aged or under-aged for grade one.'' Families were postponing the education of young children as girls were often asked to take care of younger siblings, and together with boys, help in livelihood.

The number one priority of BEE has been to make primary education accessible for all qualified students. This goal has been met successfully. Some 95 percent of children from ages six to twelve attend primary school. The Early Childhood Development Project (ECDP) is a six-year (1998-2004) joint project of three departments: DECS, the Department of Health, and the Department of Social Welfare. The program, aimed at children under six, shares responsibility for preparing a child for elementary education by providing an eight-week refresher course for grade one entrants in their first two-month-stay in school.

For the school year 2000-2001, DECS projects that 12.75 million students will enroll in primary school. In 1992-1993, there were 34,944 schools, of these 1,974 were private. There were 39,342 elementary schools in 1999-2000, a total of 3,555 of which were private schools serving 7.17 percent of the student body. The gross teacher-pupil ratio was 1:34. The percentage of students passing the NEAT was 76.54 percent.

From 1992 to 2000, the participation rate increased from 85.21 percent to 96.95 percent. Unfortunately dropout rates for the same years also increased from 6.65 percent to 9.38 percent. As of 2000, a total of 4,710 *barangays* (similar to communities) did not have an elementary school. Performance indicators, key indicators computed to evaluate the system's performance at various levels, show that participation rate has improved from 85.21 percent in 1992-1993 to 96.95 percent in 1999-2000. Completion rate for these same years increased from 66.59 percent to 68.06 percent.

The National Elementary Aptitude Test (NEAT) was first taken by primary students during the 1993-1994 school year, with 55 percent of students passing (50 percent or higher). By 1998-1999, the passing rate was 73.21 percent.

The main mission of the Bureau of Elementary Education is to provide access, progress, and quality in primary education. This body not only formulates key programs but also implements and supervises the varied projects that will eventually enable every citizen ''to acquire basic preparation that will make him an enlightened, disciplined, nationalistic, self-reliant, God-loving, creative, versatile, and productive member of the national community.'' Filipino is used to teach such subjects as Work Education, Physical Education, Social Studies, Health Education, and Character Education. English is used in all mathematics and science classes.

For the school year 2000-2001, BEE had a number of projects and programs: the Multigrade Program in Philippine Education (MPPE) was designed to improve access to and provide quality elementary education through the opening of complete multigrade classes and completion of incomplete schools in remote barangays. MPPE projects included Multigrade Demo Schools Projects (MDSP), Pupil Learning Enhancement Program (PLEP), Little Red School House Project (LRSP), and the Integrated Curriculum for Multigrade Classes (IC-MG).

One of the projects was called the Early Childhood Development Project (ECDP). It outlined the broad policy directions for the State to pursue for Filipino children under six-years-old.

The Preschool Service Contracting Program was another program used by BEE. Preschool classes were organized in the 5th and 6th municipalities and urban poor areas, and were provided preschool experiences for 6 months by private preschool providers.

The SPED Personnel Enhancement Program offered short term summer/semester courses, seminar or training workshops, and national conferences done year round. This program was primarily aimed at honing the capabilities of regular and SPED teachers, administrators, supervisors, and other service providers.

The Resource Materials Development for Children with Special Needs (CSNs) was another important project. It dealt with the development and production of various resource and instructional materials, which included textbooks in braille and in large print, Handbook on Inclusive Education, Reference or Guide Materials for Teachers of Children with Learning Disabilities, Learning Competencies for the Gifted in Grades one to three, and Enrichment materials in six learning areas including Computer Education.

Another BEE program was called the Early Intervention Program for Children with Disabilities. This program focused on the training of SPED teachers and social workers as facilitators to provide parents and other community volunteers with knowledge and skills on educational intervention that should be given to infants, toddlers, and preschoolers under age 6 who are disabled or those with developmental delays.

Standards for Quality Elementary Education (SQEE) was another program utilized by BEE. It generated competency standards for the workforce in all levels of elementary education.

In response to the Social Reform Agenda (SRA) of the Philippine government, funded in part by loans from the World Bank, the Third Elementary Education Program (TEEP) was created. According to the World Bank (WB), TEEP would address areas of weakness in the primary education system such as decentralization of authority to local government units, increase the participation rate from nongovernmental organizations such as parents' associations, private business, and the community at large. The Philippines has not had a strong history of parental associations in the educational system set-up. Despite the great start of this project, the WB stated that caution was needed since the project had a ''high-risk, high-reward approach.'' The BEE cited the main objectives of TEEP as being quality education, capacity for change, and maximizing community and local government roles.

The Social Reform Agenda of the Philippine Government had initially targeted twenty under-served provinces for TEEP, while the Presidential Commission to Fight Poverty added six more. Poverty in these provinces is more acute, with 60 percent of the population below the poverty level. The project will be implemented in 3 batches: Batch 1 (2000-2003), six pilot provinces, namely Ifugao, Benguet, Antique, Guimaras, Agusan del Sur, and Surigao del Sur; Batch 2 (2003-2006), eight provinces, namely Romblon, Masbate, Negros Oriental, Leyte, Biliran, Zamboanga del Sur, and North Cotabato; and Batch 3 (2000-2006), twelve provinces, namely, Abra, Mt. Province, Kalinga Apayao, Sulu, Tawi-Tawi, Maguindanao, Batanes, Aurora, Capiz, Eastern Samar, and Basilan.

The TEEP's loan of funds from the World Bank (WB) was approved by its board in November 1996 and had a project span date starting July 2, 1997, until June 30, 2004. In 1998, the Quality Assurance Group Risk of the WB rated the project's progress as ''non-risky'' and the Operations Evaluation Department's Quality at Entry Rating was ''highly satisfactory.'' Both its latest Development Objectives Supervision Rating and Latest Implementation Progress Supervision Rating were rated ''satisfactory.''

While 90 percent of Filipinos are Christian (83 percent Catholic), 5 percent of the population is Muslim (Moslem). The Muslim population is concentrated in the Southern island of Mindanao. The Mindanao Basic Education Development Project, which lasts from 2000 to 2007, is particularly geared to provide an educational system suited to the diverse culture and needs of the children and youth learners in Mindanao. English and Filipino are used as the media of instruction for primary school, beginning with the first grade. The local vernacular may be used as an auxiliary language of instruction, but must be used only when neither English nor Filipino could be used for full comprehension of certain concepts.

SECONDARY EDUCATION

Governance of the four-year high school education falls under the jurisdiction of the Bureau of Secondary Education (BSE) of DECS. Although secondary education is provided free in public schools, participation rate has been inferior in comparison to primary education. In 1965-1966, there were 1,173,000 students in secondary education, a majority of which was in private schools (731,000 or 62.3 percent). In 1987-1988, there were 3,494,460 students with 1,404,387 or 40.8 percent in private schools. In 1992-1993, participation rate was 56.76 percent, with 5,757 total schools (2,285 private) and the total enrollment was 4,450,000 students (1,520,000 in private schools). There were 125,142 teachers (39,822 private). The gross teacher-student ratio was 1:36. The dropout rate was 7 percent. In 1993-1994, 75 municipalities had no high school facilities available. By 1999-2000, there were 5,160,000 students with 1,240,000 being in private schools. The teacher-student ratio was 1:35. By this time, only five municipalities did not have high school facilities. The National Secondary Aptitude test was first implemented in 1994-1995, where the passing rate was 77.32 percent. By 1998-1999, a total of 94.76 percent passed.

BSE has a Curriculum Development Division which coordinates and implements research projects on curriculum changes and innovations. There is also the Staff Development Division for the training and development of teachers, administrators, and staff of the bureau. The Population Education Unit is geared to provide high school students a better grasp of population related issues to enable them to make sound and responsible decisions.

In 1993, DECS formulated a Manual of Information on Secondary Education of the Philippines where it specifies its missions, goals, and functions. The secondary education mission statement was: ''to determine a complete, adequate and integrated system of education, both formal and nonformal; to supervise and regulate appropriately all educational institutions; and to develop and promote culture and sports in order to prepare the present and the next generation for life.'' Briefly stated, it is four specific goals covering the areas of broad general education, training in middle level skills, developing for improving the quality of human life, and responding to the changing needs and conditions of the nation. The manual lists the functions of secondary education in three major aspects which are: formulation of policies, plans, and projects; the supervision of all public and private institutions; and the maintenance of a complete, adequate, and integrated system of education relevant to the goals of national development.

During the beginning of 2001, BSE had 12 active projects and a flagship 6-year program (SEDIP).

Adopt-a-school was a partnership between school and industry to maximize provisions of the resources to public schools. In February 2001, this program was able to procure one thousand PCs for one thousand facilities in sixteen regions nationwide along with provisions to train one teacher in each facility to use and implement technology applications to learning.

Balik-Paaralan sa (Out-of-School Adults (BP-OSA, Back-to-School for Out-of-School Adults) was another project of BSE. As of the beginning of 2001, there are 31 high schools serving some 1,381 adult students in this project.

Another project was Community Service and Public Safety Training (CS-PST). This curriculum relevance project was tested in six private and public schools in the underserved regions of Central Visayas and Southern Mindanao.

Government Assistance to Student and Teachers in Private Education (GASTPE) was a project utilized by BSE. It was a contract between government and private schools that allowed students who were unable to attend the free public secondary schools to enroll in private schools. In January 1999, there were 374,918 student beneficiaries in 1,122 participating schools for the Education Service Contracting and 162,966 recipients of Tuition Fee Supplements in 638 schools.

Home-Partnership Program (HPP), Population Education Program (PEP) and Population Education Information Network (POPEDIN) were inter-related programs dealing with the topics such as population education and the more delicate topic of adolescent reproductive health.

Another project of BSE was Indigenization/ Localization of the Secondary Education Curriculum. This project dealt with the contextualization of the curriculum within the local culture.

Project Effective and Affordable Secondary Education (EASE) was a project that targeted students in disad-

vantaged situations who were unable to attend regular sessions. EASE provided a temporary study-at-home solution until the student was able to return to the formal classroom setting.

Another BSE project was the Revitalized Homeroom Guidance Program (RHGP). It was a counseling program where school staff members and teachers were given a week-long training to better match students in their aptitude and career interests.

School-Based Education was another project used by BSE. It was a form of self-evaluation by schools, which was initiated, planned, and administered by the principal and the teachers themselves.

Another project was the Self-Instructional Packages in the Social Reform Agenda Provinces. It provided materials to discourage students from dropping out due to poverty/illness. Teacher Training Programs was another BSE project. It was geared mostly to train teachers in science and technology.

Thinking Skills Development for Maximized Cognitive Performance (TSD-MCP) was a program that was initiated in six schools to research and develop steps to improve student cognitive and thinking skills.

In 1983-1984, DECS launched the Program for Decentralized Education (PRODED) for elementary education to modify the curriculum and put emphasis on science, technology, math, reading, and writing. As a follow-up to this, the New Secondary Education Curriculum (NSEC) was implemented in 1989 to replace the 1973 Revised Secondary Education Program (RSEP). NSEC is a major part of the Secondary Education Development Program (SEDP) to bring PRODED into the High School system, to improve quality of graduates, and to expand access to quality education. NSEC brings forth a student-centered, community-oriented style of education where Values Education is incorporated into the teaching of other subject areas.

The eight subject areas are English, Filipino, Mathematics, Social Studies, Science and Technology, Physical Education, Health, and Music (PEHM), Technology and Home Economics, and Values Education. Four years of secondary education is required by most of the higher institutions. Philippine secondary education is composed of academic and vocational curricula. A curriculum for secondary schools introduced in 1989 made Filipino the language of instruction for all subjects except mathematics and sciences. The mathematics curriculum was also changed by the 1993 NSEC. The 1973 Revised Secondary Education Program (RSEP) required that areas of mathematics be taught in yearlong discipline based subjects: Arithmetic in the first year, elementary algebra in the second year, geometry in the third year, and advanced algebra in the fourth year. The NSEC mandates that for each year level, portions of algebra, geometry and measurement, trigonometry, statistics, and consumer mathematics would be included. The level of difficulty increases for each year level. This process allots math subjects with 200 minutes per week, 40 minutes daily.

The programs RSEP, PROPED, NSEC, and SEDP all lead to the Secondary Education Development and Improvement Project SEDIP (2000-2006). SEDIP is similar to TEEP. The goal of the project is to improve equitable access to quality secondary education in poverty affected areas. The three main objectives in the areas of improvement of quality education are increased rates of participation, completion, and decentralization of management and decision making at the provincial level. The program involves the construction of new school buildings; improvement of school facilities; provision of textbooks, manuals and instructional aids; and extensive in-service training programs for teachers and school administrators. The total project cost is $170 million. DECS implemented the 1999 and 2000 Computerization Program, and this allowed 325 public secondary schools to become recipients of computer packages and teacher training.

HIGHER EDUCATION

The Commission on Higher Education (CHED) works with DECS to regulate higher education in the Philippines. This organization was created through Republic Act No.7722, also known as the Higher Education Act of 1994, during the term of President Fidel V. Ramos. The commission's vision is the pursuit of a better quality of life for all through education. Most institutions of higher education are in the private sector and there is a large concentration of them in the metropolitan area of Manila. In 1965-1966, there were a total of 527,000 students (468,00 private) in 466 schools (440 private). In 1984-1985, this number more than tripled to 1.73 million students (1.34 million private) in 1,157 schools (838 private). Statistics from CHED show that by 1998, there were 1,495 schools (1,118 private). About 25 foreign nationalities and citizenships are represented amongst the higher education students. China, USA, and Thailand have the most representation.

Higher education programs are offered in the following fields (with the number of students for the years 1990 and 1995 in parenthesis): arts and sciences (187,313 and 226,111); teacher education (257,638 and 276,046); engineering and technology (228,757 and 275,695); medical and health (272,784 and 238,988); commerce (380,491 and 603,575); agriculture (50,006 and 72,656); law (14,581 and 13,983); religion (4,711 and 8,262); information technology (36,947 and 117,799); maritime (92,114

and 137,584); and criminology (24,297 and 47,273). Commerce is the most popular program. There has been a rapid increase, up to 218 percent, in the number of students taking information technology.

Since 1973, students are required to take the National College Entrance Examination (NCEE), before they can begin higher education. This exam is administered during the fourth year of high school. A controversial issue regarding this exam is the use of English, which prejudices against students from rural and poor areas.

Tuition in private schools of higher education is higher than that of public schools although private tuition rates sometimes mean less expenditure per student as compared to public institutions. It has even been suggested to the Philippine government that they might save money by offering government scholarships for students to enroll in private schools.

During the school year 1989-1990, the four autonomous campuses and five regional units of the University of the Philippines initiated a program of socialized tuition and subsidies named Socialized Tuition and Financial Assistance Program (STFAP). During its first year, 44 percent of the 26,000 undergraduate students received free tuition. A tuition reduction or discount of 25 to 75 percent was given to another 22 percent. Living and book allowances are other forms of subsidy under this program and some 24 percent of undergraduate students received these.

Through CHED, various projects have been created to improve higher education, namely: National Higher Education Research Agenda (NHERA), Expanded Tertiary Education Equivalency and Accreditation Program, 1996 CHED Computerization Program, and Centers of Excellence/Centers of Development.

During the 1980s and 1990s, higher education institutions were producing many graduates who were unable to find employment to match their educational skills. This lead to certain institutions being known as ''diploma mills,'' earning profit for churning out jobless graduates or underemployed graduates. It also created a group of highly educated, discontented youth quick to criticize the administration. To prevent this situation from further deteriorating, two surveys were performed: Higher Education Labor Market Surveys I and II or HELMS I and II. These studies researched and surveyed the transition from school to work over a period of time, then made recommendations based on their findings.

With the Philippine economy unable to employ its graduates, these skilled workers looked overseas for employment. An exodus of professionals and skilled laborers ensued. This situation has been referred to as the ''brain drain'' of the Philippines. In 1996, the Philippine National Statistics Office reported that the majority of Overseas Filipino Workers (OFW) were in Asia/Middles East (78.8 percent). While definitely being a grave problem, it has had some positive effects. According to the US State Government Background Notes on the Philippines, the country's economy was less severely damaged by the Asian financial crisis of 1997 due to the considerable remittances from overseas workers, totaling approximately $5 billion annually.

Of the 650 institutions providing higher education in the country, 550 are private colleges, 35 are private universities, 25 are state colleges, and 7 are state universities. In 1987 there were 274 graduate schools (196 private) in the Philippines, most of which were located in Metro Manila. There were 44,427 students in the master's programs while 4,848 were in doctoral programs during 1985-1986. About 2 percent of all students in higher education were in the graduate level. For this same period 176 graduate programs were available in Metro Manila. These post-graduate programs were in the arts and sciences (81), agriculture, forestry, and fisheries (34), and teacher education (20).

Some 147 schools offered M.B.A.s while 141 institutions offered M.A.s in education. The highest number of doctoral students was in the field of education. The majority of faculty members teaching higher education have received either a B.S./B.A. degree or a master's degree. Only about 4 percent have their doctoral degrees, and most of them are at the University of the Philippines. Faculty development becomes a major issue since schools have difficulty recruiting highly qualified faculty members due to low salary levels. Colleges and universities usually lose their professors to industries that have better pay or to overseas employers who pay in dollars.

Higher education is slowly catching up with the information age as more institutions are going online. During the beginning of 2001, there were a number of institutions with their own Web sites. Various public and private sites have also surfaced to provide services to students in higher education. The notable ones are the Advanced Science and Technology Institute, Kodiko Online, 2StudyIt.com, Education for Life Foundation, Estudyante.com, FAPENET, Gurong Pahinugod, Iskolar.com, and others. School budgetary problems limit the access of students to technology in the classroom.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Department of Education, Culture, and Sports (DECS) administers, supervises, and regulates primary and secondary education. In 1994, the Commission for Higher Education (CHED) was established. It has supervision and regulatory powers over both public and private

higher education institutions as well as degree-granting programs in all public and private postsecondary educational institutions.

The task of overseeing postsecondary technical-vocational education and the training and development of out-of-school youth and unemployed community adults used to be distributed among a few government agencies. These agencies were fused together in 1994 to create the Technical Education and Skills Authority (TESDA). The agencies concerned are the National Manpower and Youth Council of the Department of Labor and Employment (DOLE), the Bureau of Technical and Vocational Education of DECS, and the Apprenticeship Program of the Bureau of Local Employment of the DOLE. They were put together to prevent overlapping functions and to provide a centralized agency to give national direction for the government programs concerning the technical-vocational education and training system of the country. The focus of TESDA is to realize the full participation of industry, labor, local government units and technical-vocational institutions in the country's skilled manpower development programs.

As compared to other ASEAN (Association of Southeast Asian Nations) countries, the Philippine government expenditures for education is low considering the state's task of providing free education. In 1994, the Philippine government spent 2.7 percent of the gross domestic product to education compared with Malaysia's 5.4 percent and Thailand's 3.5 percent. The proportion of national government budget allocated to education has varied from a high of 31.53 percent in 1957 to a low of 7.61 percent in 1981. It stood at 15.5 percent in 1987 and at 14.0 percent in 1997. In 1997, debt service payment was 40 percent of the national budget.

The State's responsibility to provide education had been transferred to the local government units and the private sector through the processes of ''devolution'' and ''decentralization.'' These processes provide a solution for the financially strapped government but it may worsen existing inequities where poorer and richer local government units will be duplicated in the educational units themselves. The disparities between the poor and the rich schools may be widened.

Filipino research on education is hampered by a scarcity of funds. The approach and scope has mostly been confined within the parameters of pragmatism. Research is conducted to find solutions to urgent problems. Sometimes, the research itself is skipped such as when computers were bought en masse by DECS and private schools. The hasty incorporation of computer education into the curricula had prompted the procurement of the computers. Unfortunately, training in technology use by teachers lags behind the procurement of expensive equipment.

DECS offers a Computer Literacy Program and a Distance Learning Program. On June 2000, a new method to upgrade teaching skills was introduced at the annual conference of the Philippine Association of State Universities and Colleges. A master's degree can be earned primarily using Internet resources.

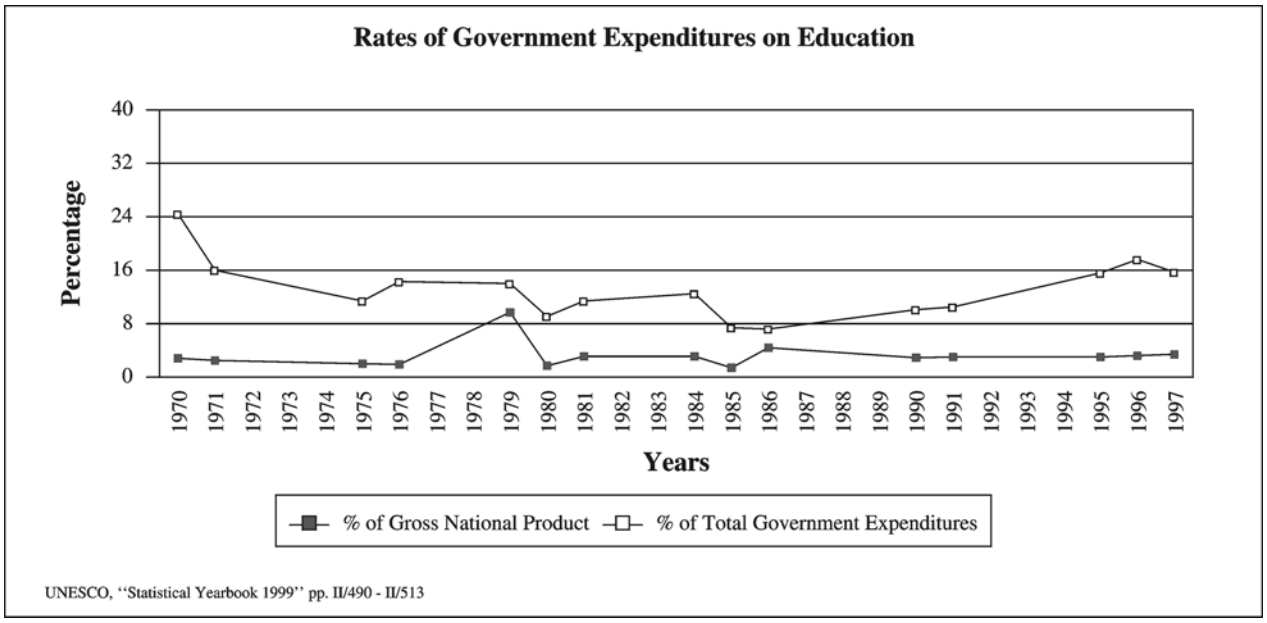
NONFORMAL EDUCATION

The mission of Nonformal Education (NFE) in the Philippines is to empower the Filipino with ''desirable knowledge, skills, attitudes, and values that will enable him/her to think critically and creatively, act innovatively and humanely in improving the quality of his/her life and that of his/her family, community and country.'' NFE aims to reduce the number of illiterate out-of-school youth and adults with need-based literacy programs, plus continue education through basic development projects. Activities that fall under this system of education range from vocational training to adult reading classes, from family planning sessions to cultural and leadership workshops for community leaders.

This branch of education is governed by the DECS Bureau of Nonformal Education(BNFE) and its history can be traced as far back as 1908 when ACT No. 1829 was created to provide for the delivery of civico-educational lectures in towns and barrios. Six years later the act was amended to assign teachers in public schools to give the lectures. The New Commonwealth government passed Act No. 80 in 1936 to create the Office of Adult Education as part of the then Department of Instruction. A decade later, this branch was transformed into the Adult and Community Education Division of the Bureau of Public Schools. After the declaration of Martial Law, the Marcos government's Philippine Constitution of 1973 created the position of the Undersecretary of Nonformal Education.

The Education Act of 1982 created the Bureau of Continuing Education from the Office of Nonformal Education. The Aquino government after the People Power Revolution, enacted Executive Order No. 117 in 1987 to create the Bureau of Nonformal Education. Article 14, section 2(4) of the 1987 Philippine Constitution stated: ''The state shall encourage nonformal, formal, indigenous learning systems, as well as self-learning, independent and out-of-school study programs, particularly those that respond to community needs; and provide adult citizens, the disabled and out-of school youth training in civics, vocational efficiency and other skills.'' Nonformal education, in this sense, is designed to extend, complement, and provide an alternative to the existing educational system. Human development thus becomes an important factor in alleviating poverty.

The National Statistics Office of the Philippines reported that in 1989, there were 3,000,000 school youths



between the ages of 7 to 24. This increased to 3,800,000 by 1994. The highest percentage of these youths was from the Western Mindanao region. Out-of-school women outnumbered the men by 6.7 percent. On October 16, 1990, Proclamation No. 480 declared the period from 1990 to 1999 as the Decade of Education for All, with the goal of meeting the educational needs of the poor and under educated.

BNFE is divided into three divisions: the Literacy Division (LD), the Continuing Education Division (CED), and the Staff Development Division (SDD). The bureau outlines its functions as: serving the needs of those unable to avail of formal education; expanding access to educational opportunities; and providing opportunities for the acquisition of skills to ensure employability, efficiency, productivity, and competitiveness in the labor market. BNFE funds come from three main sources which are: the General Appropriations Act, loans from the Asian Development Bank, and funds from other international agencies such as UNESCO, UNICEF, ACCU, and elsewhere.

In 1995, the Technical Education and Skills Development Authority (TESDA) was established to help regulate non-degree technical-vocational programs. TESDA was also in charge of skill orientation, training, and development of out-of-school youth and unemployed community adults.

TEACHING PROFESSION

The higher education system is not producing enough teachers to meet the expanding needs of the entire educational system of the country. In the academic year 1990-1991 DECS reported that there was not enough teachers. In elementary education they needed some 24,260 teachers, while secondary education lacked 22,450 teachers. These deficits were caused by the provision of free public secondary education. The mere 19,608 increase in students studying teacher education from 1990 to 1995 was not sufficient to fill the lack of teachers. As was stated in the overview, for school year 2000-2001 there was a lack of 29,000 teachers. The teaching career is not attracting students since it has a reputation for being an underpaid and unrewarding profession. Despite incentives from the government, more students are taking up commerce, perhaps due to the image of the business profession as a faster route to social mobility. Reports have also indicated the existence of corruption within the educational system and this greatly affects the morale of faculty and staff.

Recent studies have shown that not only is there a need for more teachers in the sciences and mathematics, but that present teachers in these two fields have to undergo further training and development. In 1989, the Philippines received a major grant from the Japanese government to begin construction of two new teacher retraining facilities in science education. These facilities are located in Baguio City and inside the University of the Philippines-Diliman campus.

In 1987 the Ministry of Education, Culture, and Sports sponsored the Task Force to Study State Higher Education. It recommended the identification and designation of certain campuses for teacher retraining. These campuses would serve as centers for advancement of education in designated special fields of teaching. The Task

Force also recommended using actual public schools for practice teaching rather than university-based laboratory schools. This was done to promote the relationship between educational teaching programs and public schools.

The qualification to teach in elementary and preprimary schools is a bachelor's degree in elementary education. To teach secondary education, the teacher must have either a bachelor's degree in education which a major and a minor; an equivalent degree but also with a major and a minor; or a bachelor's degree in arts and/or sciences with at least 18 education units for teaching in high school.

Decentralization efforts in elementary and high school educational systems will require a more active role from principals, superintendents, and local community leaders. The TEEP and the SEDP programs are responsible for monitoring this transition process. Public institutions for higher education require that the teacher have at least an M.A. to be awarded the rank of Assistant Professor. Labor laws stipulate that faculty members become permanent (similar to tenured) after three years. The evaluation for this promotion is mostly based on performance, attendance, and tardiness. Extra-curricular activities such as publications, research, scholarship, and community services are rarely required. Since teaching is neither a lucrative nor a well-paying job, many professors in medicine, engineering, law, and business teach only on a part-time basis while maintaining other jobs within the industry. A DECS survey during the late 1980s showed 16 percent of total faculty members in public schools as part-time, while over 40 percent of the faculty in private schools were part-time.

In 1987, a study of 64 of the 78 State Colleges and Universities showed that of the 10,546 faculty members, 57 percent were women, 56 percent had only their B.S./B.A. degrees, about 33 percent had M.S./M.A. degrees, while 10 percent had their doctorates. This 10 percent rate goes down to 4 percent when private school faculty members are included. The decade from 1991 to 2000 marked a 400 percent increase in the salaries of public school teachers. However, the added expense cut into the funding for public elementary education, textbooks, educational materials, and facilities. The marked increase in teacher salaries only gave them a compensation package that is 1.2 times higher than the poverty threshold.

SUMMARY

The Filipinos were literate even before they were colonized by Spain, the United States of America, and Japan. They may no longer be physically colonized but the ballooning economic debt, for which they may not have fully benefited, curtails their freedom. More than 32 percent of the population lives below poverty level as of 1997. Their innate desire for knowledge has been reinforced by the hope that good education can provide upward economic mobility. Steps for the realization of this hope has been codified into the constitution of the Philippines, which categorically states that the highest budgetary priority shall be given to education.

Faced with a lack of employment opportunities in their home country, at least 4.5 million of the well-educated labor force have sought and found work in other countries. They have sent their earnings back to their families and relatives in the Philippines. Overseas remittances in 1997 had amounted to US$4.5 billion. This amount, however, does not rebound for the benefit of education or the people of the country. Debt servicing in the form of interest payments for the same year amounted in excess of US$4.5 billion, which comprised the majority of the annual budget, at 40 percent. However, the ingrained resilience of the Filipinos has produced a population with 95 percent literacy despite adverse times. The over-populated country has turned the manpower section of the population into its biggest export and income-earner. The Filipinos may yet learn lessons from their economic bondage and realize that education can provide not only upward economic mobility but also economic empowerment.

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—Juanita Villena-Alvarez and Victoria Villena

PITCAIRN

BASIC DATA

Official Country Name:	Pitcairn
Region:	Oceania
Population:	54
Language(s):	English, Pitcairnese, Tahitian
Literacy Rate:	NA

Pitcairn is located in the South Pacific. Discovered in 1767, Pitcairn is named after Major Pitcairn's son, who had first spotted the island. Populated with only 54 people of English and Polynesian background, the island's natives specialize in farming, fishing, and stamp production as their main source of income. Pitcairn is most widely known as a research site for *National Geographic* and for being the setting of Charles Nordhoff's classic *Mutiny on the Bounty.*

Due to the small population, most of the island's children attend schools in Auckland, New Zealand. Auckland begins educating students when they are four years old and continue through high-school age. Like the United States, Auckland offers many of the same academic opportunities, including math, science, and music. However, students usually attend schools in a four-term calendar fashion, which is unlike the two terms that many U.S. schools follow.

Seven people attend the one room schoolhouse located on the island, six of which are the children, and one teacher who has been sent from New Zealand. Attached to the schoolhouse lies the museum that contains examples of the island's flora and fauna that the students study. Most of the children study in this schoolhouse until they are 12 or 13, then they are sent to New Zealand for higher education.

There are many different higher education schools in Auckland such as high schools, colleges, and universities. Research done by research engineer, Lynn Salmon, who has traveled Pitcairn, found that once the students had left the island to study abroad they usually never returned. Higher education and better opportunity for Pitcairn's students lies in Auckland's medicine and education/teaching professions.

Although Pitcairn is very small, the future may hold high hopes. With the age of technology and more researchers interested in this island, the possibility for newer equipment is possible; hopefully, then, this island can provide a higher education program and more opportunities for its students.

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—Deanna Edens

POLAND

BASIC DATA

Official Country Name:	Republic of Poland
Region:	Europe
Population:	38,646,023
Language(s):	Polish
Literacy Rate:	99%
Number of Primary Schools:	18,911
Compulsory Schooling:	8 years
Public Expenditure on Education:	7.5%
Foreign Students in National Universities:	5,202
Libraries:	3,565
Educational Enrollment:	Primary: 5,021,378 Secondary: 2,539,138 Higher: 720,267
Educational Enrollment Rate:	Primary: 96% Secondary: 98% Higher: 25%
Teachers:	Primary: 325,601 Secondary: 121,301 Higher: 75,432
Student-Teacher Ratio:	Primary: 15:1 Secondary: 22:1
Female Enrollment Rate:	Primary: 95% Secondary: 97% Higher: 29%

HISTORY & BACKGROUND

Educational activity began in Poland in the eleventh and twelfth centuries with the appearance of cathedral schools at bishops' sees and collegiate schools at the richest churches in Poznan, Plock, Wroclaw, Wloclawek, Cracóów, Sandomierz, Wislica, Leczyca, Glogóów, Legnica, and Brzeg. At the beginning of thirteenth century, parish schools appeared in newly founded villages and towns as a result of the so-called German Law and resolutions of the fourth Lateran Council.

The Jagiellonian University in Cracóów, founded in 1364 by King Kazimierz the Great, became one of Europe's great early universities and a center of intellectual tolerance. In need of trained lawyers, Kazimierz the Great founded the university with a law faculty or department, but without a theological faculty. The university was reorganized by King Wladyslaw Jagiello in 1400 and modeled largely on those of Bologna and Padova with four faculties. The university attracted students from many countries.

In 1519 Jan Lubranski, the bishop, founded an ''academic gimnazjum'' in Poznan called the Lubranski Academy (*Akademia Lubranskiego*) where activity focused on the humanities. Dissident schools founded in sixteenth century became centers of avant-garde thought. The Jesuit Collegia in Wilno and Lwóów established two universities; in 1579 King Stephen Batory founded Wilno Academy (*Akademia Wilenska*) and in 1661 King Jan II Kazimierz founded the Lwóów Academy (*Akademia Lwowska*). In 1595 Jan Zamoyski founded a high school called the Zamoyski Academy (*Akademia Zamojska*).

In 1741 the Piarist Father and Catholic Priest Stanislaw Konarski founded the Collegium Nobilium, a school in Warsaw for the young men of ruling families, hoping that his pupils would be inspired to effect badly needed constitutional reforms. His emphasis on patriotic education, the purity of the Polish language, and the natural sciences finally resulted in the Jesuits in Poland reforming their own schools accordingly. Konarski's patriotic attitude also influenced the education system in Poland.

In 1765 King Stanislaw August established the Knights' School (*Szkola Rycerska*) for young men of noble families. After the dissolution of the Jesuit order in 1773, he established his Commission on National Education, the world's first state ministry of education. It allowed a complete reorganization of the Polish educational system. This body set up a uniform national system emphasizing mathematics, natural sciences, and language study. The commission also stressed standardizing elementary education, integrating trade and agricultural skills into the elementary school curriculum, and improving textbooks at all levels. In 1775 the Commission on National Education established the Society for Elementary Books (*Towarzystwo do Ksiag Elementarnych*), which prepared many textbooks, regulations, and decrees.

The partitioning of Poland by foreign governments challenged the work of the Commission on National Education; Germany, Austria, and Russia sought to destroy Polish national consciousness by germanizing and russifying the education system. After 1802 schools in the Russian sector received certain liberties. The educational district in Wilno had been chaired by Prince Adam Czartoryski and seen as a model for educational reform in Russia. Czartoryski, with a group of associates (Stanislaw Kostka Potocki, Tadeuz Czacki, Jan Sniadecki, and

Jedrzej Sniadecki), attempted to develop the achievements of the Commission on National Education. One of the most successful centers was the University in Wilno.

During the first 30 years of the nineteenth century, Polish education expanded freely in the Duchy of Warsaw and, after the Congress of Vienna, in the Congress Kingdom of Poland. In 1807 the so-called Educational Chamber (*Izba Edukacyjna*) was established in the Duchy of Warsaw. In 1812 it evolved into the Management of National Education (*Dyrekcja Edukacji Narodowej*), and then, after 1815, it became the Government Committee for Religion and Public Enlightenment (*Komisja Rzadowa Wyznan Religijnych i Oswiecenia Publicznego*). In 1816 the Academy of Mining (*Szkola Akademiczna Górnicza*) in Kielce was established, as was Warsaw University with five faculties. By the November Uprising against Russia in 1830-1831, the University had educated 1,254 students.

In 1819 in Marymont, near Warsaw, the Forestry School, the Agronomy School, and the Veterinary Institute were created. In Warsaw the Civil Architecture School appeared in 1819, and in 1826, the Polytechnic Institute's Preparatory School opened. After the defeat of the November Uprising, the university was closed, and the entire educational system was subjected to an intensive russification policy. The Russian language became the teaching language. Institutions established after this time included the Real School (*Szkola Realna*), which stressed mathematics, science, and biology (1841), the Medical and Surgical Academy (*Akademia Medyko-Chirurgiczna* 1857), and the Agronomy School (*Instytut Agronomiczny*).

During the 123-year period of partition, teaching and publishing in Polish continued in pockets of resistance, and some innovations such as vocational training schools appeared. In general, the Austrian sector had the least developed education system, whereas the least disruption in educational progress occurred in the Prussian sector.

During the Spring of the Nations, as the wave of uprisings in Eastern and Central Europe in the 1840s was called, the germanization strategy in the Prussian sector was reduced. Teaching of the Polish language was permitted in elementary schools and the lower classes of some gymnasia. Especially important in the area was Ewaryst Estkowski's activity. In 1848, he established the first Polish Pedagogical Association and the first pedagogical journal in the Polish language, *Polish School*.

Another surge of germanization started in the mid-nineteenth century. The Polish language was removed from secondary schools and peasant schools, and students suffered political surveillance. In 1901 religious education in the German language began. This caused a children's strike in Wrzesnia that spread to other places in Great Poland and Pomerania. The strike was continued intermittently until 1907.

Polish consciousness was strengthened by many educational associations. Karol Marcinkowski's Association for Teaching Help (*Towarzystwo Naukowej Pomocy*), for instance, was established in 1841, and the Association of Peasant Libraries (*Towarzystwo Czytelni Ludowych*) founded libraries in small villages and towns and gave lectures and public performances. In 1861, in the Congress Kingdom of Poland, the Government Committee on Religion and Public Enlightenment (*Komisja Rzadowa Wyznan Religijnych i Oswiecenia Publicznego*) was established with Count Aleksander Wielopolski as the principal. In 1862 the tsar approved a decree concerning education in the kingdom that allowed Polish language as a teaching language, partial autonomy of schools, and the opening of four year secondary schools and seven year primary schools. University-level schools were also founded, including the Main School in Warsaw (*Szkola GlównaGlówna Warszawska*) and the Agriculture and Forestry Institute (*Instytut Rolniczo-Lesny*) in Pulawy.

The defeat of the January Uprising in 1863-1864 put an end to autonomy of education. The Main School in Warsaw was turned into a Russian university in 1869, elementary schools were reduced, and secondary schools were subjected to intense ideological control. In 1897 illiterates composed about 69.5 percent of the whole population in the Congress Kingdom of Poland. The only escape lay in underground teaching. Two such institutions were the so-called Flying University (*Uniwersytet Latajacy*), operating between 1887 and 1905, and the Peasants' University (*Uniwersytet Ludowy*). New private schools, especially for girls, were also established.

During the Revolution of 1905 the state Russian schools on Polish territory were boycotted. The protests continued until 1914. The Agriculture University evolved into the Public University (*Uniwersytet dla Wszystkich*), and the Flying University became the Higher Education Courses (*Wyzsze Kursy Naukowe*). In 1906 the private Kronenberg High Business School (*Wyzsza Szkola Handlowa*) was founded. Elementary education was developed by the Association of Teaching Courses for Adult Illiterates (*Stowarzyszenie Kursów dla Analfabetów Doroslych*). After receiving autonomy in Galicia in 1866, the National School Board (*Rada Szkolna Krajowa*) was established to manage secondary schools. Because of a lack of funds, those schools developed very slowly.

Schools in Galicia used the Polish language as a teaching language but their spirit was Austrian. The Polish students opposed that situation, especially after 1905. The Universities in Kraków and Lwów, restored to their

former status between 1870 and 1874, reached the highest standard of education. In 1866, women received the right to study (except under the law faculty). In 1878 Lwówthe High Agriculture Academy (*Wyzsza Akademia Rolnicza*) was established in Dublany near Lwów. The Polytechnic School in Lwów was also approved. In the latter years of the nineteenth century, teachers' associations started their activity, and publications concerning teaching methods and programs appeared.

In the beginning of the twentieth century the problems of educational programs and management were discussed intensively. Some perspectives underscored the role of religion in common education. An opposing viewpoint was held by the activists of the Polish Teachers' Association (*Polski Zwiazek Nauczycielski*) in the Congress Kingdom of Poland and the National Peasant Teachers' Association (*Krajowy Zwiazek Nauczycielstwa Ludowego*). They insisted on secular education, which was also free and accessible to every student, taking into consideration the needs of the whole country.

After the rise of the independent Second Polish Republic in 1918, the most important task was the standardization of the educational system. This process lasted until 1920. Between 1918 and 1939 the newly independent Poland faced the task of reconstructing a national education system from the three separate systems imposed during the time of foreign control by Germany, Austria, and Russia. One of the first legislative achievements was the law ''Concerning School Obligation'' (*O obowiazku szkolnym*) of 7 February 1919. It mandated compulsory attendance of the 7 year primary school from ages 7 to 14. Schools were to be free and accessible for all children.

Common education was intensively developed especially between 1922 and 1929 but needs in this area were greater than the reform efforts. In the grammar schools an eight year system existed, which was divided into two stages. During the first three years, the schools took the general (comprehensive) approach, teaching all students the same material. During the next five years, students were grouped into specialized areas of study for part of their schooling. The school diploma opened up the prospects of further studies. Independent grammar schools were accessible after the five year primary school, and they prepared students for education in the secondary schools. Secondary and high schools remained barely accessible because of high tuition fees.

Among the educational accomplishments of the inter-war period was the establishment of state universities in Craców, Lwów, Poznan, Warsaw, and Wilno; the polytechnic schools in Warsaw and Lwów; the Veterinary Medicine Academy (*Akademia Medycyny Weterynaryjnej*) in Lwów; the Warsaw Agricultural University (*SGGW*); and the University of Mining and Metallurgy (*Akademia Górniczo-Hutnicza*) in Craców. Also established during this period were private schools including the Academy of Fine Arts (*ASP*) in Craców and the Catholic University of Lublin (*Katolicki Uniwersytet Lubelski*). The High School of Economics (*Wyzsza Szkola Handlowa*) evolved into the Warsaw School of Economics (*Szkola Glówna Handlowa*).

In 1938 there were 25 universities, upper schools, and polytechnic schools. There were numerous specialized secondary schools as well, such as the High School of Engineering (*Wyzsza Szkola Inzynierska*) established in Warsaw in 1895, the National Technical School (*Panstwowa Szkola Techniczna*) in Wilno (established in 1922), and high pedagogical schools (in Katowice and Kielce). Specialized arts and military schools also existed, as did special elementary, technical, and high schools.

The 1932 decree of Janusz Jedrzejewicz brought important changes. This decree kept the obligatory seven year primary school for children but also introduced different levels: I level (four-year school), II level (six-year school), or III level (seven-year school). The grammar school was accessible after the six-year primary school. A six-year primary school prepared for a grammar school; a seven-year primary school was intended for those who did not want to continue their education. A four year grammar school, called the *gimnazjum,* offered a unified comprehensive teaching program, so in every school pupils were taught the same types of material. Two-year secondary schools (arts, mathematics, physics, and natural classes) prepared for high studies.

Vocational schools were of great importance. Young working people had to supplement their education in three year schools based on I-level and III-level of primary schools. The lower vocational schools were based on I-level primary school. Vocational grammar schools were equivalent to common grammar schools; vocational schools entitled their graduates to study in high technical schools. The five year pedagogical seminar schools were replaced by three year pedagogical schools, based on four year grammar schools.

In the 1920s, national trends connected with the National Democrats dominated. Tradition, patriotism, and religious attitude played very important roles in education. After the May 1926 coup established the *sanacja* government, a national education curriculum was introduced. The pedagogical activity put the emphasis on respect and responsibility to the state. A decree published 15 March 1933 increased the education minister's powers to control.

In the Second Polish Republic, education for minority populations was not sufficient and did not satisfy the

needs and ambitions of those groups. In 1929 and 1930 the Ukrainians had 790 primary schools, 24 grammar schools, and 1 pedagogical seminar with Ukrainian as a teaching language. Attempts to establish a university in Lwów were defeated. Jews were treated as a religious minority, not an ethnic minority. They owned private primary and secondary schools in which Yiddish, Hebrew, and Polish were the teaching languages. During this same time period, Belorussians had 26 primary schools using their mother tongue. In 1934 and 1935 Germans had 394 primary schools, out of which 203 had classes with Polish and German as teaching languages, and 15 grammar schools (including 2 state schools).

After the military defeat in September 1939, all Polish territory came under Nazi occupation. In the territories annexed to the Third Reich, that is Great Poland, Pomerania, and Silesia, the Polish education system was completely eliminated. Teachers, professors, and the whole intelligentsia were displaced or arrested. In the central region, called the General Government, the Nazis permitted only primary and vocational schools with significantly limited curricula, which had been stripped of all Polish content. All secondary and higher schools were closed to Poles.

The most spectacular event in the destruction of the Polish education system was the so-called *Sonderaktion Krakau*. On 6 November 1939 research workers of the Jagiellonian University and the University of Mining and Metallurgy in Kraków were invited to a meeting, arrested, and taken away to extermination camps. In response, an extensive underground teaching movement developed under the leadership of the Polish Teachers' Association, which had been established in December 1939. In 1940 the Department of Education and Culture was established to represent the Polish government in exile. The underground movement supplied students with teaching aids and textbooks that were published by underground publishing houses. This unofficial education effort spread through the whole territory of the General Government, Greater Poland, Pomerania, and Silesia. The most important center of these education activities was Warsaw, where the Poznan University was operating as the University of Western Poland. Underground teaching appeared in almost all secondary schools, even in ghettoes. An estimated 90,000 students attended underground secondary classes, 10,000 were in illegal vocational classes, and 7,000 were in the resistance's higher education classes. Nowhere else in Europe was underground teaching as extensive as in Poland.

Nazi control exacted a heavy toll on Poland's education infrastructure. Between 1939 and 1940 about 9,000 teachers and 640 professors were murdered. Approximately 6,480 primary schools, 203 secondary schools, 295 vocational schools, and 80 schools for teachers' education were destroyed or damaged. Almost all high school and university property was destroyed or seized.

Where the Soviets controlled Polish territory in the east, starting in late September 1939, education took on diverse forms. In December 1939 the Vilnius authorities closed the Stephen Batory University. At the beginning of 1940 the new authorities nationalized all private schools and closed schools managed by the church. New curricula, consistent with the Soviet system, was introduced. Emphasis on history, literature, and geography was significantly reduced. The teaching language depended on the local conditions; in multinational communities, Russian became the teaching language. Many Belorussian and Ukrainian schools were established.

Between 1944 and 1947, as Poland regained independence from the Nazis and the Second World War ended, schools quickly resumed their activity. During this period all levels of the Polish education system were plagued by shortages of buildings and teachers. In June 1945, a Nationwide Convention in Lódz established the main principles of education, which were closely related to political goals and principles.

The massive task of postwar education reconstruction emphasized the opening of institutions of secondary and higher education to the Polish masses and the reduction of illiteracy. The system of schooling was standardized, and attendance in an eight year primary school was compulsory and tuition-free. Nursery school expenses were shared by the government and parents. The state built dormitories and established scholarships. Young people up to age 18 continued their education in secondary schools. Various types of secondary schools offered basic vocational training, technical training, and general college-preparatory education. Primary schools were unified, and the remnants of the 1932 Decree were abolished.

Due to the lack of qualified staff, new pedagogical lycea were established to educate new teachers. The variety of teachers' training options satisfied temporary needs but shortcomings in the area were noticeable for a long time. In 1945 and 1946 all Polish high schools in the territory of the former Second Polish Republic were opened. New high schools, especially in LódzLódz, Torun, and Lublin, with approximately 55,000 students, were also established.

During the early post-war years, the curriculum was modified only slightly. In 1945 minor changes in Polish language teaching were introduced, concerning knowledge of World War II, social sciences, and working and rural classes. Teaching of foreign languages was commonly introduced. In spite of the breaking of the concordat with the Holy See, religious education in state or council schools was obligatory.

In January 1947, major ideological changes were initiated. Education was infused with the principles of Marxism-Leninism. The educational system depicted the Soviet Union as the country's main partner and ally, and learning the Russian language learning became obligatory. Private schools were closed, and religious education was gradually eliminated. Many educational institutions fell under government control, and many disappeared.

In 1948 the eight year primary schools were evolved into seven year primary schools that were the base for four year lyceum or vocational schools. This change and workers' training were the educational system's most important tasks. In 1955 about 90 percent of pupils were taught in primary 7-year schools. Between 1949 and 1951 about 80,000 teachers were involved in the education of 1,500,000 illiterates from ages 14 to 15. As a direct consequence, illiteracy was virtually eliminated. This was Communism's single, unquestioned contribution to Polish life.

After 1954, two-year vocational schools and four-year technical schools were established. Industrialization drew much of the population to the cities. A decree of July 1958 mandated school attendance to age 18. As a result, training schools were established at factories. These schools were too specialized though and did not satisfy practical requirements. The number of universities, polytechnic schools, academies, and specialized colleges was considerably increased. The introduction of three-year vocational colleges, four-year vocational colleges, and two-year master's studies, with the exception of medical colleges, came about in 1947.

Some faculties (medical, forest, and agricultural) were moved to independent colleges. After theological faculties were taken from universities and colleges in 1954, the Academy of Catholic Theology (*Akademia Teologii Katolickiej*) and Christian Theological Academy (*Chrzescijanska Akademia Teologiczna*) were established. The former was composed of the theological faculty of Warsaw University, which had been separated from it by the Communist authorities to form the state-supported, Catholic, university-level institution. Because it was financed by the state, the bishops looked at it with suspicion. They feared its teachers might be loyal to the state, rather than the church. Priests were also employed by the Academy of Catholic Theology. In 1999 the institution was renamed Cardinal Stefan Wyszynski University after one of the most respected, influential, and prominent figures in Polish religious and public life. The other religious university, the Christian Theological Academy, was for the protestant and orthodox churches. Lectures on Marxism-Leninism were obligatory in all types of schools, beginning in 1948 in evening technical colleges and in 1950 at part time colleges. The 1956 decree restored the importance of the pedagogical council and moderated discipline regulations.

The Law on the Development of Education Systems, passed on 15 July 1961, established formal principles that reiterated the goals of the educational system. An 8 year primary school was introduced and attendance to age 17 was mandated. Schools of all types and on all levels were free. The system of schooling was standardized. Schools were secular in nature, but the church was permitted to establish a network of separate religious education centers to compensate for this restriction. This reform in primary and secondary schools was completed between 1963 and 1971.

In 1971 new models of education were introduced. One of the most important tasks was developing a common secondary education system. The decree of 1973 established 10-year secondary schools with 2-year vocational schools to prepare students for employment or 2-year preparatory colleges, permitting students to take university entrance exams. In 1981, for lack of suitable funds, this educational reform initiative was rejected. Access to education still varied from place to place, depending on social conditions. The end of Soviet rule in 1989 brought many changes to Poland's educational system, including autonomy for local school administrations and comprehensive upgrading of material support. Nursery schools and public schools introduced religious education, according to a directive from the Ministry of National Education.

Between 1991 and 1996, primary schools were taken over by local governments. By law the number of lessons per week decreased from 199.5 in 1989 to 184 in 1993. In 1996, more than 95 percent of primary school graduates continued on to some form of secondary education. Between 1993 and 1994, only 27.9 percent of pupils completing primary school went to lycea (1561 schools with 601,854 pupils). Teachers were educated at universities and colleges. Between 1992 and 1993, approximately 7,000 teachers supplemented their education, despite the fact that tuition was high at both state and private schools. The Office of Innovation and Independent Schools was established to create the legislative basis for government support of private schools established by individuals and civic organizations. Education in the non-public schools was paid, and, with the exception of non-public college-level schools, state subsidies were set at 50 percent of the state's per-student cost. Schools for minorities also appeared, serving mainly Ukrainians, Belorussians, and Lithuanians.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The Polish educational system is currently based mainly on four laws. These are: the Constitution of the

Republic of Poland of 17 October 1997; The Act of Sections of Governmental Administration of 4 September 1997; The Act of the System of Education of 7 September 1991; and the Education Act of 26 January 1982, as amended on 18 February 2000 (known as the Teachers' Charter).

The Constitution grants parents full rights over their children, and the role of teachers is described as supportive. Article 48, part 1, states that ''parents shall have the right to rear their children in accordance with their own convictions. Such upbringing shall respect the degree of maturity of a child as well as his freedom of conscience and belief, and also his convictions.'' The Constitution, in Article 72, states, ''everyone shall have the right to education. Education to 18 years of age shall be compulsory. The manner of fulfillment of schooling obligations shall be specified by statute.'' According to Section 4 of the same Article, ''public authorities shall ensure universal and equal access to education for citizens. To this end, they shall establish and support systems for individual financial and organizational assistance to pupils and students.'' Article 72 also declares that ''the Republic of Poland shall ensure protection of the rights of the child. Everyone shall have the right to demand of organs of public authority that they defend children against violence, cruelty, exploitation, and actions which undermine their moral sense.'' This protection relates to all state organs, including the Ministry of National Education.

The Act of the Sections of the Government Administration of 4 October 1997, orders in Article 20 that the separate section of administration called ''education and rearing'' be established and be responsible for ''the matters of educating and rearing children and the youth.'' On 1 January 1999, schools and public educational institutions were turned over to local administration units. Therefore councils are responsible for kindergartens, primary schools, and grammar schools. Districts are responsible for educational institutions of regional character, designated by the Council of Ministers orders, as well as institutions for teachers' development and adult education.

The financing of schools and educational institutions depends on the administrative division. Consequently, all territorial self-government units perform their own educational tasks and finance them. Government subventions, however, constitute a substantial part of their educational budgets.

EDUCATIONAL SYSTEM—OVERVIEW

Compulsory Education & Age Limits: Education is compulsory for all children ages 8 to 16. The most recent reform of education raised the upper age limit to 18. Primary school starts at age 7 and ends at 13. Currently, reformed secondary education still consists of two systems. According to the old one, education starts at age 16 and finishes at age 19 or 20 for technical schools, and, according to the new, the age range is from 16 to 18.

Enrollment as of the 1999-2000 School Year:

Nursery Schools: The total number of nursery schools during the 1999-2000 school year was 8,733, serving 719,611 children, which included 6,763 who had some disability. In towns, such schools contained 575,736 children, 6,358 of whom were disabled. In the countryside, schools served 144,875, including 405 disabled.

Preschool Education: During the same period, Poland had 10,152 preschools, containing 199,506 toddlers, which included 1,180 disabled. In towns, the children totaled 53,866, including 941 disabled. In the country, the figures were 145,640 and 239.

Primary Schools: This system contained 17,743 schools that were attended by 3,957,986 pupils, 1,919,281 of whom were girls. In the 1999-2000 school year, the system graduated 656,245 students of whom 320,645 were girls. Public (state) primary schools totaled 17,375 and served 3,926,577 pupils. Of these 1,904,719 were girls. During the same school year, 651,862 students were graduated, including 318,725 girls. The far smaller non-public (private) primary schools numbered 368, having 31,409 students, of whom 14,652 were girls. This system graduated 4,383 children, including 1,920 girls. The total number of primary school repeaters, not including those in special schools, was 29,789, of whom 6,983 were girls. Repeaters in towns totaled 20,535, including 4,986 girls. Rural repeaters numbered 9,254, among them 1,997 girls. Special primary schools for the disabled numbered 801. They contained 59,397 pupils, of whom 22,654 were girls. Some 13,143 were graduated, including 4,772 girls.

Gymnasium: Polish schools at this level totaled 6,121, serving 615,328 pupils, of whom 296,256 were girls. Public schools numbered 5,766, and held 609,414 children, including 293,648 girls. There were 355 non-public schools. They contained 5,914 students, of whom 2,608 were girls. The nation had 709 special gymnasiums to meet the needs of 14,948 children, including 5,534 girls.

Secondary Schools: Polish schools at this level totaled 2,156. They held 864,091 students, of whom 551,531 were girls. During the 1999-2000 school year, 173,917 students graduated, including 115,973 girls. Public schools numbered 1,715 and served 823,049 children, including 530,463 girls. The system contains 439 non-public secondary schools of public school status; they

teach 40,986 pupils, including 20,947 girls. There are also two non-public secondary schools, teaching 56 students, of whom 21 are girls. Finally, there were 24 special secondary schools. They held 1,198 adolescents, including 630 girls.

Technical & Vocational Schools: Schools of this type numbered 8,066. They taught 1,552,350 pupils, including 651,235 girls. Of a total of 379,566 graduates, 164,063 were girls. Most of these technical and vocational schools or 7,749 were public; they instructed 1,526,089 students, including 636,778 girls. The system contained 306 non-public schools of public school status. They taught 25,905 pupils, of whom 14,326 were girls. Poland had 11 non-public technical schools, which served 356 students, including 131 girls. There were also 353 special technical schools, holding 30,954 students; 12,866 of these were girls.

Complementary Secondary Schools: Schools in this category numbered 2,328. They taught 205,538 students, including 133,686 girls. Of these complementary secondary schools, 925 were public. They served 100,731 pupils, of whom 71,695 were girls. Another 1,072 non-public schools of public school status existed. They held 83,393 youths, including 50,347 girls. Non-public schools of this type numbered 331, training 21,414 students, which included 11,644 girls.

Academic Year: The school year for all types of primary and secondary schools begins on 1 September and finishes in June. The exact closing date is not prescribed, but the year must contain at least 42 weeks. It contains two semesters. There are three major holiday periods: Christmas break (usually one week), winter holiday (two weeks), and Easter recess (one week). The winter holiday period is usually in late January or early February, but exact dates are defined by regional education authorities. National holidays and Teachers Day (14 October) are free by law.

The academic year for university-type institutions starts usually in October, but the decision is left to the university rector who may move it to late September. It is usually divided into 2 semesters, each 15 weeks long. Some private three year colleges have trimesters, depending on decisions by college authorities. Holiday periods at universities vary and are decided by their governing bodies. Typically, they fall at the same periods as non-university schools. Rectors may decide about an extra day off for students and faculty (called Rector's Day), which is usually the Academic Year Inauguration Day, or any other day that should be free for important reasons. In both types of institution, winter holiday marks the end of the winter semester and beginning of the summer (spring) semester.

Language of Instruction: The language of instruction is Polish in schools for Poles and in minority schools the language is the minority's language. According to *Oswiata i wychowanie w roku szkolnym 1999/2000,* during the 1999-2000 academic year, there were 429 primary schools of this type. Belorussion was the language of instruction in 31 schools, serving 2,220 students. Sixteen Kashubian institutions instructed 980 youth. Thirteen Lithuanian programs affected 528 students. German schools, numbering 273, taught some 25,545 young people. Eleven Slovakian establishments reached 303 students. Ukranian institutions (76) instructed 1,919 students, and 8 Lemk schools taught 66 youth. That same year there were 25 pupils studying the Hebrew language as their mother tongue.

In 1999-2000 there were 91 gymnasium-type schools for 3,383 ethnic minority pupils. Ten Belorussian institutions reached 354 students. Two Kashubian schools instructed 144. Two Lithuanian establishments taught 73 young people. The nation had 49 German language schools with 2,588 pupils. Slovakian speakers (29) studied at three schools, while 190 who spoke Ukranian learned at 23 schools. Finally, 2 Lemk programs reached 14 students.

That same year there were 10 lycees for 2,214 ethnic minority pupils. Two Belorussian schools reached 1,046 students. One Kashubian institution instructed 346; a Lithuanian establishment, 128; a German, 111; and a Slovakian, 53. Four Ukranian schools taught 530 pupils. There were no Lemk lycee.

Grading System & Examination: Polish education marks students from one to six. One means failure; two is poor; three signifies satisfactory; four good; five very good; and six excellent. The grading system is not considered effective, and many believe it should be modernized in accordance with European standards. Grading rigor varies widely, and marks on school certificates are not always legible. In the reformed system of education, the Matura examination and school certificate are expected to be external and standardized, comparable with the European Committee. The latter arrangement affords graduates better opportunities at higher education or employment.

Currently, pupil progress is assessed internally by each school. Detailed examination requirements are designed by a teacher and approved by a Pedagogical Council and headmaster. Pupils and their parents are informed about these requirements. The requirements must not violate the Ministry of National Education directive of 19 April 1999, which delineates principles of public school evaluation, examination, grading, and promotion. Other external assessment standards are provided by Regional

Examination Commissions and by State Examination Commissions, which are established by the Ministry of National Education.

The Polish system mandates standard testing at various levels. After primary school, students take an aptitude examination. After the gymnasium, they are given an orientation examination. After the profiled lyceum they take an exit examination, known as the Matura. Upon completing the program at a vocational school, students are tested in the appropriate trade. After a supplementary lyceum, they may take the Matura examination. During the 1998-1999 school year, at the general secondary school level, 172,216 students took the Matura examination (99.1 percent of the total). The vast majority, 163,977 (94.4 percent), passed it. For the same time period, in technical and vocational schools, 176,402 students took the Matura. Again most, 151,309 (85.8 percent), succeeded. University candidates take entrance examinations for their chosen institution. The education reform that has introduced the Matura produced agreement from university authorities that it would serve as the entrance examination.

Private & Religious Schools: In Poland all non-public schools are considered private. The word ''private'' might be part of a school's name, but it is not used in official documents. Consequently, all religious schools are private, because the state generally does not support them financially. On the other hand, Lublin Catholic University receives state financial support from time to time. Twice a year a collection for LCU is taken in Polish churches. There is a Catholic state university, Cardinal Stefan Wyszynski University in Warsaw, but it is not subsidized by the church. Another church institution is the Papal Academy of Theology in Craców. Religious primary and secondary schools may be subsidized by state money. Seminaries, which prepare students for the priesthood, are maintained by the diocese.

Education of Pupils Needing Special Care: Special courses and curricula for gifted students try to take into consideration the student's social skills and attitudes. A new experimental gymnasium and academic lyceum are being considered. Also, plans include a Nationwide Center for Supporting Gifted Pupils (*Ogolnopolskie Centrum Wspierania Uczniow Wybitnie Uzdolnionych*) that would be based on a local institution in Torun.

Polish schools are available for everyone, including pupils suffering from physical, emotional, or other disabilities. Such students comprise about 3 percent of the nation's children. In recent years the disabled have been integrated into the mainstream. Today, a typical class may have 15 to 20 students, plus 3 to 5 possessing handicaps. As much as is possible, all participate in common activities, and act together to solve common problems. Some of the disabled, such as the blind and the deaf, receive individual lessons with specialists, making use of sign language, Braille, and exercises to help develop a sense of direction. As of 1997, approximately 3,590 pupils attended integrated classes. Children and youth who need special care but lack the opportunity to attend integrated classes make use of special education.

Instructional Technology: Schools use computers as instructional aids. No exact number is available. The goal is to have a computer laboratory with Internet access in every school. The subject ''informatics'' *informatyka*) teaches computer skills. Many schools participate in a program called ''Internet for Schools.''

The new, reformed educational system needs textbooks that are consistent with the programming basics. Teachers have the right to choose the most appropriate textbooks from a list compiled by the Ministry of National Education. Listed books are those deemed appropriate in content, methodology, and reading level. They must be constitutional, consistent with the United Nations' Declaration of Human Rights, non-racist, respectful of children's rights, and not at variance with international textbook principles. Beyond the Ministry of National Education's list, schools may add experimental textbooks that comply with the legal system.

Foreign Students: During the 1999-2000 academic year, there were 6,025 students in Poland from the following countries: Ukraine (1,073); Belarus (831); Lithuania (515); the Czech Republic (265); Kazakhstan (363); Russia (262); the United States (270); Vietnam (168); Germany (147); and Bulgaria (127).

PREPRIMARY & PRIMARY EDUCATION

Preschool education (*Wychowanie przedszkolne*) is part of the formal system of education in Poland. There is a well-established network of state preschools that children may attend between ages three and six. Formal school education before age 7 is not compulsory, but currently 97 percent of the nation's children attend. Preschool education is designed to aid child development, promote personal independence, and instill a sense of confidence in one's self and abilities. Preschool education helps those between the ages of three and five develop communication and social skills, so they can cope with any situation. Parents may participate in arranging activities.

Programming is based on assumptions that: children expect approval and safety; they need to develop communication and social skills; they should be encouraged to explore and understand their environment and the larger

world; they should examine their creative nature; they need to know how to recognize and express emotions; they must learn how to live in a group; and they must also learn to act independently. Polish teachers are expected to generate situations whereby children can realize their innate potential.

Polish education features a so-called zero year (*Zerowka*) for six-year-olds, which helps children make a fluid transition from preschool to primary school. Beyond this transitional nature, however, preschools have educational value. Preschools measure a child's progress. They can help recognize the child's potential and alert professionals to any need for specialized intervention. Preschool teachers help children understand themselves and the outside world, develop relationships with peers, and build their own system of values.

From seven years of age, all children must attend primary school, which is divided into two teaching stages. The first is integrated teaching, classes I-III (*Szkola podstawowa I etap*) for children aged seven to nine. The second is block teaching, classes IV-VI (*II etap*) for children between 10 and 13.

The first stage of primary education should develop literacy and an understanding of numbers; teach children how to use simple tools; help them become independent and self-confident; develop sensitivity; strengthen cultural, historical, national, and ethnic identity; and teach children to explore their environment and the world. Integrated education takes advantage of children's experiences in family life and other situations.

At this stage teachers give lessons, which follow the established curriculum. The routine is adapted to pupils' ability and includes physical exercises every day, totaling approximately three hours per week. Class I has a minimum of 20 lessons per week. Fifteen of them are general in nature and mandated by law. Another three lessons per week are assigned at a tutor's or the headmaster's discretion. Compensatory activities, in accordance with appropriate regulations, make up another two lessons a week. Beyond these, additional lessons may include religion or ethics (two per week) and corrective gymnastics (two per week). Class II is structured in the same manner with the minimum lesson number raised to 21. Class III features a minimum of 23 lessons weekly.

The second stage of primary education (*II etap*) features classes IV to VI. Education at this level is designed to help students gain adequate knowledge and skills; promote curiosity and stimulate intellectual activity; develop sensitivity toward and empathy for disabled persons; instill proper social attitudes; and teach appropriate behaviors. Schools strive to create the necessary conditions for gaining knowledge and skills. The curriculum includes thematic blocks covering: patriotic and social education; preparation for family life; health care education; and public relations.

Beginning with class IV, a considerable degree of structure appears. Students receive at minimum 26 lessons per week. Six are in culture, the Polish language, history, and social science. Another six are in mathematics and biology. Foreign language training accounts for three, fine arts and technical activities for two and physical education for three. One lesson per week takes place with a tutor, and five per week are at the tutor or headmaster's discretion. An extra two lessons per week in religion and ethics are set by special regulations but are not counted toward the number of compulsory lessons. This structure is identical for classes V and VI.

After finishing six years of primary school, children take aptitude examinations, which are administered and assessed by the school's internal board. Such testing measures achievement and informs both parents and teachers. Results are communicated to the next level of schooling, the gymnasium.

SECONDARY EDUCATION

Gymnasium: The gymnasium, the secondary stage of general education, is compulsory in Poland for pupils aged 13 to 16. Education at this level is designed to help pupils develop adequate knowledge and skills; take advantage of human achievements; fully master their mother tongue; become independent, confident in themselves and their abilities, and prepared to become responsible individuals; participate in cultural activity; develop sensitivity toward and empathy for disabled persons; solve the problems of adolescence; and learn how to work well with others.

In each of the 3 classes of the gymnasium, students must take a minimum of 28 lessons per week. Four are devoted to the Polish language. Another four are divided among history, traditional culture, and civic education. Three lessons per week are devoted to mathematics and three to foreign language study. Five lessons per week are divided among biology, chemistry, physics, astronomy, and geography. Two per week cover computer sciences, technical education, music, or fine arts. Physical education makes up three lessons weekly. One lesson per week is determined by the student's tutor and another three by the tutor or headmaster. Two lessons per week of religion and ethics are required but not counted toward the total. All of the aforementioned subjects prepare students for higher education. They are supplemented by interdisciplinary lessons, which include preparation for family life; healthcare education; ecological education; philosophy; the culture of public relations; and civil defense.

Post-Gymnasium Secondary Education: At age 16, the gymnasium graduate chooses to prepare for higher education or to begin training for a vocation. Those seeking the former attend a three year profiled lyceum. Completion of this program leads to the Matura certificate, which confers entitlement to enter a university. Other students choose a two year vocational school, which ends with a vocational examination. The graduate of this school may elect to go on to a supplementary lyceum, which is a two year school that prepares one for the Matura examination. Passing that examination permits entry to academies.

Profiled Lyceum: The profiled lyceum (*liceum profilowane*) is a three year secondary school following the gymnasium. At this level, 80 percent of education in Poland is comprised of general courses, which follow a basic curriculum. About 20 percent is ''profiled'' or specialized education in academic or vocational subjects. Five profiles exist: academic; technology; agriculture and environment; social work and services; and culture and arts. The academic profile is made up of traditional college-preparatory courses and is designed for both those eventually seeking higher education and students whose precise future plans remain unclear. The technology profile deals with industrial production and features courses in: construction; chemistry; electricity and electronics; mechanics; the media; woodworking; food preparation; textiles; and biotechnology. The agriculture and environment profile is built around natural resource management and provides curricula that include: landscaping; forestry; horticulture; environmental protection; and related areas. The social work and services profile stresses the management and organization of social services. Its offerings include: economics and administration; trade; delivery of medicine; promotion and marketing; transportation; tourism; catering and hotel management; defense; and others ranging from beautician's training to insurance. A final profile concerns culture and the arts. It is aimed at those interested in organizing and managing cultural activities. Its courses include: European and regional culture; theatre and film; artisanship and monument restoration; fashion and interior design; and sports.

Despite this broad range of choices, most of a student's time in the profiled lyceum is spent taking mandated courses. Students have 15 lessons per week in the study of the Polish language. They take 10 a week in their primary foreign language and 6 in another. History and civics make up another six. Ten lessons every week are in mathematics. The science component is strong. Students must have four weekly lessons in physics and astronomy; three in chemistry; and three in biology. Rounding out the required courses are three lessons per week in geography; two in entrepreneurship; two in national defense; and nine in physical education. Every student's week also includes three lessons with a form tutor; three at the headmaster's discretion; and six in religion/ethics, though the latter do not count toward required totals.

Vocational Education: Vocational schools are two-year schools based on the gymnasium model and preparing graduates for employment. The certificate confirms their vocational knowledge and skills. In vocational schools, about 35 percent of the lessons stress general knowledge and social skills and aim to develop proper adult attitudes. The remaining lessons impart intensive vocational knowledge and skills to raise the graduate to the journeyman (or entry-level) employee. Education at this level strives to maintain a careful awareness of the labor market and local employers' expectations. The curriculum provides 12 lessons per week in the area of general education, including a foreign language and preparation for family life. Two lessons per week are spent with the form tutor. (Groups of students have a permanent mentor known as the form tutor.) Usually this time is spent on class bureaucracy, behavior problems, and arranging parental conferences. National Defense takes up two lessons a week and physical education six. Two lessons are reserved for entrepreneurship. A full 40 lessons per week are devoted to vocational training. Conditions vary from institution to institution, but in no case do theoretical approaches exceed 25 percent; the great bulk of these lessons are grounded firmly in the practical. For underage students, the number of vocational lessons is determined by the Labor Code.

Students who pass all subjects receive a graduation certificate. It proves the acquisition of both general and vocational knowledge and skills, which is confirmed by an authorized examination center appointed by the Regional Examination Commission. Special care is taken to protect juveniles. Their examinations are conducted by a craft guild or a trade commission. The under-aged graduate receives journeyman vocational entitlements, according to a professions register. Pupils who have served a suitable six month apprenticeship may also receive vocational degrees.

Supplementary Lyceum: The supplementary lyceum (*liceum uzupelniajace*) is a two-year general school, which is designed mainly for vocational school graduates who want to supplement their education. This school prepares students for the Matura examination and should thereby create an equal chance for all students to pursue the highest levels of education in the Polish system. Such education takes the form of daily or evening courses. Supplementary lycea concentrate approximately 85 percent of the lessons on compulsory subjects. Graduates

may continue their education, including higher education.

The supplementary lyceum curriculum typically consists of 15 lessons per week on the Polish language and 10 on a foreign language. History and civic education require 6, and mathematics consumes another 10. Again a strong science component appears: physics receives four lessons per week; chemistry three; and biology three. There are three geography lessons; nine optional classes; and two at the headmaster's discretion.

Upper Secondary Specialized Lyceum: A specialized lyceum (*szkola policealna*) educates lycea graduates and makes possible vocational skill acquisition at the secondary level. This school is designed for graduates who possess the Matura certificate. The curriculum is quite flexible. Students take 437 lessons per semester in vocational training. They spend nine lessons studying the market economy and labor economy of their chosen field. Physical education accounts for 19 lessons, and 10 are devoted to topics at the headmaster's discretion. Vocational training in the secondary specialized lyceum is a combination of theoretical and practical courses. It is difficult to say how important the specialized lycea will be in the future. Graduates from the profiled lycea can choose from employment, supplementary education, and higher education. The main advantage the specialized lyceum provides is the acquisition of professional qualifications.

HIGHER EDUCATION

The academic year lasts 30 weeks, is divided into 2 semesters, and in most cases begins with Matriculation Day, 1 October. Graduates from institutions of higher education may receive the Bachelor's and Master's degrees and the professional title of engineer. The Bachelor's degree (*licencjat*) is awarded following at least three years of professional training. Engineer (*inzynier*) comes after a minimum of three and a half years of professional training. The Master's degree (*magister*) can be awarded to those with four and a half years in a program of study in a given discipline. The degree can also be obtained by completing a two year supplementary Master's program, for which holders of the title of engineer are eligible. Some universities and the Polish Academy of Sciences award the Ph.D. degree. Doctorate studies take the form of daily courses and last approximately four years. They require, among other things, that applicants possess master's degrees in their field and write at least two articles and a dissertation. In Poland, as in many continental systems, a post-doctoral degree, known as Doctor Habilitated (*doktor habilitowany*), can be attained. Persons write and successfully defend a second dissertation, which is usually publishable, and complete a complicated five step process, assuring that they are among the finest scholars in the land.

Types of Institutions: As of December 2000, the rapidly growing higher education sector included: 15 universities; 18 technical universities; 2 maritime schools; 5 academies of economics; 9 high pedagogical schools; 7 academies of agriculture; 12 academies of medicine; 7 academies of theology; 11 military academies; 8 music schools; 6 schools of art; 3 theatre schools; and 6 academies of physical education. Legislation creating the current system includes the Education System Act; the Higher Education Act; and the Scholarly Degrees and Titles Act, supplemented with more detailed regulations by the Ministry of National Education.

Scholarly research is conducted by the 51 scientific institutes of the Polish Academy of Sciences (*PAN-Polska Akademia Nauk*), 29 research units of PAN, and 4 foreign research institutions. In 1991, the Committee for Scientific Research, a government agency, was set up to bring back direct government financing of science. Fundamental principles include financing projects, not institutions, granting financial support on a competitive basis, and granting statute research according to the ranked quality of state educational institutions. Foundations for scientific research, however, have very limited funds. The government-run Foundation for Polish Science, also established in 1991, plays an important role as well. Its chief objectives are financing scientific research and projects through nearly 100 loans, subventions, and stipends per year for young scientists. In 1992 the Foundation Award for exemplary scientific achievements was initiated. It is granted in three main fields: the humanities and social sciences; medicine and the natural sciences; and technical and exact sciences.

Admission Standards: To qualify for admission to an institution of higher education, the applicant must hold the secondary school certificate or the professional title of Bachelor's degree or meet requirements determined autonomously by a specific high school.

Faculty: Lectures and other classes are conducted by research workers: professors, associate professors, senior lecturers (*adiunkt*), and assistants. Classes are also taught by senior lecturers, lecturers, and instructors. The post of professor is an appointed position for persons who have been granted the degree of professor. The post of associate professor is given to persons who have received at least the degree of reader (*doktor habilitowany*) and corresponds to the United States position of associate professor. In the high vocational school, which grants the professional title of bachelor's degree or engineer, the associate professor post is given to persons who have ob-

tained the degree of doctor and possess the necessary professional experience gained outside high schools or the educational system. In a higher maritime school, associate professor is an appointed position for those who have obtained the degree of doctor and possess the highest naval degree. The post senior lecturer is for persons who have attained at least the title of doctor. Assistant is given to those who have obtained at least the master's degree or its equivalent. Senior lecturers are persons who have attained the professional title of doctor or master (or its equivalent) and have the necessary professional experience.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

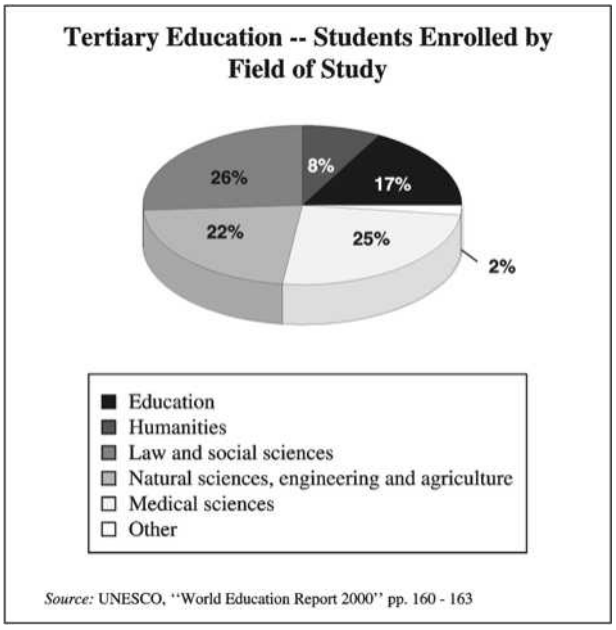
In Poland, public schools of all types are free because tuition costs are covered by the state. In non-public schools, tuition fees depend on maintenance costs and vary widely. In higher education, all day courses are free, but students have to pay for evening, part-time, and postgraduate courses. In addition, Ph.D. candidates pay for doctoral examinations and review costs, unless they are employed in a teaching capacity by the university.

The following examples reveal the high cost of part time and evening course costs. To put them in perspective, it may help to note that a nominated teacher with 10 years' experience earned 1,100 Polish *zloties* (PLN) per month in 2001, when one U.S. dollar was worth four PLN. Similarly, an assistant professor with a Ph.D. and 8 years experience received 1,200 to 1,300; members of the Polish Academy of Sciences made even less, as they did not have teaching duties.

For courses in economy and management: The Academy of Economy in Poznan charged 2,100 PLN for part time winter semester courses and 1,900 PLN in the spring. Evening course fees were 2,500 and 2,300. Courses toward the Master's degree charged 2,200 for the winter semester and 2,000 for the spring. Warsaw University's Department of Economy charged 3,600 per semester. The Roman Kudlinski Higher School of Banking, Finance, and Management in Warsaw, a private school, charged 5,300 per year for day courses and 4,400 for part time.

For courses in law: Jagiellonian University in Cracow charged 5,000 PLN for part time courses and 3,000 for each subsequent year. The Higher School of Commerce and Law in Warsaw, a private institution, levied 2,400 per semester, plus an additional 300 enrollment fee, for day and part time courses.

For computer science courses: Wroclaw University required 2,100 PLN per semester. The Polish-Japanese Higher School of Computer Techniques, a private institution, charged 980 per month for 10 months for day courses and 760 for evening courses.



For courses in pedagogy: Adam Mickiewicz University in Poznan charged 1,200 PLN per semester. The private Higher School of Humanities and Economy in Lódz required 320 per month for 12 months, plus 500 as a yearly enrollment fee for day courses. Its part time courses were 280 PLN per month for 12 months with a 540 enrollment fee.

For political science courses: Maria Sklodowska Curie University in Lublin charged 2,100 PLN per year.

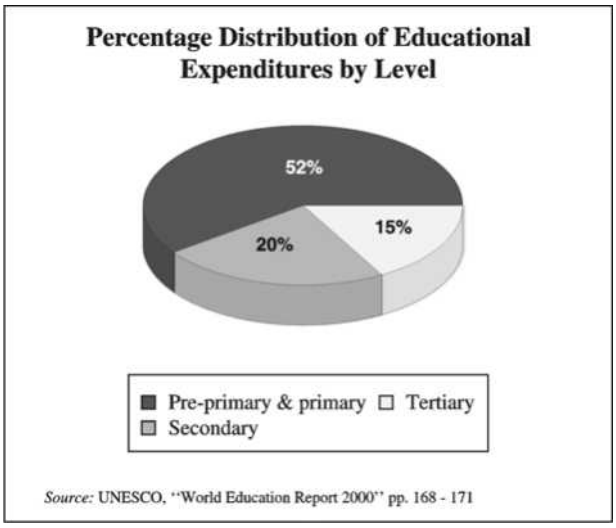
For courses in psychology: Warsaw University charged 3,900 PLN per semester for evenings. Lublin Catholic University's evening courses cost 1,700 for the winter semester and 1,500 for the spring.

For courses in Sociology: Warsaw University charged 1,750 PLN per semester for evening courses.

Educational Budget: In 2001, Poland's educational budget projected expenditures in the following manner: teachers' salaries, 70 percent; administrative salaries, 10 percent; repairs and maintenance, 14 percent; teaching aids, 2 percent; teachers' development, 3 percent; and curricula, 1 percent.

NONFORMAL EDUCATION

Adult Education: Currently, the most important continuing education institutions are the Continuing Education Centers (*Centra Ksztalcenia Ustawicznego*) and the Practical Education Centers (*Centra Ksztalcenia Praktycznego*). Figures as of December 1999 showed 109 adult elementary schools, 108 of them full time. They held



5,777 students, including 1,106 women. They graduated 4,259 persons, 783 of them women. Adult gymnasiums totaled 21, with 20 of them full-time day schools. They served 710 students, of whom 89 were women. There were no graduation figures for this level. The nation had 754 adult secondary comprehensive schools, 353 day and 401 part time. Total students numbered 205,708 of whom 67,644 were women. They graduated 24,181, including 13,719 women. Secondary vocational and technical schools were greatest in number. There were 1,829 of them, 1,078 day and 751 part-time. They held 205,708 students, which included 67,644 women.

In Poland's reformed system, adult education will be extremely important. Presently, formal elementary education of adults is not necessary. The tendency is to study extramurally, without attending courses, and then to take the required examinations. For this reason it will be necessary to establish a proper accreditation system for schools and examination commissions. It is anticipated that public schools will take on three major adult education functions. First, they will impart the general knowledge that children obtain through the three year profiled lyceum and the two year supplementary lyceum. Second, they will provide vocational knowledge and skill training for adults. Third, they will be responsible for the supplementary education of youths who gained skills during an apprenticeship or in voluntary units, the so-called OHP (*Ochotniczy Hufiec Pracy*).

Open University & Distance Learning: The open university concept was tried in 1994-1995 but failed. The idea has never been resurrected. Aside from distance language and vocational courses, distance education does not exist. Indeed, the concept is associated with the great open spaces of Australia, and there is little enthusiasm for it in Poland.

TEACHING PROFESSION

Education of Teachers: Teachers are trained in two systems: higher education and the other schools. Higher education includes universities, high pedagogical schools and pedagogical academies, and academies of physical education. The other schools in the department of education, culture, and health care train teachers in vocational subjects or general education subjects. These other schools include schools of polytechnics, academies of music, and academies of art. They also include colleges for teachers (who will work some day in preschool education, primary schools, and educational institutions) and foreign languages colleges that train teachers for primary and secondary schools. Training courses in colleges are consistent with subjects to be taught or activities to be executed. The goal is the acquisition of the knowledge and skills necessary to employment in a given job.

High schools educate teachers in accordance with regulations of the Central Accreditation Council and are compatible with academic subjects. In the present register of courses, only some courses are purely educational in nature: special pedagogy, physical education, music education, and technical education. For this reason, education follows special guides. If the university does not possess such guides, teachers are trained under an optional pedagogical college course. In most cases, the high school offers single specialization courses. Teachers who have specialized in one subject have an opportunity to gain another specialization through postgraduate two year programs of study. In compliance with the regulations of the education act *Karta Nauczyciela,* the student teacher gives lessons at schools and educational institutions or operates in special educational institutions. Specialists who help with education (speech therapists and psychologists) are also considered teachers.

This same act established five stages of teacher promotion. At the entry level is the ''trainee,'' who teaches for one or two years. Success at this level, plus an interview before a committee consisting of the trainee's mentor, school's director, faculty chair of the subject, and a trade union representative selected by the trainee, elevates the trainee to the level of ''contract teacher.'' Here he or she works for at least three years. Thereafter, passing an examination raises him or her to the status of ''nominated teacher.'' Three good years must be completed at this level, plus an interview with a committee consisting of the school's director or assistant director, three experts from the Ministry of Education, and a trade union representative. The fourth level, ''certified teacher,'' is where most careers end. Some, however, manage to reach the fifth level, which is honorary, ''professor of education.''

Academic Teachers in Institutions of Higher Education: As of the 1999-2000 school year, a total of 77,821 faculty members, including 29,908 women, worked in Polish higher education. There were 15,530 professors of whom 2,873 were women. Predictably, there were far fewer doctors habilitated, 8,963. Of this figure, 1,388 were female. Associate professors numbered 596, and among them were 120 women. Of this figure 391 held the scientific degree of doctor habilitated, including 80 women. Tutors possessing at least the doctorate, called *adiunkt*, were counted at 2,768 with 715 females. Out of this total, 885 possessed the scientific title of doctor habilitated. Assistants, holders of the M.A. degree, totaled 18,138 and among them were 8,511 women. Other teachers numbered 15,861, of them 8,689 were female.

Teacher Unions: There are two main teachers unions, the Polish Teachers Union (*Zwiazek Nauczycielstwa Polskiego*) and Solidarity's Teachers Section (*Sekcja Nauczycielska NSZZ Solidarnosc*).

SUMMARY

Free Poland inherited from the era of Soviet domination an excellent public education system. In some ways that system has been made even better. Since 1989, Marxist-Leninist dogma has been removed, and, in addition, the curriculum has been made more practical and less encyclopedic. Today a wide selection of textbooks is in use. Polish schools now demand even more from teachers, who have been forced to develop their skills more fully. New pedagogical methods are in use, and parents now play a greater role in the education of their children. Poland has responded eagerly to the technological revolution of the 1990s, and stress on computers and the Internet is heavy. In addition, new facilities have been built. Poland's system for busing school children is quite efficient.

Not all change has been positive. In the pell-mell rush to embrace capitalism, Poland, like many nations of the former East Bloc, has badly neglected its public sector employees. In just a decade, low wages have produced a visible generation gap. University graduates are not attracted to teaching, but instead the most talented are lured into business. Below the college-teaching level, the profession has experienced a feminization found frequently in nations that support public education in an inadequate manner. Likewise, low investment in school equipment, such as teaching aids,plagues the system. Post-Communist creation of a new level of schools, the gymnasium, has caused school bureaucracies to expand, even as funds have not kept up with growth. The closing of small, rural schools in the name of efficiency has caused some children to be bused great distances to the chagrin of parents. Indeed, the very selection of which schools to shut has led to ugly rhetoric in parts of the Polish countryside.

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—Dorota Batog, Wlodzimierz Batog, and James G. Ryan

PORTUGAL

BASIC DATA

Official Country Name:	Portuguese Republic
Region:	Europe
Population:	10,048,232
Language(s):	Portuguese
Literacy Rate:	87.4%
Academic Year:	October-July
Compulsory Schooling:	9 years
Public Expenditure on Education:	5.8%
Foreign Students in National Universities:	6,140
Libraries:	219

Educational Enrollment:	Primary: 896,681 Secondary: 947,478 Higher: 319,525
Educational Enrollment Rate:	Primary: 128% Secondary: 111% Higher: 39%
Female Enrollment Rate:	Primary: 124% Secondary: 116% Higher: 44%

HISTORY & BACKGROUND

The beginning of Portugal's history can be traced back to the twelfth century. The Iberian Peninsula was once a unified region. At the end of the eleventh century, Afonso VI, King of Leon, married his daughter Urraca to Count Raymond of Burgundy. His other daughter, Tareja, who was illegitimate, was married to Henry of Burgundy. As a wedding gift, Count Raymond of Burgundy received the region of Galicia, the second area between the Minho and the Tagus, called *Condado Portucalense.* When Afonso VI died, military and political struggles took place in the Christian kingdoms. Afonso Henriques, son of Tareja, had the necessary military forces to achieve independence. Portugal became an autonomous country in 1143 and Afonso Henriques received the title of king in 1179.

Public instruction took place in the cathedrals, Episcopal churches, convents and monasteries. Reading, writing, and grammar were taught in Latin, but it was spoken only by a few religious people and ambassadors from the twelfth to the fifteenth century. It was necessary to have vocabularies in both Latin and Portuguese. During the reign of King Dinis (1279-1325), Portuguese was declared the official language. The first written texts in Portuguese, mainly translations from Latin texts, appeared in the beginning of the thirteenth century. People were taught through oral transmission: *cantigas* (songs composed by troubadours), chivalry novels, sermons and proverbs. D. Dinis founded the first Portuguese university in Lisbon in 1290, moving it to the city of Coimbra in 1308.

In 1385, with the Master of Avis, King John I, the epoch of world exploration starts. The focus of the feudal system changed to commerce. This social transformation brought a new conscience, best described as ''man has a creative power that enables him to dominate the universe.'' In order to achieve this transformation a person needed knowledge. In addition to reading and writing, the merchants living in Oporto and Lisbon acquired the ability to count.

The sixteenth century was the golden age of world exploration. In the kingdom of John III (1521-57) the university, which had been moved back to Lisbon, once more returned to Coimbra (1537) and the *Colégio das Artes* (School of Arts) was created. Teachers and masters were recruited from France. Latin, Greek, Hebrew, mathematics, logic, and philosophy were taught. The philosophy of Aristotelic rationalism replaced the previous medieval theology. With the death of André de Gouveia, head of the school, a crisis began, and in 1555 the management of the school was handed over to the *Companhia de Jesus* (Company of Jesus), and became a center of theological studies. Primary and secondary schools were established and mainly maintained by religious congregations.

An organized censorship was introduced by the Spanish Inquisition in 1540. Inquisition, censorship, and the Jesuit education intervened in the cultural development of the country. Writings of well-known authors such as Gil Vicente, Luis de Camões, and Bernardim Ribeiro were considered against the faith and good customs. The Portuguese language became more grammatically established when João de Barros wrote the *Gramática da Língua Portuguesa* in 1540.

With Portuguese exploration, there was an overseas expansion to Africa, Asia, and South America. The chief discovery was Brazil in 1500. Primary schooling was started there, primarily to convert the natives. Father Antonio Vieira, the most famous author of Baroque prose, was sent to Brazil principally for this purpose.

A change of mentality occurred in the eighteenth century, with the theories of the Enlightenment. This intellectual movement of renovation started in England and reached its high point with the French revolution. The ideas and philosophy of Diderot, D'Alembert, Voltaire, and Jean-Jacques Rousseau had great influence. Spanish influence was replaced by French, Italian, English, and German thinking.

Beginning in 1755, King Joseph (1750-77) with the help of his prime minister, the Marquis of Pombal, adopted foreign theories based on ''reason.'' There was a direct intervention by the state on the teaching and cultural systems. Jesuits were forbidden to teach and were expelled from the country in 1759, and religious censorship was replaced by the *Real Mesa Censória* in 1768. Even religious charity institutions involved in teaching were replaced by a systematized education. The Marquis of Pombal was able to perform a complete renewal of the whole political and educational structure in 1755 due to an earthquake that destroyed the city of Lisbon. A new city was created in its place, and a renewal of the educational system was introduced. Luís Antonio Verney (1731-92) wrote *O Verdadeiro Método de Estudar*

(1746), with the intention of ensuring that the following subjects would be taken into account in education: writing, languages, rhetoric, arithmetic, humanities, sciences, and dance. In 1768 the *Escola de Comércio* (Commercial School) started providing education for the bourgeois class. Females had access to school for the first time beginning in the eighteenth century, under the reign of Queen Mary I (1777-1816), who also founded the *Academia Real das Ciências* (Royal Academy of Sciences) and the *Biblioteca Nacional* (National Library). Educational progress was slow during the nineteenth century. With the introduction of journalism as a means of communication, reading became more important, although until 1900 the rate of illiteracy was about 80 percent. New schools continued to be opened, with institutions specializing in agriculture, medicine, and humanities (*Faculdades de Letras*). Free primary schooling was guaranteed by the constitutions of 1822 and 1926. Well-known writers were engaged in improving education, and many composed books and essays with this purpose. Antonio Feliciano de Castilho contributed with *Método Português Castilho* (1850) and *Felicidade pela Instrução* (1854). João de Deus fought illiteracy with his *Cartilha Maternal* (1876). In the twentieth century major changes occurred. Elementary school was reformed in 1901. Instruction was divided into *ensino infantil* (preschooling) from the ages of 4 to 6; *primeiro grau* (elementary school), which was obligatory and free for both genders between the age of 6 and 12; and *segundo grau* (middle school), which was not obligatory but was paid. The republic was proclaimed in 1910, and a new *Decreto* (law) remodeled the educational system. *Ensino primário* (elementary school) was divided into elementary, which lasted for three years for children with a minimum age of seven; complementary, with a duration of two years for children beginning at age 10; and superior, three years for students beginning at age 12. When they graduated they could go to *Escolas normais primárias* (teaching schools for elementary education), or to regular courses in industrial, agricultural, commercial, or technical schools. *Escolas móveis* (mobile schools) were created where it was not possible to have permanent schools. The 1910 *Decreto* was replaced in 1919, at which time obligatory schooling was extended from three to five years, and elementary and complementary school were transformed into one course called *ensino primário* (elementary school) with obligatory attendance.

The Ministry of Public Instruction that had been created in 1913 was eliminated with in 1926 when the fascist regime *Estado Novo* (new state) of Antonio Oliveira Salazar took over the country. This regime ruled until 25 April 1974. In 1936 the *livro único* (sole book) was institutionalized for elementary education. Salazar closed the *escolas móveis* that had been important for adult literacy. He replaced the *escolas normais superiores* (higher normal schools) with *cursos de ciências pedagógicas* (pedagogical science programs) and the *escolas normais primárias* with the *escolas de magistério primárias.* The former schools were for women, the latter for both genders. In 1930 the *Universidade Técnica de Lisboa* was founded, uniting several colleges.

The Republic had given initial autonomy to women as to career and employment. Divorce was legalized, and in 1914 the *Conselho das Mulheres Portuguesas* (Council of Portuguese Women) was created to defend women's rights. Salazar's regime was a setback. Women who stayed at home were cherished, and in 1939 a law was introduced allowing men to make their wives return home in case they left them. From 1950 to 1960, Salazar introduced a law that prevented women from obtaining a passport or leaving the country without her husband's authorization.

Major changes took place with a 1974 coup (*Revolução dos Cravos*). The Portuguese speaking countries in Africa (Angola, Mozambique, Cape Verde, Guinea Bissau, and the Islands of São Tomé and Príncipe) gained independence from Portugal. In 1975, one year of compulsory *serviço cívico* (civic service) became obligatory before entering the university. The Constitution of 1976 gave equal rights to both men and women without discrimination. In this same year coeducation became obligatory.

Marcelo Caetano, Salazar's successor, created the Ministry of Education, proposed the reform of the secondary school, and encouraged student repression. Teachers of elementary schools, in addition to their normal duties, had to perform other tasks such as teaching illiterate adults and functioning as agents of community development.

The government elected in 1991 began to emphasize modernization and decentralization. Some of its goals continued into the late twentieth and early twenty-first century. Portugal joined the European Common Market and sought to promote the Portuguese language and culture at home and abroad, to modernize public administration, and to give more local power to educational institutions by decentralization.

CONSTITUTIONAL & LEGAL FOUNDATIONS

National education policies, curricula, and specific programs are administered by the Ministry of Education. Principles and rules are established by *decretos-leis* (legal decrees). The basic educational law, *Lei 46/86,* dates from 14 October 1986. It has 64 articles (*artigos*) divided into nine chapters (*capítulos*). Chapters I and II

define general and organizational principles; chapter III determines the support and educational complements for successful learning; chapter IV establishes the careers and the requirements for educators to teach; chapter V determines the organization of material resources; chapter VI establishes the principles and forms of educational administration; chapter VII determines the forms of development and evaluation of the system; chapter VIII defines the role of private and cooperative teaching; and chapter IX deals with the transition, implementation, and application of the law. Another law, *Decreto-Lei 43/89,* of 3 February 1989, is an additional document that establishes the juridical regime of school's autonomy in basic and secondary education.

Besides establishing a basic educational policy, the law 46/86 (*Lei de Bases do Sistema Educativo*) declares that education is universal, compulsory, and free of charge for all children until the age of nine years. Education is compulsory from the age of 6 to 15. This is still the key law.

Other laws of significance are the law that established the teaching career, *Decreto-Lei 139-A/90,* and the law that modifies the teaching career for elementary and secondary, *Decreto-Lei 1/98.*

Portugal has advanced immensely in the last few decades. From the coup in 1974 to the twenty-first century, freedom and autonomy have been granted to educational institutions and contemporary social concerns have been addressed, such as special education for disabled children, access for immigrant children to Portuguese language and culture, promotion of the Portuguese language abroad, and the use of democratic rights by teachers, students, and parents in the form of associations.

Beginning in the year 2000, the third part of PRODEP III, or *Programa de Desenvolvimento Educativo para Portugal* (Educational Development Program for Portugal) was put into action. This program was established with the European Commission and is designed to be in effect until 2006. The first two parts of the program, PRODEP I and II, contributed heavily to the development of the country's educational system throughout the decade of the 1990s.

The financial resources made available by PRODEP III are directed towards the various levels of instruction, such as basic, secondary, and higher education, and also to professional schools. More importantly, PRODEP III allocates funds for professional development of those individuals directly involved in the teaching process. This effort helps keep teaching professionals up-to-date with the latest technological advances.

EDUCATIONAL SYSTEM—OVERVIEW

The educational system as it was established by the Law 46/86 has a number of divisions:

(a) preschool education;

(b) basic education with three cycles; the first cycle is four years, the second cycle is two years, and the third cycle is three years, with the first six years of basic education being compulsory and free;

(c) Secondary education lasts three years, with a choice among general courses, technological courses, vocational courses, and courses of specialized artistic education;

(d) higher education is divided into university education and polytechnic education, and the student can graduate with a *bacharelato* (bachelor's degree) or *licenciatura* (license to teach);

(e) *Mestrado* (master's degree), and

(f) *Doutorado* (doctorate degree).

The school year runs from October through July. Schools have double and even triple shifts in some cases (morning, afternoon, and evening). The curricula are formulated by the Ministry of Education. In addition to public schools, there are also private ones, mainly Roman Catholic. There is also indirect education in remote and peripheral zones with the use of television, although the government is trying to make the whole system direct. The school year is divided into two semesters of 15 to 16 weeks each. There is an effort to have classes no larger than 25 pupils. Each teacher is responsible for one subject.

PREPRIMARY & PRIMARY EDUCATION

Preprimary Education: The family is in charge of the child's education at an early stage. The role of the family is complemented or supplemented with *educação pré-escolar* (preschool education). Preschool education is part of the *Departamento de Educação Básica* (Department of Basic Education), and is organized into public and private nursery schools. Since 1977, there is a legal provision for one year of preprimary education, but because the government recognizes the importance of the family in the child's learning process from the age of three to six, attendance is optional.

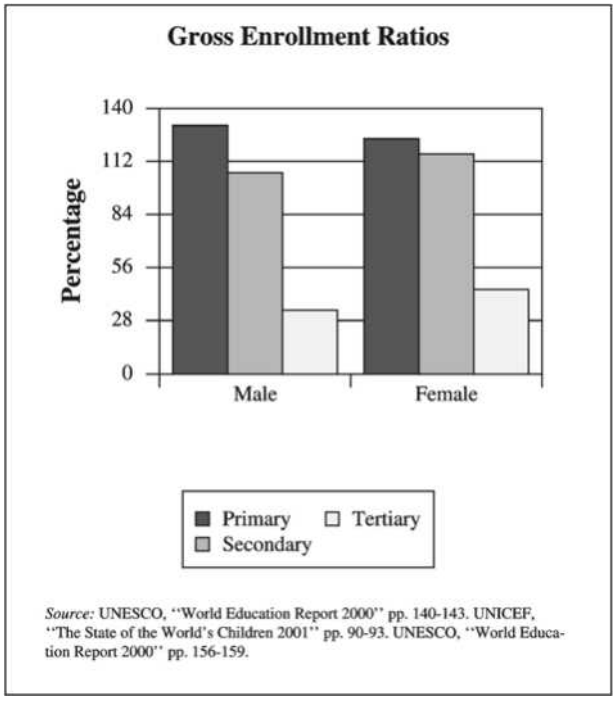
The purpose of preschool is to stimulate the child's skills, introduce him or her to a system, encourage the development of a number of potential abilities, help acquire a sense of order and responsibility, and promote social integration at an early stage. Awareness is a keyword in this process.

Basic Education: *Educação básica* (basic education) starts at the age of six and lasts for nine years. As the name implies, it is a basic and general education that allows the student to pursue higher levels of education.

Basic education is universal, compulsory, and free of charge. It is divided into three cycles of different duration. The first cycle lasts four years. It includes the development of speech, reading, and writing, and basic skills in the subjects of arithmetic, artistic expression, drama, music, and sports.

The second cycle lasts two years. Education is centered on the previous humanistic, artistic, and physical studies, along with scientific, technological, sociological, and economical studies. Emphasis is given to developing creative and critical thinking, and methodology is introduced in several of the fields taught. Moral and civic education is also introduced at this stage.

The third cycle lasts three years. There is a continuation of the previous teaching, but is focused on the student's future either in continuing studies or in joining the work force. Vocational guidance is given to help prepare the student for the future. The twelfth year is the *ano propedêutico* (a year of preparation for higher level studies).



Source: UNESCO, "World Education Report 2000" pp. 140-143. UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

Adult Education: Part of the Department of Basic Education is the *Ensino Básico Recorrente* (Basic Education for Adults). It provides an opportunity for adults who did not have a previous chance to study, or who failed or dropped out of school, to integrate into the societal system. It also allows adult professional improvement. At the end of the third cycle of this learning process, adults receive a diploma or certificate similar to regular education. There is a curricular program with evaluation, but learning is focused on an interdisciplinary approach to round out the adult's personality. The goal of adult education is to help eliminate illiteracy. In 1990 the rate of illiteracy was 13 percent, mainly in rural areas and among women.

Special Education: There are special schools for handicapped children, although they are often included in normal classes. The *Instituto Antonio Coelho* and the *Instituto Condessa de Rilvas* are responsible for mentally retarded children. The *Instituto de Assistência aos Menores* takes care of the visually and hearing impaired youngsters. The *Centro Infantil Helen Keller* is also in charge of the visually impaired. In 1973 the Ministry of Education set up a department of special education to help out the basic and secondary levels. Teachers are prepared at the *Centro de Preparação de Pessoal da Direcção Geral de Assistência.*

SECONDARY EDUCATION

Secondary education in Portugal is administered by the Department of Secondary Education. Depending on the student's aims, he/she can pursue *Cursos Gerais* (general courses) if he/she wants to continue to higher education, or *Cursos Tecnológicos* (technological courses) to prepare for the job market. Each of these courses lasts three years and corresponds to the tenth, eleventh, and twelfth school year. At the end of the twelfth year of the general courses, a diploma is awarded that specifies the course completed and the final grade, allowing the student to apply for higher education. A Vocational Qualification Certificate is awarded at the end of the technological course that allows students to access the job market.

According to the Constitution and to the secondary curricular structure, the main objectives of secondary education are to create conditions for personal and social fulfillment; to consolidate the student's culture through knowledge, instruments, and methodologies; to help define individual interests and vocational options; and to prepare the student intellectually and emotionally for a role in society.

Additionally, there is secondary education for adults, similar to the normal secondary education, divided into general courses and technological courses. There are also visual art courses for adults, part of the special artistic education, divided into *Curso geral* and *Curso tecnológico do ensino artístico*, both leading to a twelfth year diploma.

Vocational Education: If the student is not going to pursue a university career, he/she can get technical training for three years following the ninth year of schooling

organized in modules or autonomous learning units. These units allow the student to learn at his/her own pace. There is flexibility in training according to individual needs and potentials. If the student completes the studies successfully, he/she will receive a diploma, which allows acceptance at the university in the future. The student also receives another diploma, a vocational certificate, enabling him/her for the job market. Vocational education is a response to shortcomings in local and regional markets.

Artistic Education: Visual arts, dance, and music are specific courses designed for those with potential ability and interest in one of these artistic expressions. Plastic arts and musical expression are taught beginning in preschool. Visual education, such as art and design, is part of the secondary education. Artistic education provides training for professional preparation in these fields. It encourages individual and group practices and stimulates creativity. The Calouste Gulbenkian Foundation has a school that teaches music students at the primary and secondary levels. Lisbon and Oporto have schools of fine arts on a higher level. Lisbon also has a National Conservatory and a Gregorian Institute. Other cities have musical conservatories and visual arts institutions as well.

HIGHER EDUCATION

Higher education consists of university education and polytechnic education. Both are supervised by the *Direcção Geral do Ensino Superior* (General Office for Higher Education). Each university has a general assembly, a faculty council, and a pedagogical and scientific council. The head of each university is the *reitor* (rector), and all rectors are members of the National Board of Education.

The aim of higher education is to provide students scientific, cultural, and technical preparation for their professional career. The *Licenciatura* ranges from four to six years. Further specialization can be pursued with a *mestrado* (master's degree) and *doutorado* (doctorate degree).

Higher education is also undertaken in polytechnic institutes with the purpose of developing specific skills and knowledge in professional activities. These institutes offer a *Bacharelato* (bachelor's degree) after six semesters or a *Licenciatura* following eight semesters of pedagogical training.

The most traditional universities are in Lisbon, Coimbra, and Oporto. The University of Coimbra is the nation's oldest university. Like other universities, it has several colleges and institutes.

There is an entrance examination for the university that can be waived if the secondary school degrees are very high. In 1975 the Revolutionary Council approved a law obliging students to perform one year of public service before entering the university.

Faculty is organized in four ranks: lecturer, assistant professor, associate professor, and full professor. Universities recruit their faculty through competitive examination and appropriate credentials.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Administration: The Ministry of Education centralizes the educational system in Portugal, although autonomy has been given to the islands of Azores and Madeira. The Ministry has several departments and institutes, including departments for basic education, secondary education, and higher education. There are other departments or directorates for special education; adult education; technological, artistic, and vocational education; distance education; and educational technology. Councils and consulting bodies complement this structure. The advisory bodies are the National Education Committee, the Private and Cooperative Education Coordinating Committee, the Committee of Higher Education, and the National School Sports Committee. The technical and planning bodies are formed by the General Secretariat, the Planning and Research Bureau, and the Financial Management Bureau. The Institute for Educational Research is responsible for research and educational development. The Ministry of Education also works in conjunction with other ministries such as health, labor, and social welfare; culture; and public works.

Since decentralization and regionalization was established in 1976 and effectively implemented in the 1990s, Portugal has been divided into central and regional bodies, each with its own directorate. There is one directorate for each of the five regions of Portugal (*Direcção Regional de Educação do Norte, Direcção Regional de Educação do Centro, Direcção Regional de Educação de Lisboa, Direcção Regional de Educação do Alentejo, and Direcção Regional de Educação do Algarve*). The Ministry of Education is responsible for educational guidelines, administrative and planning support, coordination of developmental research, and social policy.

Finance: The GEF, or *Gabinete de Gestão Financeira* (Financial Management Bureau), is an autonomous branch of the Ministry of Education in charge of financial programming and management of projects cofinanced by the European Union. The budget of the Ministry of Education in the year 2001 was about US$6.8 million, which represents an increase of 9.8 percent in comparison to the previous year.

The Ministry of Education pays the salary of teaching staff and faculty for public schools and universities.

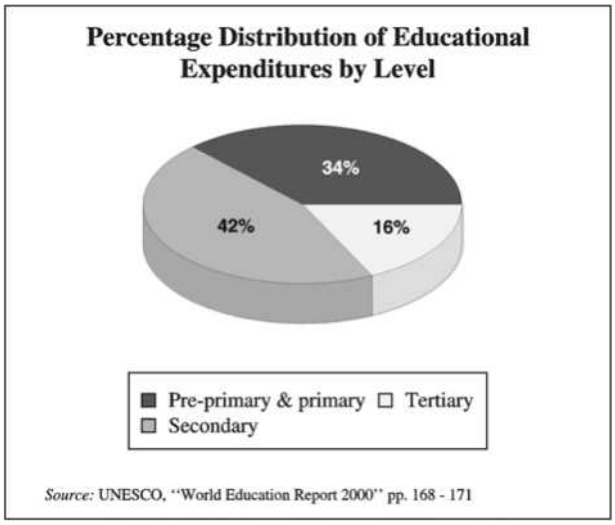
Municipalities are in charge of elementary schools for administration and construction. The Ministry of Public Works is responsible for other construction. Tuition is free for students, but they must pay for books and school materials. Grants for needy students are available from social services.

NONFORMAL EDUCATION

The Ministry of Education created the GAERI, or *Gabinete de Assuntos Europeus e Relações Internacionais* (Office for European and International Relations) through the Decree-Law 59/96 to take care of *assuntos comunitários* (community issues), *assuntos bilaterais e multilaterais* (bilateral and multilateral issues), and *cooperação para o desenvolvimento* (developmental cooperation). The objective of GAERI is to fulfill the needs of the European Common Market. Several projects are being developed by the Instituto de Inovação Educacional (Institute of Educational Innovations) in this direction. There are over 110 projects available, elaborated by a team of professors from several countries. This is part of the distance learning process. Some of the main projects developed by Portugal in conjunction with other countries are: ''The image of the other,'' ''Women all over the world,'' ''Islands projects,'' ''Art gallery,'' ''Life in my part of the world,'' ''Global water sampling project,'' and ''Radiodata.'' The last two projects highlight a main concern of the Institute of Educational Innovations with environmental issues involving the decline of life quality. The institute tries to identify the evolution of national measures for environmental protection and to disseminate these notions through nonformal education in the media and schools in order to bring awareness to the youngsters who can make a difference in the future of the world.

The European Schools Project is a European initiative to promote telecommunications in basic and secondary schools throughout the world. It was started in 1988 at the University of Amsterdam and has the participation of more than 300 schools in 26 countries. The use of the Internet to promote better learning is one of its main purposes.

Other projects involve the teaching of the Portuguese language and the development of knowledge of Portuguese culture through books and television programs to Portuguese speaking countries, the PALOP, or *Países de Língua Oficial Portuguesa* (countries of official Portuguese language). In the African Portuguese speaking countries, Portuguese is only one of many languages and generally the official one for schooling and business communication.



TEACHING PROFESSION

Teachers for nursery schools are educated for three years in *escolas de educadores de infância.* Basic education teachers are trained in *escolas do magistério primário.* There is an entrance exam, and the course lasts three years. For all other levels, the training is done in *escolas superiores de educação.* If the teachers have a *bacharelato* or *licenciatura,* they take a two-year theoretical and practical training course; otherwise they have to pursue a four- or five-year course at a higher level. Secondary school teachers take courses that last four years, or five if they continue pedagogical or professional training. Special education is taught at the *Instituto Antonio Aurélio da Costa Ferreira* in Lisbon, and hearing impaired training is also taught at the *Instituto Jacob Rodrigues Pereira.*

SUMMARY

The Iberian Peninsula, which includes Portugal and Spain, has always been considered separate from the rest of Europe. Innovations from the rest of Europe were introduced up to a century after they had been instituted in other countries. Two major changes occurred in the twentieth century that helped Portugal catch up with the rest of Europe. The first was the Revolution of 1975, which introduced democratic reform. The second was Portugal's admission to the European Common Market. Financial aid, technological cooperation, and a renewed educational system helped diminish the educational gap and allowed Portugal to compete with other countries in the twenty-first century.

The Ministry of Education office in Portugal has faced continual challenges throughout its existence, especially with demands for a standardized education throughout Europe. Major reforms took place in Portugal

in the 1980s and 1990s: development of polytechnic higher education as an alternative to university higher education, implementation of school management with the participation of the community (parents, local authorities, etc.), reform of school curricula by integrating subject contents of different fields of knowledge, and collaboration of state support in private vocational schools.

In the 1990s, the demand for a completely free education became a proverbial battle between the Ministry of Education and students from public universities across the country. Prior to the 1990s, private higher education institutions were nonexistent, and the small number of enrollments available in public universities was responsible for a huge gap between the number of applicants and the number of admissions. To complicate matters, access to universities was dependent on different factors dictated by different governments. Admissions criteria varied from a student's twelfth year of schooling as the determining factor in admission to a student's placement on nationwide standardized exams. Admissions criteria then became based on a student's placement on the controversial PGA, or *Prova Geral de Acesso* (general access exam), in conjunction with his/her grades from the tenth through the twelfth years of school. The PGA was later replaced by the *Provas Específicas* (specific exams), which tested candidates to the university according to their fields of expertise.

In any case, access to a university was a competitive process that left thousands of students each year waiting for another opportunity the next year. Among those who made it, there existed a gap between those receiving a nearly free education at public universities and those dealing with the high cost of studying at a private university. After graduating from a program, the Portuguese students had another challenge, finding a job that corresponded to their education, training, and aspirations.

As of the early 2000s, the way universities offer their *cursos* (courses) differs from the United States. Courses in Portugal consist of a predefined program for the duration of the student's education. Rather than random classes, students pick from programs in specific fields. As most universities tend to specialize in a limited number of subject areas, students have a limited choice of schools that offer the courses pertinent to their vocation.

Students in secondary education voiced their concerns in an active way. In the early twenty-first century, it is a common occurrence in Portugal for students to boycott classes and organize manifestations in front of the headquarters of the Ministry of Education or one of its regional branches. One concern of students was sex education classes, which students claimed were promised to be in the curriculum many years prior but had never been included. High school students have also been known to voice their disagreement, as when the Ministry of Education proposed to increase the length of the class period from 50 to 90 minutes.

The twenty-first century offers the challenge of broadening access to higher education for more students, the training and development of teachers to face the increasing number of students, and increased vocational education for a more demanding and specialized job market. Education in Portugal is developing at an accelerated rate in all aspects. Illiteracy rates have fallen consistently in the last years. There have never been so many students in higher education, and so many pursuing graduate studies. The country is developing rapidly, and education is accompanying this strong evolution.

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—Monica Rector and Pedro Lopes

PUERTO RICO

BASIC DATA

Official Country Name:	Puerto Rico
Region:	Puerto Rico & Lesser Antilles
Population:	3,915,798
Language(s):	Spanish, English
Literacy Rate:	89%
Compulsory Schooling:	10 years
Educational Enrollment:	Primary: 385,903
Educational Enrollment Rate:	Higher: 42%
Teachers:	Primary: 17,270
Student-Teacher Ratio:	Primary: 22:1

HISTORY & BACKGROUND

Puerto Rico is the smallest of the three islands, including also Santo Domingo and Cuba, that make up the Caribbean chain known as the Greater Antilles. The first governor, Ponce de León, set a pattern of common interests for Spain and Puerto Rico, but later this commonality of interests ceased to be, and the Spanish captains-general who held all authority on the island came to represent a Spain that became increasingly foreign to the inhabitants of Puerto Rico. The island consequently was transformed into a colony much as the American colonies would have been had there not been an American Revolution. After the euphoria felt by Puerto Ricans at their ''liberation'' by the United States in 1898 and with appointment of an American civil governor at the end of the military *régime,* it became clear that Puerto Rico, a Spanish-speaking tropical island possessed of four centuries of recorded history, and in virtually all respects culturally different from its new masters, was being ruled by Washington in a manner not so very different from that practiced by the former Spanish authority. If anything, the change in *régime* reinforced Puerto Rico's colonial status. The American governors were instructed to charge Puerto Ricans with the task of convincing Congress that they deserved to run their own affairs. They succeeded at this, at least for a while, and it was the main source of their very concentrated power. Meanwhile, Puerto Rican politicians and statesmen not only had to satisfy their constituents at home—or at least keep them tranquil—they also had to gain the approval of their American governors. With the advent of the Commonwealth (*Estado Libre Asociado*) in 1952, it was no longer a matter of ''political maturity,'' but also one of money. Puerto Rico was too poor to survive as a ''real'' country; it needed American help, and so, while the Commonwealth galvanized all its energies into industrialization schemes, banking, and more recently in high tech projects to prove the country's money-making capacities, the colony went on, and the extremely powerful governor was its most effective agent.

It has been said that when the colonial metropolis sneezes the colony catches pneumonia. Such was certainly the case with both Cuba and Puerto Rico. For these two islands, the illnesses visited upon them by the turmoil in nineteenth century Spain resulted in general paralysis. Nowhere was this paralysis more endemic than in the area of education. Plans for much-needed educational reform agreed to by a few liberal Spanish governors were regularly undone by their traditionalist or reactionary successors. The captains-general governors throughout the century retained all real power. What was required of the island population and its élite was collaboration. While some Puerto Ricans took another course of action, such as living in exile, the island leaders, like Muñoz Rivera and other *autonomistas,* who remained felt constrained to negotiate within the colonial parameters set by Spain. Formed in the Spanish mold, these same men negotiated in a similar way with the American conqueror—first with the American military commander and then with his civilian successor, the governor dispatched from Washington. The basic and essential colonial structure was maintained and solidified with the help of the President, the Congress, and the U.S.

To attempt briefly to analyze Spanish educational policy in Puerto Rico during the nineteenth century would be an exercise in futility. Let us refer to the *Report* written by the Secretary of the Insular Board of Education, Enrique C. Hernández in 1899 and presented on 2 January 1900 to his superior, the American President of

the Insular Board of Education, Dr. Victor S. Clark. Until 1850, Hernández states:

> Public education was practically left to private initiative. . .[and] primary education was confided to those whose education and training left much to desire, and. . .this was supplemented only by an exceedingly scanty secondary instruction given by the teachers employed by the Economic Society and the few private schools and academies that then existed.

The Jesuits came and went; more or less durable, private, essentially Puerto Rican initiatives were taken and lasted for (usually) rather short periods of time. Perhaps the most significant of these was the Civil Institute of Higher Studies, founded in 1882 and opened in 1883. In 1883-84 a total of 172 resident pupils were enrolled in the Institute, 170 matriculated at private schools affiliated with the Institute, and 77 home tutored students were not resident at any school, for a total of 419. The official plan of study included Spanish, Latin, the geography of Spain, universal history, and elements of physiology and hygiene, as well as elements of agriculture, French or English, and religion and moral instruction. A parallel, but quite short-lived, professional school for the preparation of surveyors, builders, commercial and industrial agents, and engineers was also established with very strict standards of admission, which probably contributed to its rapid demise. Similar difficulties also attended the opening of a trade school in 1886 that was designed to furnish an opportunity to workmen and others to acquire a broader knowledge of their particular arts and trades. Diverse religious institutions were allied in one way or another with the Secondary Institute (e.g., the Mothers of the Sacred Heart, for girls—now the coeducational Universidad del Sagrado Corazón, in Santurce; the Central Academy, El Estudio and the College of the Paulist Fathers, in Ponce; the Lyceum, in Mayagüez, as well as the Lyceum in Guayama). All of these institutions received some tax-based financial support. After renewed petitions to found a university in Puerto Rico were turned down by the Spanish government, the Society for the Protection of Intelligence was founded by Laurano Vargas. It still existed in 1900, and its object was to provide funds for study abroad to talented, but needy youths. At the initiative of the *Ateneo de Puerto Rico,* the colonial régime authorized the founding of an Institute of Higher Studies linked to the University of Havana in 1888 that lasted only a few years. Its most notable achievement was the establishment of a scientifically-based course for midwives. Finally, a school of *Enseñanza Popular* (People' Teaching) was established in 1896 for the education of workmen; subjects taught included reading and writing, the history of Spain, political economy, the geography of Puerto Rico, popular law, and ethics. About 100 workmen attended the lectures and workshops of this school; it disappeared after the United States conquest and occupation. Hernández made the following comments:

> So it resulted that in the principal towns (by the time the régime changed) the culture of the Porto [sic] Rican students was much superior to that of the Spaniards, as is evidenced upon mere cursory examination of the periodicals and publications of the time. This naturally was not the case in the smaller towns, especially in the country, where the inhabitants were under the complete domination of their masters, without other means of defense than their innate intelligence and wit, sharpened in the struggle to evade laws they believed oppressive and to escape obligations that they believed unjust, and when their natural acuteness was not sufficient to effect this they took refuge in a passive resistance against which all the efforts of the Government were fruitless.

Thus, at the time of the American takeover, the bankruptcy of the Spanish *ancien régime* in matters of education was complete, and the initiative had passed into the hands of a rather disparate Puerto Rican leadership. Secondly, *faute de mieux,* stress was placed less on elementary or primary education than on the more advanced levels (although the 1880-98 period saw the establishment of two Normal Schools designed to train elementary teachers). Finally, a rather traditional, humanistically oriented program of study remained at the core of secondary study, complemented by a set of complementary practical courses, such as ship navigation, agronomy, pharmacy, and midwifery.

At the close of the school year 1898-99, less than a year after the American arrival, the wretched conditions of public education in terms of the children served are evident in the following numbers given in Dr. Clark's above-cited Report. Out of a total island population of 857,660, some 203,373 boys and girls constituted the school age cohort. Of these students, 14,720 boys and 7,153 girls were actually in attendance at the schools that existed at the time—a bit over 10 percent.

It is erroneous to believe, however, that a pupil enrolled in September stayed in the course throughout the school year. Some dropped out; others came in late to take their place. As best as could be determined for the island's schools in 1907 some 65,436 pupils were enrolled. However, of these only about 35,000 received a full year's instruction. Thus, despite much school reform and rhetoric, great expenditures of money, and an extraordinary amount of planning (including passing laws that declared school attendance obligatory), in the decade following 1886, school attendance increased a little over 50 percent. One is led to speculate that mass schooling had not yet entirely entered into the Puerto Rican cultural mentality or perhaps that the population, recalcitrant to government-inspired initiatives, failed to see the advantages in having their children taught in the schools.

The decades following the Congressional passage of the Jones Act in 1917—the Act that replaced the first Organic Act of Puerto Rico, known as the Foraker Act (1900), that accorded United States citizenship to the residents of Puerto Rico—witnessed the further attempted implementation of what has been called the three educational objectives common to the entire sequence of powerful American Commissioners of Education on the island: ''Americanization or de-Puertoricanization, physical extension of the school system, and the teaching of English'' (Osuna). However, these goals were never attained. Many schools were built; however, the early experiment of bringing in American teachers to teach in them was a failure. It became necessary to train native Puerto Rican teachers and then to police their command of English through annual testing. The training was attempted through the creation of Normal Schools. One of these, first located in Fajardo and then in Río Piedras with a faculty imported from the United States, was joined to various other institutions and declared a university by law in 1903. However, it constituted little more than the nucleus for a new humanities and sciences-based University of Puerto Rico created over an initial period of five years (starting in 1924) by its American Chancellor, Thomas E. Benner. A tripartite primary-middle-high school model was transferred more or less as is to Puerto Rico and was expected to function as it did in much of the United States at the time, with pupils advancing year by year in the grades. It succeeded only partially.

Thus, despite the genuine enthusiasm felt by many Puerto Rican thinkers, economic and political leaders, and patriots for educational reform and progress, American efforts in these directions (or viewed as such by Americans) met with mixed success. Henry K. Carroll's assertion that the people of Puerto Rico ''will learn the art of governing in the only possible way—by having their responsibilities [e.g., education] laid upon them'' was systematically ignored. Indeed, the Foraker Act invested the entire responsibility for education on the United States-appointed Commissioner of Education whose ''reports. . .[were] annually [to be] transmitted to Congress'' (Section 18). Yet, already in 1899 General Miles had warned: ''A careful and painstaking study of local conditions and laws, occupying many months at least, should. . .[precede] any attempt at legislation on a subject as important and difficult as that of public instruction of a million people of Spanish origin'' (Negrón de Montilla).

Besides the traditional inertia of the upper socioeconomic classes with regard to the education of their laboring compatriots-Blacks, *jíbaros,* and factory workers (often women in the sewing industry), resistance to the United States's English-language policy in the schools (implemented at least temporarily in 1907) was rampant both among the teaching staffs and their pupils and would continue until well into the fourth and fifth decades of the century. By this time textbooks were almost all in English and even Spanish translations were culturally exotic to Puerto Rican children, e.g., white Christmases; light brown-haired Bill, blond Mary and their dog, Spot; the small-town American suburban house with its white picket fence; and the total absence of Blacks and dark-skinned people. Meanwhile directives from the Commissioner of Education continued to require school attendance on Epiphany, the Day of the Three Kings when Puerto Rican children traditionally received what is called in the United States their ''Christmas presents.'' Also, the foisting on the school system by the last United States Commissioner of Education, Puerto Rican-born J.B. Huyke, of textbooks written by himself was seen as a public scandal, as was his consistent affirmation of the power invested in him by his office to choose whatever textbooks he wanted.

The end of the 1920s and start of the 1930s saw new perceptions and opinions voiced by a generation in the process of succeeding its fathers. The son of Muñoz Rivera, Luis Muñoz Marín was the most charismatic of these new voices. In March 1928 he wrote in *The Literary Digest,* ''We demand a form of government that shall give us ample power to deal with our internal affairs, unhampered by documents and policies not made for Puerto Rico and not decently applicable to Puerto Rico'' (Negrón de Montilla 1971). And, in *The American Mercury* (February 1929): ''Two major problems perplex the old Spanish province of Porto Rico arising out of its enforced relationship to the United States. One deals with consequences of American economic development, the other with the cultural Americanization.'' In this same article Muñoz focuses on the students of the University of Puerto Rico, finding in them the effective means to face ''the two instruments of Americanization, the bayonets of education and the contagion imminent in close commercial relationships, because they want Porto Rico to be Porto Rico and not a replica of Ohio [or] of Arizona.'' It should be noted that the University administration passed in 1926 from the control of the Puerto Rican legislature and the United States Commissioner of Education in Puerto Rico to a separate status entirely.

By the start of the 1930s, the three elements that would constitute the basis of Muñoz Marín's gradual assumption of power in Puerto Rico and that would be the *raison d'être* of his *Partido Popular Democrático* (founded in 1937) were already in place. These were (1) the affirmation of Puerto Rican identity and reaffirmation of its ''true'' culture, to be accomplished particularly by strengthening the position of Spanish; (2) the ever-increasing participation of Puerto Ricans themselves in the economic life of the island, leading eventually to the

creation of Operation Bootstrap and governmental planning agencies like Fomento; and (3) the integration of the dispossessed poor into full participation in the political, economic, and social life of the island.

These goals, it was felt, could be achieved only by education, led by higher education. The schools were the key; they would provide a necessary patriotic and hard-working technocracy armed with university and graduate degrees who would be beholden to Muñoz's party for their careers and the chance it gave them to know an upward social mobility unheard of before in Puerto Rico.

On 25 July 1952 the bill approving the new Puerto Rican Constitution was signed into law by President Harry S. Truman. Henceforth the governor and legislature of Puerto Rico would be elected by the people resident on the island, and domestic affairs would largely pass into their control. However, Congress had retained the last word.

From 1940 to 1968, the reigning political party was the P.P.D. (the *Populares*); it was during this 28 year period that Muñoz put into practice the ideas and principles summarized above. The modern Puerto Rican educational system can be understood only in terms of the Commonwealth objectives as these constitute a response to the complex set of events and factors in the historical background of Puerto Rico.

CONSTITUTIONAL & LEGAL FOUNDATIONS

The United States Congress retains ultimate *de jure* responsibility and power to govern the Commonwealth of Puerto Rico. By and large the rights of Congress in this regard have been regularly strengthened over the century by a series of judicial decisions and rulings. The Foraker (1900) and Jones (1917) Acts that constituted the organic Acts through which Congress decided to exercise this responsibility were radically superseded by the passage in 1952 of legislation that set up the present-day Commonwealth structure. Nevertheless, to give a specific example of Congressional power, although the proposed Puerto Rican Constitution contained an amendment requiring that students matriculate exclusively in the public schools (except when these were unavailable), Congress deleted this amendment thereby reaffirming the rights of private, even confessional-related, education on the island.

Specific and *de facto* control of education is now vested in the Commonwealth's governmental institutions. The Department of Education is a department of state; its head and the second-in-command are known as the secretary and undersecretary of education. They are political appointees named by the island's popularly elected governor and confirmed by the island senate. The Department's executive staff is assisted by such statutorily created councils as The Council of Higher Education and The General Council of Education. Their powers of oversight extend to the private sector as well as to the public one. Thus, the Council of Higher Education, originally founded in 1966 in order to govern the University of Puerto Rico received in 1976 the mandate to regulate (i.e., accredit and license) the growing number of private postsecondary institutions of learning. These two functions—the governance of the University of Puerto Rico and the oversight of private colleges and universities—were separated from one another by Law 17 (1993). The purposes this law laid out were, among others, the licensing and accrediting of private university institutions, as well as the protecting of private institutions from official interference threatening their academic freedom through the agency of a new Council of Higher Education. (Law 17 has no application to such institutions as award religious titles, i.e., seminaries and the like.) In connection with its mission, the Council, whose members are also political appointees, publishes a wide variety of statistics and other kinds of documentation. The Secretary of Education is an *ex officio* member of the Council. Among the Council's powers are included that of imposing fines, issuing cease and desist orders, appointing committees of experts, and supervising the awarding of student scholarships both Federal and local to name a few. Meanwhile the General Council of Education exercises supervision of public primary, middle, and higher secondary schools, as well as, to a degree, private schools (licensing and curriculum). Thus, its functions correspond to those described in the Organic Law (Law 68) of 1990.

Law 149 was passed in 1999 and is also known as the Organic Law of the Department of Public Education of Puerto Rico; it created the possibility of developing *Las Escuelas de la Comunidad* (Community or Charter schools). Law 158, known as the *Ley de la Carrera Magisterial* (The Teaching Profession), also came into being in 1999.

Federal, i.e., that of the United States, implication in the island educational system closely resembles that existing between the Federal Government and the states. To give two examples of this, support of veterans' postwar training/education (the GI Bill of Rights) applies fully in Puerto Rico and has done so since its passage after the Second World War, with very important repercussions in the ''undereducated'' island. Also, Pell Tuition Grants for college and university students whose families' income is low are available and much taken advantage of. Some 90 percent of the 8,000 students registered at the *Universidad del Turabo* receive Pell Grants. Puerto Rican scholars and research scientists are eligible to apply to various Federal agencies for research support; aid of this sort has been and continues to be essential. The

same or even higher percentages apply throughout the system.

For children of elementary, middle, and high school age, Federal programs (e.g., Head Start) have been regularly made available to Puerto Rico. Federal Affirmative Action programs have also resulted in a significant increase in the attendance by Puerto Rican college students at institutions based in the United States, often with considerable financial help. Sons and daughters of the Puerto Rican socio-economic élite, trained in the exclusive private secondary schools of the island, have been especially quick to take advantage of these opportunities.

It must be emphasized, however, that unlike the situation prevailing in pre-1930 Puerto Rico, the United States government plays no ostensible role in determining Puerto Rican educational policy. However, among the numerous laws approved in Puerto Rico over the years in order to meet the challenges of changing conditions are to be found some that respond to Federal laws and educational regulations. Thus, the 1998 Federal Higher Education Act, seeking to better the quality of teaching in the United States, required (in Section 207) the states (and Puerto Rico) to submit a number of reports to the Department of Education, including a regular up to date annual report concerning mainly teacher training. The Puerto Rican *Consejo de Educación Superior* was charged with implementing these requirements imposed by the Higher Education Act. Similarly, Puerto Rican Law 138 (the Educational Opportunities Act), passed in 1999, created two new programs, Supplementary Educational Aid and Scholarship Aid, which replaced the former Educational Fund and the Legislative Scholarship Program. Henceforth scholarships would be made available solely to entering students who had just earned their high school diploma with at least a GPA of 3.0. The eligibility of students for both aid programs was to be determined according to the requirements established in the above-mentioned Higher Education Act. The money would henceforth be awarded to the institution attended by the grantee and be made available to the students by that institution. Some 165,000 checks were disbursed in this way during fiscal 1999-2000. Thirty-eight million dollars thus passed through 31 college/university-type institutions and 62 other postsecondary establishments. In 2000-01 some 95,000 students are expected to benefit from aid awards totaling $41,000,000.

EDUCATIONAL SYSTEM—OVERVIEW

The public pre-higher education system remains closely modeled on the American preprimary (when applicable), primary, middle, and higher secondary sequence. Higher education also follows the American model with undergraduate associate (two years of study) and bachelor's degrees of various sorts (awarded usually upon the student's successful completion of four years of prescribed study). Graduate research degrees include the M.A. and (more rarely) the Ph.D. The doctorate in Education (D.Ed.) is also awarded by the appropriate university School of Education. The professional post-graduate schools (law, medicine, etc.) have their own degrees comparable to the American J.D., M.D., and M.B.A.. Schooling is legally compulsory for children throughout the island for least for ages 5 through 16, although enforcement is spotty.

In addition, a substantial number of public and private educational/technical programs are aimed at adult audiences. These programs range from basic classes in reading, writing, and the English language to undergraduate and post-graduate university programs. More specialized private postsecondary schools in a wide diversity of fields—secretarial schools, computer use, tourism, TV repair, and business (to name but a few)—have proliferated throughout the island. These institutions vary immensely in quality.

Except for classes in English language, the language of instruction in all primary through secondary schools is Spanish; at the university level, both English and Spanish are used (depending on the subject matter and instructor). Public pre-university textbooks are in Spanish (except for English classes); at the university, they may be in either Spanish or English.

Access to information technology (IT) and other resources is fairly limited in most primary and secondary schools and districts. The availability of computer clusters, work stations, and web-access for students of the humanities even at the University of Puerto Rico is exiguous. Students of science, business, or engineering are much better off. For example, the School of Science at the private Universidad del Turabo requires of its general science majors a course labeled ''Scientific Computer Programming'' (devoted largely to BASIC), as it also does of its applied mathematics, biology, and chemistry majors. Turabo, however, has no major in computer science. A substantial number of non-public educational facilities at the secondary and college-age level that specialize in practical IT training are located in the larger towns and cities; these are well-subscribed because they lead to positions in enterprises and the government that depend on computer literacy.

Given the highly centralized nature of public education at the pre-university level in Puerto Rico, curriculum development has traditionally taken place under the close supervision of the Commonwealth Department of Education. The University of Puerto Rico's College of Education has exercised much influence in this area. Over the years centralized curricular planning has tended to apply

to Puerto Rico various trends in vogue in the United States. The long-standing Commonwealth political emphasis on economic planning has also played an important role in determining what subjects deserve increased funding, with technology and now globalization viewed as the key to progress. Indeed, at present, the Department of Education is in the process of setting up administrative means for the incorporation of private business and banking's informed input in regard to the most promising present and future areas of employment.

Since past economic planning has not invariably produced the desired results, skepticism with regard to so exclusive a reliance on educational centralization made significant inroads during the 1990s and more recently. New initiatives have surfaced. The Universidad del Turabo has made a policy decision to open up areas of close collaboration with the municipalities close to it, mainly the towns of Cages and Kurabo. Recently an imposing sports complex, including a modern stadium, has been built on its campus with funding of its own, contributions from the surrounding municipalities, and from the Commonwealth. This complex is shared by the university and nearby towns. On a different note, the predominantly Catholic Universidad del Sagrado Corazón (in Santurce) with funding and other support from the Ford Foundation, ASPIRA of Puerto Rico, the College Board of Puerto Rico, the Puerto Rico Community Foundation, and the Department of Education created the San Juan Metropolitan Alliance for Education. It works with the municipality of Cattalo, an impoverished town across the bay from San Juan, to effectively improve the primary, middle, and secondary schools of that town.

Finally, public education has been undergoing a series of grave crises. From 1940 until 1968 Puerto Rico was a one party state led by a single all powerful leader. Such a political structure tends to render genuine debate quite difficult. Consequently, in the absence of effective open discussion on the goals of public education, the early Commonwealth failed to develop in the nation an underlying consensus concerning the purposes of mass public education. Consequently, when governing power changed hands from the P.P.D. to the New Progressive Party in 1968, the sort of long range planning possible within the one party political context no longer was possible. The new party in power did what it could to undo what its defeated rivals had put in place.

PREPRIMARY & PRIMARY EDUCATION

Apart from kindergarten with which children age five normally begin their primary education, the public school system does not as of yet universally provide preschools or nursery schools. Parents desiring to place their three and four year olds in such classes must have recourse to private facilities. The K-12 system characteristic of the United States is used for Puerto Rican preprimary, primary, and secondary education; it corresponds (ideally) to the age cohort of the pupil. No private nursery or preschooling enrollment figures have been found. Schools are coeducational, and, as said earlier, attendance is in theory compulsory by law. A single curriculum has been designed to be universally applied throughout the ten regional areas of Puerto Rico. Facilities for special education have been made available throughout the island's schools. Great efforts have also been made to provide cost free textbooks and other learning materials.

Public Primary Education: Virtually all public school facilities throughout the island identify primary education with the seven year K-6 grade sequence. First grade constitutes the initial year of proper schooling. Grades one through three constitute the first primary level, and grades four through six make up the second level.

All instruction is in Spanish with English introduced (usually in the second year) as a required foreign language. The subjects emphasized on Level I are basic reading, writing, and arithmetic with some exploration of English; drawing and a very elementary introduction to computing are also required. The visual arts and dance are introduced, along with basic hygiene, physical education, and music. Level II builds on the knowledge acquired; for example, there are more advanced mathematics that include elements of geometry within the context of measurements, the metric system, calculation, etc. The social sciences (history and civics) are introduced, as well as beginnings in science and technology (food chains, the physical properties of objects, health, plant structures, weather and climate, the atmosphere, etc.). The history of Puerto Rico is emphasized. Spanish grammar is taught ''functionally,'' i.e., not in isolation but in connection with texts and writing. The Fine Arts, such as the visual arts, dance, theater, and music, are continued.

In 1993 Charter Schools (*Escuelas de la Comunidad*) were initiated. In principle the entire school system will eventually be converted to a variant of this system.

Public primary schools generally occupy buildings of their own, but this is not always the case in poorer, remote districts. Thus, the small community of Culebra, for example, crowds primary, middle, and upper secondary schooling into a single dilapidated building where the youngest children find themselves ignored by the older ones (*El Nuevo Día,* 12 February 2001). According to an English teacher there, whose real specialty is accounting and computer technology, material resources are very scarce and/or difficult to come by. The sole special education teacher takes care of 28 pupils at all age levels. The

hygiene and health teacher has no classroom, yet she is required by law to teach kindergarten, third, eighth, ninth and tenth grade pupils; she does so beneath a staircase and wherever she can improvise a space. There are no laboratory facilities for science classes (middle and high school levels). The school has received no computers whatsoever from the Department of Education; 15 older models were made available by a private business for graduating seniors so that they might have at least some exposure to computing. Alienated, unhappy, and bored, Culebra's school population has a significant dropout rate, and, in part because all pupils are thrown together, the understandable cynicism of the older pupils exerts a powerful influence on the younger, primary level group.

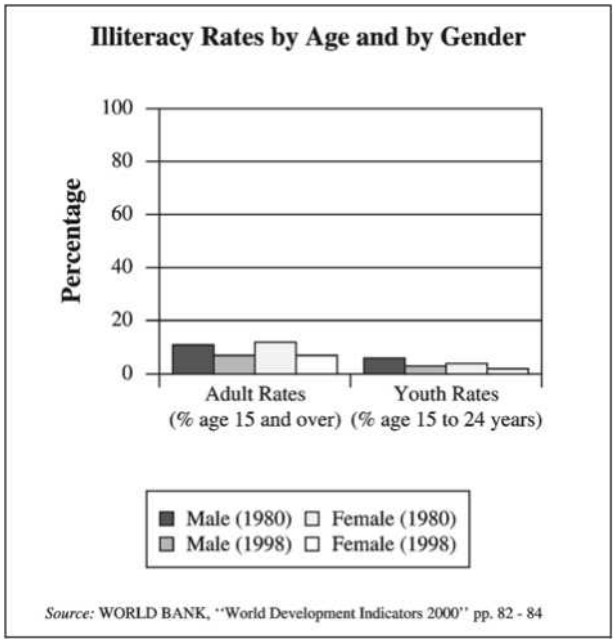
About 86 percent of Puerto Rican public school pupils are from families whose incomes fall beneath the poverty level. Some 75 percent of the inhabitants of Adjuntas, Jayuya, and Utuado (small towns in the island's mountainous interior) live beneath the poverty level. It is in such towns that the illiteracy rate is highest. Thus, the child begins his or her schooling under unfavorable conditions.

Very shortly after the story of Culebra's single school broke in *El Nuevo Día,* the Governor of Puerto Rico, Sila M. Calderón, announced an emergency plan to immediately begin the much needed repair and remodeling of some 1,000 school buildings in the island (there are a total of 1,600 such buildings in Puerto Rico). It is hoped that this work, costing about $82 million, will be concluded by August 2001, in time for school reopenings. Finally, the sum of $105 million has been set aside for the acquisition of computers to be placed in the schools.

The Department of Education is also preparing to undertake a thorough study in order to determine what the island's illiteracy rate truly is and the socio-geographic features that characterize the places where this rate is particularly high. According to the 1990 census figures, out of a total population 10 or more years old of 2,904,455 residents, 307,915 did not know how to read or write.

Enrollment figures officially given by the Department of Education for the public primary schools of Puerto Rico during the academic year 1997-98, which are the latest available, were 360,700 (188,794 males and 171,906 females).

The middle or intermediate school corresponds to the seventh, eighth and ninth grades and, ideally, to pupils aged 12 through 14 or 15. Intermediate school enrollments during 1997-98 school year were 149,863 (77,506 males and 72,357 females). Given its adolescent clientele, the middle school is properly considered as forming part of the secondary education sector. No sharp curricular break occurs between the primary and the middle school, nor does one prevail between the middle and the senior high school, but the pupil's needs and interests reflect his and her growing maturation to adulthood. The task of the school is to respond adequately to these important mental, physical, social, and emotional changes. Thus, in both Spanish and English, the pupil is taught actively to write, think, do an initial draft, revise, correct, and ''publish'' his or her work. Reading requires analysis and evaluation. Mathematics became more content-oriented, involving (with geometry and algebra) matters of relation or pre-algebra. Elementary algebra, advanced geometry, and intermediate algebra constitute the sequence followed. Science introduces the pupil to the basic principles of biology, physics, chemistry, and the earth sciences. In the social sciences, emphasis is placed on the human being and his historical effort. The subjects taught are the history of Puerto Rico, Latin America, and the world. The fine arts, health, and physical education complete the intermediate cycle.



Source: WORLD BANK, ''World Development Indicators 2000'' pp. 82 - 84

Efforts are made to provide adequate individual and group counseling, especially to forestall the dropouts that tend to begin at the middle school age. Problems of motivation are severe. Also, it must be said that social issues—delinquency and narcotics—increase in severity at the middle school level and ought to be better dealt with.

SECONDARY EDUCATION

Senior high school enrollments in the 1997-98 year totaled 119,428 (57,141 males and 62,287 females). This enrollment number shows a substantial dwindling from a primary school high to a high school low. Also, whereas

boys outnumber girls in the primary and middle schools, the reverse is true in the senior high schools. It is at this level that dropout rates increase radically. Whereas, according to statistics released by the Department of Education, in 1997-98 there were some 52,606 pupils enrolled in first grade, only 33,099 were counted in twelth grade that year, a drop of about two-fifths. Causes identified for this high dropout rate range from pregnancy and marriage to getting a job, from academic failure to disciplinary problems. The statistics don't mention cultural and/or family reasons or boredom and peer pressure.

The goals of the tenth to twelfth grade curriculum have been summarized as follows by the Department of Education guidelines: to promote the transition from concrete to abstract thought; to encourage the transformation from individualism and competitiveness to social cooperation; to facilitate the transition of study competence to work competence; to help the pupil go from reliance on memorization to applying what he or she knows in the real world; and to teach the art of ''self-apprenticeship.'' Thus the young man or woman will think critically, be able to make proper decisions, use technology, evaluate and judge, be responsible, and possess a worthy scale of personal and social values. At the same time, the high school diploma means adequate communicative skills; a high level of expression in both Spanish and English; a capacity for creative work; a conceptual mastery of diverse areas of knowledge; and a sense of self-esteem.

The program requires three credit years of Spanish, English, mathematics (including computer science), social studies, and science; 1 credit year of visual arts, dance, music and theater each; one semester (one-half credit) of health (including sexual education); and three years of physical education with the possibility of participating in intramural and extramural sports.

Finally, Puerto Rico maintains 24 selective specialized high schools: 2 in science and mathematics; 11 in fine arts; 1 in sports; 1 in radio and TV; 6 bilingual; 1 pretechnical; and 2 in talent development.

Private Primary & Secondary Education: The history of bitterness and systemic political antagonism between the private (largely Roman Catholic) and public sectors in education has had a choking effect on primary schooling in Puerto Rico. These antagonisms have not yet been laid entirely to rest, although there are welcome signs that they need not be prolonged over yet another century. Much of the prestige attached to private schools in Puerto Rico derives from the unevenness of the public sector. During the first half of the twentieth century, an average of about 4 percent of school children were enrolled in private schools (10 percent in 1960). Growth in this sector has been vertiginous, with, in 1988, some 128,554 children so enrolled. Parents, themselves the product of the public schools, have often reluctantly chosen to place their children in private schools when they can afford it so as not to expose them to the dangers and the inadequacies they perceive their children would face were they to attend local public schools. For other parents of the élite socio-economic class, private education is a social and class tradition. Still others, who have succeeded economically, will place their children in upper-class private schools in the hopes that they will be helped thereby in moving up the social ladder. Critics of the private schools charge, not without reason, that such schools constitute an important means of perpetuating across generations the existence of an impermeable governing and economically powerful élite. Many such critics also say that this class has become increasingly out of touch with the realities of the country; it is absorbed in globalization and safeguarding its own perquisites.

According to the Organic Law of 1990, private schools beneath college and university level must be licensed by the *Oficina de Licencias* (License Office) of the *Consejo de la Educación* (Council of Education). The existence of a physical plant, presence of labs and library, sanitary conditions, as well as a satisfactory curriculum and properly trained teachers, are all factors considered in the process. By 1995 about 550 schools obtained licenses; in addition there exist some 290 vocational and technical schools that must also obtain licenses (López Yustos).

As might be expected, the curriculum of most private schools rarely departs from that set for public primary schools, except for the more or less strong emphasis placed in many of the former on religious instruction and traditional moral teaching. Resources in the élite schools (buildings, library collections, more individual attention, computers, variety of opportunities of different sorts, and ''proper'' peers) are generally superior to those of the vast majority of public schools. The classroom atmosphere is usually more tranquil and classes are smaller than in the public sector. Although the erstwhile numerous order-related teaching staff has often given way to lay teachers, teacher morale is generally high. In most instances each private school offers a K (or Pre-K) through 12 track.

In all private schools, as well as in many public schools, rather strict dress codes are imposed and observed. These involve blouse and jumpers for girls and trousers and shirts for boys, often with colors specified.

College/university preparation is generally perceived as the various institutions' common major goal and chief educational *raison d'être.* Since as far back as 1940, graduates of the better private schools have rather consistently outperformed their public coevals at the Uni-

versity of Puerto Rico, and a significant proportion of them go on to study at prestigious colleges and universities in the United States (Nieves Falcón).

Mention should also be made of the still-increasing importance of Protestant schools, which range from the fundamentalist to such mainstream Anglo-Saxon institutions as the Episcopalian school in Santurce. Although the different denominations often correspond to socioeconomic classes, there remains nevertheless much social mobility between them. In part the flourishing of these schools is due to the perceived social dangers associated with the public schools, as well as to the upper crust character often attributed to the well-known Roman Catholic institutions.

HIGHER EDUCATION

The Public Sector: According to data published by the *Consejo de Educación Superior,* during the 1999-2000 school year, some 79 public and private college and university level institutions of higher learning existed alongside what are called postsecondary educational institutions. (The figures count each *recinto* or campus branch as one institution, and they comprise two year colleges, four year colleges, and institutions with graduate programs; some emphasize the liberal arts, and others are specialized.) Of these 22 are public and 57 are private; total full and part time enrollment comes to 174,550 students, of which 73,846 are in the public sector (61.7 percent of which are women, and 38 percent are men). In the 57 private campuses, enrollments come to a total of 100,704 (59 percent are women, and 40.2 percent are men). In addition to the institutions just mentioned, Puerto Ricans also dispose of numerous private or proprietary postsecondary schools that do not quite fit the portrait ascribed to a college and university. Seventy-nine institutions of higher education of varying quality, completeness, and mission constitute a large number for a population of approximately 3,000,000.

The curricular matrix of the public University of Puerto Rico (headquartered in Río Piedras) forms the basis of undergraduate study in virtually all the public and private colleges and universities on the island.

Admission standards at the U.P.R. (Río Piedras and Mayagüez), especially in the postgraduate professional schools (e.g., Law and Medicine), are generally higher than those prevailing in other Puerto Rican institutions. Because of limited enrollments, an entering undergraduate must offer a proper college preparatory high school diploma and a competitive GPA (usually a solid B average); he or she must also take an entrance examination.

The typical Arts and Sciences B.A. candidate spends the first two years in the School of General Studies satisfying distribution requirements of various sorts before concentrating in one of many majors available during the junior and senior years. During the freshman and sophomore years, the student also takes the prerequisites necessary to the anticipated major. Perhaps in imitation of the University of Chicago's graduate ''Divisions,'' the university is divided into ''faculties,'' i.e., Humanities (*Humanidades*): social sciences (*Ciencias sociales*), natural sciences (*Ciencias naturales*). It is also divided into ''Schools'' (or ''Colleges'') like Education (Educación, or Pedagogía) and ''Programs'' (Business, Architecture, Planning [*Planificación*], Communications, etc.). Postgraduate programs in Law and Medicine (with special distinction in the field of tropical medicine) have been expanded extensively since the university's inception in the 1920s.

The similarly distinguished institution founded at an early date in the West Coast city of Mayagüez for Engineering and Agricultural Sciences resembles the state ''A and M'' universities developed in nineteenth and twentieth century North America. This Mayagüez campus, still subject to governance by the central U.P.R. governing board (Río Piedras), has now begun to agitate for its separation from the flagship campus.

Hopes for the island's further economic expansion into fields like petrochemicals and high-technological electronics have led to emphasis on technological and business matters, as well as in the several four and two year universities and regional colleges (*colegios universitarios* and *regionales*) created during the period starting in the early 1960s in such smaller cities and towns as Humacao and Cayey, Carolina, Bayamón, Arecibo, Aguadilla, Utuado, and Ponce. However, these latter institutions also maintained the more traditional curriculum in the humanities and the sciences. By the mid-1990s, the University of Puerto Rico had become a university system (upgraded by some 11 new units since 1962) recognized as such by the University Law of 1966, with an overall budget of about two-thirds of a billion dollars (set by the same Law at 9 percent of the total government revenues), and in the 1999-2000 school year, serving almost 70,000 students on both the undergraduate and postgraduate levels of a total public university student population of 73,846.

It is argued that the expansion of the University of Puerto Rico system has been achieved at the expense of the Río Piedras campus' upkeep, resources, and the salaries it pays its faculty. It has become increasingly difficult to attract and retain top faculty talent, especially in the highly competitive business and technical fields. Requests for increased funding (set in 1996 at 9.65 percent of total government revenues) have usually been made in connection with the university's relation to the research

and development needs of business and the job market in the high tech sector of the island economy. The technical and research infrastructure has absorbed more and more of the money available. The university also publicizes its traditional rôle as an indispensable problem solver with respect to various social issues.

In exchange for virtual monopoly control over the island's public higher education resources, under Chancellor Jaime Benítez, the U.P.R (University of Puerto Rico system) embraced the policies favored by the Commonwealth party of Luis Muñoz Marín. It became the *régime's* partner in the P.P.D.'s many projects of social engineering; politically the U.P.R. did its best to marginalize alternatives to the *Estado Libre Asociado* concept. Educationally the U.P.R. opened the door to the sort of mass higher education through which the P.P.D. hoped to reduce the power of the former élite governing classes. The U.P.R. constituted the single most important factor in the régime's policy (1) of industrialization and (2) of technological research and development. Finally, the U.P.R. became the means through which the P.P.D. created what it most desired: a native middle class largely devoted to its cause. The U.P.R. stood for, and did much to define, what Muñoz loved to call *el Progreso.* Though itself a hotbed of *independentista* thinking and feeling, its Department of Hispanic Studies and various pockets within General Studies, the Social Sciences, and elsewhere in the Humanities, the institution as such helped weaken the cause of Puerto Rican independence, at least temporarily. Perhaps ironically, not a few of its graduates came to identify themselves with the cause of statehood for Puerto Rico.

In the Humanities at least (with the possible exception of Hispanic studies), the University Library, while generally adequate, cannot truly be labeled a research library. There are too many gaps. These occur in, for example, Classics, Modern Languages and Literatures, Oriental Studies, and the like. Thus, advanced scholarly Humanistic research requires study abroad.

However, one of the U.P.R.'s truly enduring accomplishments should be remembered at this juncture. During the 1950s and 1960s, it identified individuals of talent, often from relatively disadvantaged social classes, educated them, and then provided the means to send them abroad to mainly to the United States and to Western Europe for further advanced study. While abroad, these young men and women came into contact with first-rate research facilities (laboratories, libraries, and teachers), as well as with foreign contemporaries of talent. They returned to teaching jobs in Puerto Rico, bringing to their work on the island not merely what they had learned abroad but also their experience of integration into contexts relevant to, yet wider than, the Puerto Rican reality to which they had been born and in which they lived.

The Private Sector: Enrollments in the historically confessional (Protestant, in the case of the eleven campuses of the Universidad Interamericana, and Roman Catholic, as in the Universidad del Sagrado Corazón and the four campuses of the Pontificia Universidad de Puerto Rico), as well as in the secular, establishments of higher education have for some time exceeded those of the public ones. Unlike the principal campuses of the U.P.R., these institutions are almost exclusively dedicated to teaching. The total of their undergraduate enrollments is 90,677 (graduates in Education: 10,027) for a grand total of 100,704 (as opposed to a public grand total of 73,846). Also, more often than not, the private university student tends to come from families whose income is lower than that of public university students' families. In the mid-1990s the average private institution family income was $11,728 while that of the public university was $15,221. Little or no direct institutional financing is provided for private institutions from state funds (except for specially earmarked research projects of interest to the state). Virtually all funding derives from tuition payments, which are considerably higher than those of the public-sponsored colleges and universities.

The low income levels of private school students is a result of the availability of Federal funds for which these students are eligible, especially the Pell Tuition Grants program, a program to help students from low income families finance their college education. As noted above, about 90 percent of the 8,000 students matriculated at the Universidad del Turabo receive Pell grants. The 1996-99 *catalogue* of Turabo announces average annual tuition and fees set at $2,784; the maximum Pell grant award in 1997 was set at $2,470. In addition, there were available Federal and State funds to students with great financial need, such as the Federal Supplemental Educational Grant; a Puerto Rican scholarship fund for qualifying students; a Puerto Rican Educational Fund for students whose family income is $3,500 per capita or less; a Puerto Rican State Student Incentive Grant, administered by the *Consejo de Educación Superior,* to which a given cooperating institution may make application on behalf of specific candidates; subsidized Federal and Ford loans to students; Federal Parent Loans (PLUS); and Federal Work-Study Programs. All these sources of funding are also available for students at public institutions. Various Athletic Scholarships are also provided for outstanding student athletes.

The situation at the Universidad del Turabo is to all intents and purposes mirrored at the other private institutions recognized and accredited by the *Consejo de Educación Superior.* The private institutions of greatest interest are those, like the Universidad del Turabo, which have forged a genuine sense of mission for themselves since their founding, as well as those, like the Universi-

dad del Sagrado Corazón, which have undergone a process of constant renewal over the years. Far less burdened with the kind of bureaucracy characteristic of the public U.P.R., these private schools have been able to exert an influence on island educational policy far greater than their somewhat marginal status would appear to authorize.

The Universidad del Turabo belongs to a network of institutions known as the Ana G. Méndez University System. As a member of the Ana G. Méndez University System, which operates under the auspices of the Ana G. Méndez Educational Foundation, Turabo is governed by the System's Board of Trustees—the body to whom the chancellor and his office are responsible. The Board approves the mission of the Foundation and its several institutions, its budgets, administers its business, confirms appointments, establishes salaries, approves academic programs and long-range planning, and supervises the distribution of funds.

Admission requirements at the Universidad del Turabo include a valid high school diploma (or a high school certificate); if 25 or under, the College Entrance Examination and the Diagnostic and Placement Center test offered by Turabo (students older than 25 must take only the Diagnostic and Placement test); possession of at least the minimum ''admission index;'' and if the candidate does not reach the level required, a personal interview. Less stringent than the requirements at the U.P.R., these requirements also permit a degree of individual flexibility.

The University is divided into various ''Schools'' (i.e., Education, Business Administration, Sciences and Technology, Engineering, and Liberal Arts—the latter being further divided into Departments of Humanities and Social Sciences). Each of these has its own requirements and programs of study. A GPA of 2.0 is required for the B.A., associate degrees may also be earned, and certain limited graduate programs are available (e.g., Education). In addition, the University offers programs of Extension and Continuing Education, as well as maintaining Off-Campus centers in Yabucoa, Naguabo, and Cayey whose programs lead to bachelor's degrees in Social Sciences, Education, and Business Administration.

Computing resources are distributed in clusters and work-stations within the various schools. This could be, for example, a SUN SPARCstation network, with 25 SUN workstations, numerous Macintosh Quadras, and Windows-type PCs in Engineering; a computing lab in the School of Business; a 25 unit Apple Share network in the School of Science; and older Macs (largely for word-processing) for Humanities.

Two closely interconnected elements appear to have shaped the mission the Universidad del Turabo has designed for itself. The first of these is the obviously practical nature of the curriculum, with its emphasis on imparting skills to students wishing to move up in the world—to become teachers or to work in business or construction, etc. The second element has to do with the university's sense of its *place,* which is in the foothills of an impoverished mountain region almost systematically stripped of whatever economic wealth it might have had in times past, specifically in cane, tobacco, and coffee. These resources were taken away, and nothing was successfully put in their place. Much of the population has emigrated to the United States; many of those remaining are dependent upon food stamps and other forms of handouts. This is the region the university identifies itself with and functions in.

However, it has neither the resources nor the inclination to impose upon its region and student body its own predetermined agenda of social improvement. In a profound sense it collaborates with its region. It provides what many of its young people want and are quite willing to work for. The campus consequently insists on providing its student clientèle with a clean, honest, and disciplined place; it is spotless (no trash strewn about; clean, neat, and well kept up buildings), and this is due as much to the students' care as it is to ground crew cleanup squads. (The contrast with the clearly neglected Río Piedras campus of the U.P.R. is striking.) The Turabo campus is identified with the kind of life to which numerous students there aspire; in that way it differs from the all too often overcrowded and perhaps messy quarters in which many students live in at home. In addition, the friendly civility of the Turabo staff reflects little of the bureaucratic *hauteur* to be found in the larger, more impersonal public institutions.

Much is being hoped of ongoing university initiatives that are both in keeping with its academic nature and innovative with regard to its contemporary and past academic emphases. One of these initiatives is that of the Center for Humanistic Studies, founded in 1981, which, along with the desire to strengthen university library resources—at present quite poor—in the Humanities, recognizes the intellectual and spiritual centrality of the Humanities and Fine Arts to a life well lived.

Another university, the Universidad del Sagrado Corazón (Sacred Heart University), located in Santurce (part of the San Juan Metropolitan Area), came into being (1935) as the outgrowth of a girls' school founded in 1880 by the Mothers of the Sacred Heart. This teaching order was, itself, the creation of Mother Madeleine-Sophie Barat, now canonized as a saint of the Church in the France of 1800, in order to prepare girls for life in the new, ''modern'' world order consequent to the upheavals of the French Revolution. Thus, its *raison d'être* is close-

ly related to the issues of change brought about by the emergence of Post-Enlightenment modernity, a matter hardly irrelevant to conditions in late nineteenth century and twentieth century Puerto Rico where, incidentally, women have come to play a central rôle both in education and politics. The University decided to become coeducational in 1973; although still strongly affiliated with the Roman Catholic Church, it has become increasingly secularized in administrative and teaching personnel.

In 1999-2000 the student body numbered 5,184 (3,355 women and 1,829 men). Bachelor's degrees may be earned in Liberal Arts (art, education, languages and literatures, history, international relations, economics, commercial studies, mathematics, chemistry, biology, psychology, and sociology), as well as in secretarial and library sciences, business administration, information technology, nursing, and communications; there exist a number of special programs, including educational technology, tourism, public relations, as well) Finally, the U.S.C. maintains an extensive Program in Continuing Education.

The Library has made great strides in recent decades, but it remains inadequate, containing a third of the volumes to be found in a good United States liberal arts college with one-quarter the enrollment of U.S.C. Computing facilities need expansion and upgrading too. Financing is the problem. Like Turabo, U.S.C. depends heavily on tuition, which, of course, translates into Pell Tuition Grants, and on Federal funding—loans and outright grants—for infrastructures (e.g., a Women's Residence Hall and the Library building). Private foundational assistance has been solicited and granted for faculty salaries.

An interesting sponsoring program on behalf of very low income students has met with success at the U.S.C. An adult or a couple may ''adopt'' a student by contributing $2,500 to his or her educational expenses. The scheme has the virtue of breaking down certain social barriers. A shared interest in the U.S.C. brings together the ''godparent'' and the young student who then often become personal friends, with the student frequently being invited to his or her godparent's home on social occasions and the latter also serving at times as a kind of extra-curricular mentor.

However, by far the most ambitious and potentially far-reaching initiative taken by the U.S.C. in recent times has been that, initiated in the early 1990s (and referred to above), led by Dr. José Jaime Rivera, its President, with respect to the crucial issue of public educational reform in Puerto Rico, i.e., The San Juan Metropolitan Alliance for Education (see the SJMAE *Progress Report* 1999).

This initiative owes much to previous thought and writing on education in Puerto Rico including the seminal work of the late Angel G. Quintero, *Educación y cambio social en Puerto Rico: Una época crítica* (2nd ed. 1974), Undersecretary and Secretary of the Department of Education from 1960 to 1968, and the hands-on experience of the present Secretary of Education, César Rey, formerly Dean at U.S.C.

Structured as a cooperative venture including, in addition to the U.S.C, The Ford Foundation, ASPIRA of Puerto Rico, Inc., The College Board of Puerto Rico, the Puerto Rico Community Foundation, and the Department of Education (Commonwealth of Puerto Rico), the SJMAE established goals and selected initially for their achievement over a five year period three ''allied'' schools in the Cataño School District. More schools, including senior high schools, have been added subsequently. Eventually, the eight remaining schools of the Cataño District were also incorporated. The total includes public primary, middle, and high schools.

Meanwhile, Public Laws 149 and 158 (1999) passed by the Puerto Rican legislature, establishing the new school—community/charter schools and calling for the creation of a redefined ''Teaching Profession'' (*Carrera Magisteria*), offered an alternative to the previous highly centralized public school system by emphasizing on the most basic level a genuine collaboration of administrators, teachers, parents, and pupils viewed as equal partners in the educational process. The school must no longer act as the vehicle for the imposition by a central authority of values upon the communities served by it; rather, a credible dialogue between the above-named constituents should constitute the bedrock on which the trust and commitment to the ideal of the school—of schooling itself—should rest.

That, precisely, is the doctrine held by the SJMAE. No other approach stands a chance of commanding the indispensable support of the school's clientèle, it contends. Its philosophy thus resembles in interesting ways the ''regionalism'' being developed by the Universidad del Turabo.

The greater part of the *Progress Report 1999* details what the SJMAE has done up to that date, with whom, and how it has proceeded. It has been a member of the Urban Partnership Program since its inception in 1994, and in this connection has defined the following specific objectives: ''(1) promote model programs geared to help under-served students develop their talents and skills, and thus [eventually] attain a university degree; (2) promote collaboration and coordination among programs; (3) Identify and disseminate information, including research; and (4) identify and support successful initiatives'' (*Progress Report 1999.* With respect to its having received an award for its work (1998), the SJMAE defined several new objectives ''aimed toward the promotion of

systemic change'': to encourage changes in the school culture; to increase innovative teaching/learning practices and provide continuous professional development; to promote curricular articulation among educational levels; to promote students' development in the personal, academic, social, and occupational aspects by integrating counseling and curricular activities across all educational levels; and to strengthen collaboration between parents, the schools, the district, and the region. (The region constitutes the curriculum level in the hierarchical structure between the school district and the center office of the Puerto Rico Department of Education. There are ten regions.)

The choice of the Cataño District came about because of its location within the general Metropolitan Area, its many problems and poverty, and because students of Education at the U.S.C. had been using some of its schools for its practice teaching programs. The first two schools chosen were Isaac del Rosario and, a bit later, A.S. Pedreira; middle schools Mercedes García de Colorado and Las Américas were selected, and so forth. The teachers were elected to be the first focus of the program's action; also, the special responsibilities of each of the components of the SJMAE were defined.

Not everything went smoothly, however. The fact that a good number of the schools had no principal—a problem endemic in the Puerto Rican school system, especially in its senior high schools—constituted a serious impediment. The effects of Hurricane Georges (1998) were brutally destructive and still have not been entirely remedied. Yet the Project's results have been very encouraging: in 1998 the Isaac del Rosario Elementary School was selected by the Federally sponsored Regional Conference on Improving America's Schools as one of eight schools whose records of improvement were outstanding; it also won the Puerto Rican Dr. Ángel Quintero Alfaro Award for outstanding educational innovation. Generally speaking, school dropout rates in Cataño have decreased significantly; the number of college-bound high school seniors has increased substantially; GPAs and test scores have improved also (although they still remain low and require improvement especially in mathematics and foreign languages); and, perhaps most important of all, students report a much greater sense of their own self-confidence as students and a more determined desire to succeed academically. The *Progress Report 1999* states: ''From mistrust, doubt, and skepticism there has been a movement to a growing faith that change is possible. This transformation brings with it the conviction that common goals are attainable through unity and the actual testing of programmatic alternatives. [There is a] palpable movement towards a growing receptivity to change [which will provide] the groundwork for the next stage of the Alliance work.''

A team of five professors of mathematics at the University of Puerto Rico has accepted a task to work at developing a new math curriculum that will be used (and tested) by the Alliance. This effort may help bring about an improvement in the disappointing scores just mentioned.

Thus, each of the two private universities has committed to play a significant rôle in what surely looks like a reincorporation of democratic and people-oriented values into the educational system of Puerto Rico. Provided that the island's political authorities support their efforts and similar efforts by what appears to be a revitalized and open Department of Education, there are reasons to believe in the future of Puerto Rican mass education.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Administration: The Puerto Rican Department of Education (*Departamento de Educación,* formerly the *Departamento de Instrucción*) is by the Organic Law of 1990 (Law 68) charged with the responsibility for all schooling on the island, from preschool to university; it is headed by a cabinet-level secretary and an undersecretary—both political appointments made by the island governor and subject to the advice and consent of the Senate. The secretary reports to the governor and, on occasion, to relevant committees of the Puerto Rican legislature. The Departmental Secretary is assisted by the two aforementioned Councils (on Higher Education and on General Education), as well as by various offices in charge of vocational and technical training, relations with the community, finance, extension/long distance learning, and the like.

Puerto Rico is divided into various school regions (whose number varies from time to time according to movements of population); each region is assigned personnel charged with revising and/or designing curricula (in conjunction with teachers). Meanwhile the administration of schools falls under the purview of the district. Each district is directed by a superintendent (aided by an assistant superintendent) and other officials. The principal of each school within a given district must report to the superintendent's office. The individual school is headed by a director and a sub-director, or principal and assistant principal; he or she is aided by the teachers, a social worker, a person responsible for orientation (*orientadora*), and food service and custodial personnel. The shortage of candidates willing to take on the responsibilities of the school principal has reached critical proportion in recent years.

Finance: The public educational system is virtually entirely financed by the island government; its funding is

dependent on yearly budgets voted by the legislature. As noted above, the amount set aside by law for the University of Puerto Rico system equals 9.65 percent of the total revenues accruing to the State; meanwhile López Yustos [1999] estimates that the cost per pupil in the public schools was about $2,000 in 1990 (i.e., if this is so, and basing the calculation on official enrollment figures, the total amounts to about one and a quarter billion dollars for the primary, intermediate, and senior high schools alone). This figure does not count students in institutions of higher learning or in such special programs as long distance learning. Puerto Rico allocates about 30 percent of its total annual revenues to the Department of Education, the most expensive of all government agencies and the country's largest employer.

However, the figures just given are very approximate; what they mean is extremely difficult, perhaps impossible, to determine with real precision. For some analysts they bespeak the people's faith in education, while at the same time that they are often cited by critics of the system who point out the mixed results achieved by these expenditures. It seems certain, however, that education is closely identified with the material progress achieved over the past half-century by the *Estado Libre Asociado.*

The University of Puerto Rico system (with a 1994 total budget of $622,300,000) received 68 percent of that figure from state funding, 17.5 percent from federal contracts and institutional grants, and 8 percent from student and tuition fees.

Perhaps due to the Commonwealth's mistrust of the private sector, contributions to private schools and institutions of higher learning are not tax deductible. This has surely done much to limit fund-raising on the part of these entities in Puerto Rico and to the establishment of significant endowments. The major exception to this rule has been the Universidad Católica (Ponce), which has benefited handsomely from private donations.

Federal funding also enters into the picture. The above-mentioned Pell Tuition Grant program is indispensable to the survival of private-sector institutions of higher learning. To take an example, the eligibility of 90 percent of the 8,000 students at the Universidad del Turabo brings into the university's annual operating budget a sum located between 17 and 18 million dollars. Few students could afford to study without this aid, and without such students and the university would close its doors. Certain capital expenses are also met with the help of Federal funding, especially such expenses as result from Federally-mandated requirements. Finally, Federal funding, e.g., the N.S.F., N.E.A., N.I.H., and N.E.H., is of great importance for scientific, social scientific, and humanities research—especially the first of these three. It has proved impossible to put a dollar figure on totals regarding Federal educational support, but the sums involved are surely impressive.

Educational Research: Research dealing with education is an important industry in Puerto Rico. Most of it is social scientific, statistics-based in nature and has to do with remedying perceived deficiencies of various kinds and/or planning. Considerable attention is paid to historical matters, some to historico-political aspects (e.g., Negrón de Montilla 1971), but much more has to do with reform and what ought to be done.

The Department of Education sponsors studies of many kinds and publishes statistics. This research is accomplished mainly on behalf of its own planning programs and also for various governmental purposes (e.g., budget). A departmental division—that of planning and educational development—is more or less in charge of these kinds of research. The Department also maintains an important documentary library for research and consulting purposes.

The island's various Schools of Education also constitute a source of research on educational matters, as does the work accomplished by Puerto Rican candidates for advanced degrees in education in many United States graduate schools.

NONFORMAL EDUCATION

Programs of adult education began in earnest with the 1940s initiative of Fred Wale and others to provide practical aid to the new communities formed by the breaking up of old *latifundios* into small farms (*parcelas*) that were awarded to disadvantaged rural citizens. Engineers volunteered their time to help these communities build a needed bridge; architects and builders helped with construction. Others developed programs of adult eduction (reading and writing, arithmetic, etc.). Artists, writers, and theater people also intervened.

These efforts led to the creation, in 1949, of the *División de la Comunidad* (Community Education Division) under the auspices of the *Departamento de Instrucción Pública* as the Department of Education was then known (Wale). This was the starting point of the diverse set of offerings and programs over which the Community Education Division and its various offices has jurisdiction. By means, first, of itinerant teachers and of correspondence courses, and then through radio and public TV broadcasts, it became possible to complete a high school diploma and take college-level courses or classes in various technologies. In 1958 (and reformed in 1985), the Community Education Division was renamed the *Area de Extensión educativa* (Area of Educational Extension).

In 1997 the *Administración de servicios de educación de adultos* (Administration of Adult Education Ser-

vices) replaced the Area of Educational Extension. This was done pursuant to the passage of the Federal Public Law 105-220 or the Workforce Investment Act. Federal funding has been made available to ''raise the level of school of youth and adults'' and ''to reduce illiteracy'' (Fajardo) in response to project proposals made by the various school districts, community (i.e., charter) schools, and by specific public and private not for profit institutions. Evening, night, and weekend schools are supported as are approved applications by individuals.

Thus, as time has passed, the community-focused nature of these special programs has tended to give way to more classic, adult education-type offerings with an increased emphasis on basic skills and technology. Therefore, by the mid-1960s, the Program of Adult Education and Cultural Extension had come into existence, under the leadership of an Assistant Secretary of Public Instruction: adult education was henceforth integrated into Public Instruction more and more as a remedial, or ''catch up,'' addendum to the general educational purposes of Public Instruction with a decided emphasis on vocational preparation, individual ''recycling,'' and technology. The communitarian vision that had inspired Wale and Isales was downplayed, which they deplored:

> There are those who assume. . .that the physical solution of a problem is a part of growth, but it is so only when it emerges as the result of the entire involvement of a community in the process of solution. . . [If this involvement does not occur,] the methods employed by the leaders can perpetuate dependence instead of aiding true development (Wale).

Like the 1990s theorists of community schools, Wale and Isales appear to be suggesting that the progress of the individual is contingent upon a wider community-oriented commitment, and that it is the job of the government to encourage such a commitment.

TEACHING PROFESSION

For most of the first half of the past century, public primary school teachers were trained at Normal Schools and/or in university-affiliated Schools of Education. The course lasted two years for students presenting a valid high school diploma, not counting such time as was required, particularly in the early days, for necessary remedial preparation. With the passage of time, teacher preparation came to stress pedagogical methodologies and supervised practice teaching; the two-year Normal School course was replaced by four year programs largely given over to education (pedagogy).

The public secondary-level teacher was required to offer a bachelor's degree (with a major and minor field of specialization, e.g., mathematics, science, Spanish, etc., in addition to a required number of education courses, plus experience in practice teaching). However, pedagogical matters were given ever increasing priority in teacher training, even on this more advanced level, to the detriment, say critics, of sufficient intellectual content. Defenders of this trend claimed that even in high school the teacher's main job was not to transfer knowledge to his or her pupils, but rather to supervise the pupils' independent ability to effectively seek out such knowledge when needed. The teacher's true specialty lay in teaching itself.

Graduate study in pedagogy eventually succeeded in shunting aside such study in the disciplines—history, languages, and the sciences—as were taught: an M.A. in Education earned its holder the same raise in salary and promotion as an M.A. in mathematics and was easier to obtain. According to statistics provided in López Yustos 1997, in 1987 a total of 2,364 accredited teachers possessed a two-year Normal School training, 29,724 held the B.A. or the B.A. with some post-graduate work, and 2,615 held the M.A.Ed. (no other M.A. category is provided, although 22 individuals in the system had earned a doctorate with the field unspecified).

The trends just described went hand in hand with the ''professionalization'' of teachers. A civics teacher became less and less a political scientist who taught; he or she was a teacher who happened to teach civics—like a lawyer who does tax law or a doctor who practices cardiology.

The 1999 law entitled *La Carrera Magisterial* (The Teaching Profession) appears to give legal status to these practices. Teachers are declared members of the *carrera* or profession when they obtain a ''regular certificate in the category in which they exercise his/her profession'' (Fajardo). There exist four ranks of teacher (seemingly modeled on the university instructor-assistant professor-associate professor-professor track). Rules for certification are not spelled out in this law, but previous laws, presumably still in effect in 1999, required for elementary school teaching a Normal School or two year university Associate of Arts diploma in Education and a four year B.A. for secondary school teachers, with a major in the area to be taught plus a set of required courses in pedagogy. In addition to these requirements, the Organic Law of 1990 formalized a new requirement that each teacher candidate take a Certification Examination that included: (1) a test of ''Fundamental Knowledge and Communication Skills'' and (2) a Test of Professional Competency. However, those desiring to teach Spanish, English, or Mathematics are required also to take a test in their respective [academic] specialties (López Yustos). The *Carrera Magisterial* law awards life-long tenure to teachers; it also sets up a clear, though somewhat complex formula for the virtually automatic determination of teacher's salaries.

Many teachers belong to one or the other of two organizations, the older *Asociciación de Maestros de Puerto Rico* (founded in 1911, affiliated with the National Education Association of the United States) and or the *Federación de Maestros de Puerto Rico* (established as an affiliate of the American Federation of Teachers AFL/CIO during the 1960s). The orientation of the first of these organizations is ''professional;'' that of the second lies mainly with matters of salaries and work conditions.

On the public university level, matters are simpler. As a rule, graduate degrees are a requisite to appointment, and the percentage of faculty holding the doctorate—Pd.D. or foreign equivalent—continues to rise. This is especially true of the University of Puerto Rico and substantially less so of the private universities (where salary levels are considerably lower). Faculty recruitment has encountered new difficulties, particularly in areas (e.g., engineering fields, computer technology) with a strong demand in private industry. Although on the whole Puerto Ricans prefer living at home in their own land, there does exist a notable ''brain drain,'' especially to the United States.

SUMMARY

Familiarity with the story of the Puerto Rican educational system commands respect for the high level of its protagonists' commitment to the values of learning as these apply above all to the creation of social, economic, and political citizenship of a democratic sort. The fact that the leadership class in government has accepted to devote so high a proportion of the island's resources to education tangibly confirms this commitment.

While the accomplishments of the past century, especially of its second half, can be judged a success, there are several shortcomings. These have to do with the tendency within the *Estado Libre Asociado* to undertake projects of social engineering. Although recognition of the distinctiveness of the Puerto Rican experience as a colony is a recognized fact, this fact has seldom received the practical importance it merits in plans drawn up for the island's present and future. Thus, what ought to be done tends to replace what can be done, and what the people want to be done. Also the Commonwealth has relied on the social sciences to furnish studies that justify what its leadership wishes to do, often despite values deeply ingrained in the culture of the people. However well-meaning, passing a law that declares schooling obligatory and attendance at school compulsory does not mean it will work. If anything, the State's acting this way is less effective than the early practice of *cédulas reales* (royal decrees) issued from the Spanish monarchs; and it is as ineffective as the American attempt to make ''good Americans'' out of Puerto Ricans by foisting English language teaching on their children.

Developments like the Turabo ''regionalism'' and the Universidad del Sagrado Corazón Cataño initiative seem quite promising. The Cataño initiative has replaced the centralized vertical (from top to bottom, i.e., from government and specialist to people) model by a horizontal, communitarian view. In a school there are teachers, pupils, and administrators; there are families and parents; and there are social and economic characteristics. All of these components have an equal stake in a school; they should be brought together and made to heed one another.

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— Karl D. Uitti

QATAR

BASIC DATA

Official Country Name:	State of Qatar
Region:	Middle East
Population:	744,483
Language(s):	Arabic, English
Literacy Rate:	79.4%
Academic Year:	September-June
Number of Primary Schools:	174
Compulsory Schooling:	6 years
Foreign Students in National Universities:	1,360
Libraries:	5
Educational Enrollment:	Primary: 53,631 Secondary: 37,635 Higher: 8,475
Educational Enrollment Rate:	Primary: 86% Secondary: 80% Higher: 27%
Teachers:	Primary: 5,864 Secondary: 3,858 Higher: 643
Student-Teacher Ratio:	Primary: 9:1 Secondary: 10:1
Female Enrollment Rate:	Primary: 86% Secondary: 79% Higher: 41%

HISTORY & BACKGROUND

The State of Qatar juts out into the Arabian/Persian Gulf from the Arabian Peninsula, a peninsula itself protruding from Arabia into the Gulf, comprising 11,437 square kilometers (4,416 square miles) of low lying land surrounded by a number of reefs and small islands. The main cities in Qatar are the capital city of Doha, the industrial city of Misaiaeed, and the smaller cities of Al Khor, Al Wakrah, Dukhan, Al Shamal, Al Zubarah, and Ras Laffan. The population of Qatar in 1998 was about 600,000 people, although of this number, only an estimated 120,000-150,000 were national Qataris. The rest of the population was foreign workers, mainly from Iran and Pakistan, as well as India and other countries of Asia. Most Qataris are of the strict Wahhabi sect of Sunni Islam, and the country has socioreligious restrictions, for example the prohibition of alcohol and the veiling of women. The official language is Arabic, but other languages are used such as English and Urdu.

After World War I, Qatar became a British protectorate, this following four centuries of Turkish control. The country was an economically stagnant backwater until oil exports began in 1949. Oil revenues enabled an accelerated pace of development, and today there are attempts underway to diversify the economy because Qatar's petroleum reserves are not expected to last for much longer. The oil reserves are relatively insignificant in comparison to the vast reserves held by neighboring Saudi Arabia and the United Arab Emirates, but Qatari natural gas reserves are extremely large, the third biggest proven reserves after Russian and Iranian reserves.

Historically Qatar has been continuously inhabited since the fourth millennium B.C. The Ubaid culture of Mesopotamia encompassed the Qatari Peninsula, and historians such as Herodotus noted the navigational skills and marine trading of the early inhabitants of the region. On Ptolemy's map of the ancient Arab world, *Qatara* is listed in reference to an important commercial seaport of the time.

The marine profession of pearling created economic growth in the fourteenth century Abbasid era. The demand for pearls by the Baghdad Caliphate benefited the local pearling and trade-based economy. In the sixteenth century Qatar aligned with the Turks in order to resist the Portuguese, and for the next 400 years Ottoman rule was effected through the headship of local Arab tribal sheikhs subordinated to the Ottomans.

Qatar became an independent nation on September 3, 1971. There had been talk of the emirates of Qatar and Bahrain joining the federation of the United Arab Emirates (UAR), but when Bahrain declared to become a sovereign state instead of joining the UAR, Qatar followed suit, not wanting to be outdone by its rival sheikhdom. Recent (since 1986) rivalry and mistrust between Bahrain and Qatar stems from territorial disputes over the Hawar Islands and gas fields, but the disputes are not considered to be serious and the countries are cooperating with arbitration efforts.

Originally from the Najd region in Saudi Arabia, having moved to the Qatari Peninsula in the eighteenth century, the Al Thani ruling family dominates Qatar today. The *emir* or ruler of the country, HH (His Highness) Sheikh Hamad bin Khalifa Al Thani, deposed his father Sheikh Khalifa Al Thani in a 1995 bloodless coup supported by the military and the Al Thani family. Executive power is vested in the Emir Sheikh Hamad, who governs by royal decrees. No political parties are allowed, but there is a consultative council, the *Majlis As Shura,* a largely powerless entity performing only consultative duties for issues that the Emir places on the council's agenda. There is talk of establishing a permanent constitution and an elected parliament, and there may possibly be some important changes in Qatar's system of governance as the country again follows the trail of its neighbor Bahrain where there now exists a greater degree of political freedom than before.

Constitutional & Legal Foundations

The Constitution of the State of Qatar assures citizens of social welfare provisions made possible through the oil revenues generated since oil exports began. All Qatari nationals are entitled to free education in the state's comprehensive schooling system that began with the first primary schools in the early 1950s. Equal rights for and obligations of citizens are outlined in the constitution, and the government's responsibility for providing citizens with jobs is highlighted.

There have been signs that the Qatari government may take steps toward allowing greater political freedoms in the country. The Majlis As Shura, or consultative council, of Sheikh Hamad, may be replaced by an elected council or parliament. This would add an element of democracy to the governing process, and the fact that such a move is even being contemplated illustrates the pressures for change. The ruling family, comprising an estimated 10 percent of the Qatari national population, is very powerful, and although the ruler is accountable to the family, other elements of Qatari society have little or no say in the process of governance. The emir is vested with the authority to issue decrees after consultation with the Majlis As Shura. Emiri Decree number 2 established the University of Qatar in 1977, and Decree number 10 (1990) established the Educational Technology Center. But if greater freedoms result through an elected consultative council, a step may be taken toward liberalization and greater social freedoms. In fact, Sheikh Hamad himself has promised that such elections will occur. It remains to be seen how educational development will be affected by further involvement and greater participation of Qataris in governing their own country.

Educational System—Overview

Education is free in Qatar. Students in government schools are provided books and transportation to and from schools. The 12-year public school system consists of a six-year primary cycle followed by a three-year secondary cycle and then a three-year tertiary cycle, taking students up through the secondary level by Western educational standards.

Education in Qatar has benefited greatly from oil revenues. The first schools in Qatar before the beginnings of the modern education system were religious in nature, Quranic schools where young boys learned to recite the *Quran* and acquired basic Arabic literacy skills. The first secular primary schools, for boys only, opened their doors in 1952 shortly after oil exports began, and further expansion and development in education soon followed, as the Ministry of Education was one of the first government ministries to be created in 1956. In the mid-1950s, girls schools were started, and programs in secondary education began. By the 1980s, the educational sector was fairly well developed thanks to the generous welfare provisions of the state. By that time there were programs beyond general academic courses. At the secondary level of education, students could choose from technical, vocational, commercial, and religious training tracks.

The College of Education commenced operations in 1973, forming the nucleus of what was to later become the University of Qatar in 1977. The university now offers a considerable range of courses in the humanities, social sciences, Islamic studies, science, engineering, and education. By the early 1980s, there were around 46,000 students enrolled in the 12-year system of public education, and the government made plans to increase the num-

ber of schools from about 160 in 1983 to 300 in 1990. The majority of the teachers in the 1980s were foreign. However, Qataris, mainly Qatari women, comprised almost half of the teachers in public schools.

At the onset of the new millennium there were many challenges to be met by the Qatari education system. The era of oil super affluence, although permitting rapid development and accelerated progress, has also meant that citizens have come to depend on the social services and welfare provisions of a benevolent state. When schooling is free in an educational system that provides everything from buildings to books, and when there are comfortable jobs to be had upon completion of studies, the expectation of many younger citizens is that they will be able to continue a lifestyle of ease as did their parents. But in an era of dwindling Qatari oil reserves and a larger population, such expectations are unrealistic. Settling into a well-paying job with little actual work involved is an option that many of the younger generation in Arab Gulf states may never realize (Sick 1997).

Such a socialization into the welfare state mentality partly explains the overwhelming reliance on expatriate labor in the Arab Gulf countries. With an estimated 83 percent of its workforce comprising foreign workers, Qatar is somewhat in the mid-range as compared to other Gulf states (Sick 1997). And such dependence on foreign labor highlights an ever-increasing dilemma for the Arab Gulf states such as Qatar, a dilemma of an increasing mismatch between schools and training institutions with the actual needs of the labor market (Al Sulayti 1999). In Gulf Cooperation Council (GCC) states, the vocational/technical professions are generally seen as being beneath a certain level of dignity and respectability. Gulf nationals would prefer an easy government job as opposed to a vocational/technical career. The low enrollments in vocational/technical programs are not enough to meet the national needs for skilled workers, and this low enrollment reflects the less than enthusiastic attitudes toward professions involving ''manual'' labor that are vocational/technical in nature. Outside the government sector, companies generally prefer to hire motivated foreign workers willing to work for low wages rather than relatively unmotivated, expectant nationals. There are urgent reforms needed in the educational and training systems if these issues of concern are to be dealt with.

Upgrading of the Qatari education and training systems is a main focus at the beginning of the twenty-first century, targeting the quality of education available, the *Qatarization* of the workforce, the high failure rate of students in government schools, and the correlation of training and educational curricula with actual labor market needs.

At the twenty-first graduation ceremony of the University of Qatar in 1998, the Emir of Qatar, Sheikh Hamad, addressed the graduating class with a vision for further progress. Acknowledging the advancements made, he cited the need for reviewing and updating the university programs and specialized courses of study, upgrading the standards and quality of education, and relating study and research to the needs of Qatari society.

PREPRIMARY & PRIMARY EDUCATION

From having only a few Quranic schools for boys in the early 1900s, Qatar's system of education has evolved into the comprehensive educational infrastructure that exists today. Both private and government schools offer preschool and primary education. At the primary level, there are around 160 schools in operation, following the Qatari educational curricula, or in the case of private schools, following curricula that will meet the needs of the various expatriate communities in the country. British, French, Norwegian, American, Filipino, Japanese, Indian, Bangladeshi, and other communities have schools that serve the needs of their respective members. The majority of these private schools coordinate closely with educational authorities in the home countries of their constituents, and the standard of education in these private schools is generally high. The following is a sampling of private schools providing education at the preschool and/or primary levels: Al Hilal Kindergarten, Bright Future Pakistani School, Central English-Speaking Kindergarten, Gulf School, Doha Montessori, Ideal Indian School, Tinkerbell Nursery, French School, Iranian School, Phillipine School of Doha, and QAFCO Norwegian School. Not only do these schools cater to the expatriate community, but because many nationals choose to enroll their children in an English-language school so as to enhance their children's fluency in English, a substantial number of national students are served in the private schools of Qatar.

SECONDARY EDUCATION

The secondary level of education in Qatar comprises—according to the national education classification system—the secondary and tertiary cycles, taking students up to the age of 18, equivalent to the completion of secondary education by Western standards. Both the secondary and tertiary cycles are three years in length, and by the time students complete these cycles they are ready for entry into the University of Qatar for further studies. There are about 34 secondary schools in Qatar, including government schools such as the Technical Institute, the Religious Institute, and the Secondary School of Commerce. There are also a number of private schools at the secondary level, for example, the Doha College, based on the British system of education up to the General Certificate of Secondary Education (GCSE) and A-levels. The American School in Qatar offers an American

curriculum at the secondary level. Other schools offering secondary-level schooling include the Pak Shama School (with the Pakistan Education Center), the Doha English Speaking School, the Jordanian School, the Middle East International School, the Park House English School, the Qatar Academy, and the Qatar International School.

HIGHER EDUCATION

The University of Qatar is the main institution of higher education in Qatar today. With the establishment of the College of Education in 1973 the foundation was laid for the official opening of the University of Qatar in 1977. At that time, there were four colleges: the College of Education, the College of Humanities and Social Sciences, the College of Science, and the College of *Shari'a* and Islamic Studies. Since 1977 the university has added three colleges: the College of Engineering, the College of Administrative Sciences and Economics, and the College of Technology, and now has a total of seven. The university also has four research centers: the Scientific and Applied Research Center, the Sunna and Sirra Research Center, the Educational Technology Center, and the Documentation and Humanities Research Center. The main campus of the university is located in the northern part of the capital city of Doha, housed in attractive modern buildings.

Partly due to more Qatari men studying abroad than Qatari women, and also due in part to teaching being one of the more acceptable professions for women in Islamic societies such as Qatar, the women outnumber the men approximately three to one at the university. From the early 1980s to the 1990s the student population at the university nearly doubled, from 3,500 students in 1982-1983, to 6,873 students in 1992-1993. The following data show the number of students and their areas of study at the University of Qatar as of 1992-1993.

1. There were 2,010 first-year students with no declared major, including 510 men and 1,500 women.
2. There were 278 men and 1,786 women majoring in education.
3. There were 209 men and 728 women majoring in humanities.
4. There were 243 men and 425 women majoring in science.
5. There were 55 men and 404 women majoring in Shari'a (Religious Studies).
6. There were 294 men and 165 women majoring in administration.
7. There were 276 men and no women majoring in engineering.
8. In all majors, there was a total of 1,865 men and 5,008 women enrolled, for a total of 6,873 students.

As of 1999, the Shaqab College of Design Arts was another option for students at the higher level of education. The college is a Qatar-based extension of the Virginia Commonwealth University and offers educational opportunities in professional design. Students can earn a bachelor's degree in fine arts (BFA), in communication arts and design, fashion design and merchandising, or interior design in the college's four-year program.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Established in 1956, Qatar's Ministry of Education is responsible for overseeing the national education system. Since the formation of the Arab Gulf Cooperation Council (GCC) in 1981, the ministry has worked toward coordinating its educational agenda with that of other GCC states (Bahrain, Kuwait, Oman, Saudi Arabia, United Arab Emirates). At the end of the 1990s, the emphasis was on educational reform in order to address problems such as high unemployment, high attrition and failure rates in schools, poor uptake of graduates into the labor force, and curriculum revision to improve the quality of education on offer. With an estimated 5 percent of the national budget going toward general education, and another 4.5 percent going to the University of Qatar, the funding exists to implement needed reforms. And, with specialized educational think tanks such as the Education Research Center (ERC), the resources exist to analyze the problems and challenges facing educators in Qatar. The ERC supports educational research, offers consultation services to schools, facilitates cooperation among Qatar University's faculty and staff, publishes a biannual journal for the reporting of research results, and organizes workshops, seminars, and conferences for the benefit of the educational profession in Qatar.

NONFORMAL EDUCATION

There are a number of schools in Qatar catering to children with special needs and offering services to the handicapped and mentally impaired. This type of special education began in 1974 with the establishment of a governmental Special Education Section. Additionally, the Ministry of Education operates special needs schools for the deaf and blind, for example, the Shafallah Center, which opened in September 1999. Funded by the Supreme Council for Family Affairs and the National Committee for Special Needs, the Shafallah Center is a private, nonprofit institution. Units at this school include a Family Support Unit, an Early Intervention Unit, miscellaneous school units, a Paramedical Support Unit, and an Instructional Media Unit, along with a library. Also planned are a school unit for autistic children as well as prevocational and vocational units.

Other options for Qatari students outside the formal schooling sector include distance education initiatives, cultural centers, and centers for adult learning. There are also a number of short educational and training courses being offered in Qatar made available through either local or visiting companies. Training and community programs are also offered through various cultural clubs in Qatar.

TEACHING PROFESSION

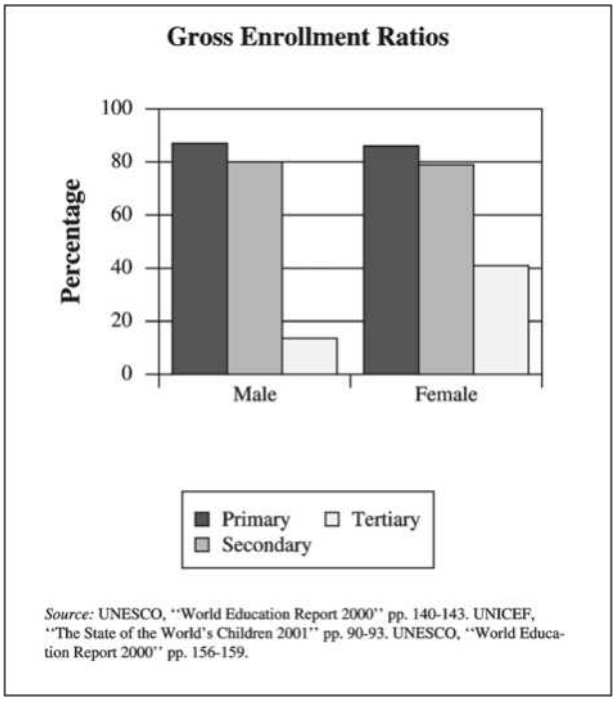
The teaching profession in Qatar, as in other Arab Gulf states, is one characterized by large proportions of foreign teachers. The dominance of women in education, and their exclusion from areas such as engineering and administration, is also characteristic of the traditional religious restrictions placed upon women—although changes are underway. In 1992-1993 the number of women studying in the University of Qatar's Faculty of Education outnumbered the men an astounding 1,786 to 278. The traditionally acceptable role of women as teachers in Islamic societies is comfortably reinforced in the restrictive Wahhabi-influenced society of Qatar. Although there is much talk about Qatarization of the national workforce in areas such as education, it is clear that more participation of native men is needed if this goal is to be realized.

The College of Education was the first component of the modern University of Qatar to be established in 1973 as the Faculty of Education. Teachers are trained there for the various levels of basic education in the government system. A great variety of specialties are available for education majors, ranging from language education (English and Arabic), to science education, art education, and more. Teachers-in-training have the option of benefiting from and participating in the ongoing research of the university's Educational Technology Center and the Educational Research Center.

The British Council of Qatar has been involved in a program of quality improvement with regard to English-language education. English teaching supervisors in the Ministry of Education participated in training programs in 1999 as part of the ministry's strategy to improve the quality of instruction in state schools. Training and consulting provided through the British universities of Reading, Kent, and Nottingham are a component of the overall upgrading and reform of the Qatari national educational and training systems.

SUMMARY

There have been some positive indications suggesting that education in Qatar will continue to develop at an accelerated pace enabled through the prosperity brought on by petroleum and natural gas revenues. But with the prosperity has also come a set of new challenges. A government in the position of benevolent provider of welfare services is in the precarious position of ensuring a level of continued prosperity for its citizens. Fluctuations in the price of oil, a growing population expecting the same entitlements as their parents, and the dependence on foreign labor are factors in the social equation that might easily lose equilibrium.



Source: UNESCO, "World Education Report 2000" pp. 140-143. UNICEF, "The State of the World's Children 2001" pp. 90-93. UNESCO, "World Education Report 2000" pp. 156-159.

There are signs that the ruling family of Qatar is relinquishing some control in order to give citizens an outlet for political expression in an elected consultative council. Following the lead of neighboring Bahrain, Qatar seems poised to permit greater political freedoms. Such changes are needed if the country is to create a better system of state bureaucracy. As accelerated as the pace of change has been in Qatar since the first oil exports, it is clear that the country generally lags behind its GCC neighbors in terms of social progress and educational advancement. Qatar is not the pioneer in educational and training initiatives that its neighbor Bahrain is. Its population is tiny in comparison to neighboring Saudi Arabia, and Qatar does not benefit from a motivation driven by the threats of an aggressive neighbor, as does Kuwait. Furthermore, societal restrictions are more repressive in Qatar relative to the United Arab Emirates. As cautious as Qatar may be, following along the trails blazed by others is an education in itself, and not a bad option when lessons can be learned through observing the experiences of neighbors with a similar history, a common religion, a similar sociocultural outlook, and common challenges at the onset of the twenty-first century.

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—John P. Lesko

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RÉUNION

BASIC DATA

Official Country Name:	Department of Réunion
Region:	Africa
Population:	720,934
Language(s):	French, Creole
Literacy Rate:	79%

The island of Réunion, located in the Indian Ocean approximately 450 miles (724 kilometers) east of Madagascar, became an overseas department of France in 1946. As of July 2000, the island counted nearly 721,000 inhabitants.

The educational system is based on that of the mother country. School attendance is compulsory between the ages of 6 and 16. More than 217,000 students attend some 640 public and private establishments. Nursery schools and kindergartens exist for children between two and six years of age. Elementary schools are for the first five years of study, junior high schools (*collège*) for the next four years, and senior high schools (*lycées*) for the final three. Overall, the system employs about 17,000 people, including 14,000 teachers and teachers aides. Seventy percent of the students who complete their studies and pass a series of examinations in all major disciplines receive the *baccalauréat,* or secondary school diploma.

The University of La Réunion was founded in 1982. More than 13,000 students coming from all over the world attend classes at its four sites. They prepare degrees in one of the University's three schools (law and economics, letters and human sciences, and science and technology) or one of its three institutes (linguistics and anthropology, management, and business administration). University studies are divided into three cycles: the first lasts two years, the second lasts three or four depending upon the degree that is sought, and the third lasts for five years. Each one is sanctioned by a diploma. Students can also prepare a doctorate. Research is done in the Schools of Sciences, Economics and Political Sciences, and Letters and Human Sciences.

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—John J. Janc

ROMANIA

BASIC DATA

Official Country Name:	Romania
Region:	Europe
Population:	22,411,121
Language(s):	Romanian, Hungarian, German
Literacy Rate:	97%
Academic Year:	October-June
Number of Primary Schools:	6,188
Compulsory Schooling:	8 years
Public Expenditure on Education:	3.6%
Foreign Students in National Universities:	14,181

Libraries:	3,246
Educational Enrollment:	Primary: 1,405,308 Secondary: 2,212,090 Higher: 411,687
Educational Enrollment Rate:	Primary: 103% Secondary: 78% Higher: 22%
Teachers:	Primary: 71,829 Secondary: 175,958 Higher: 26,310
Student-Teacher Ratio:	Primary: 20:1 Secondary: 12:1
Female Enrollment Rate:	Primary: 103% Secondary: 78% Higher: 24%

HISTORY & BACKGROUND

Romania, located in southeastern Europe, is about the size of Pennsylvania and New York combined. The terrain of Romania mainly consists of rolling, fertile plains with hills in the eastern region of the central Danube River basin and with the Carpathian mountain ranges running north and west in the center of the country. Romania is bordered on the north and northeast by the Ukraine and the Republic of Moldova, on the northwest by Hungary, on the south and southwest by Yugoslavia and Bulgaria, and on the east by the Black Sea. The country occupies an area of 237,499 square kilometers (91,699 sq. mi.).

As of the year 2000, the estimated population of Romania was 22.5 million and was decreasing at a rate of 2.7 percent. Its largest city and capital, Bucharest, had an estimated population of 2.02 million. Although much of the population is rural and agricultural, there are six cities with populations of 300,000 or more (Constanta, Iasi, Timisoara, Cluj-Napoca, Galati, and Brosav).

Its people are overwhelmingly Romanian (89 percent) which, unlike Slavs and Hungarians, are traced to Latin speaking Romans. However, there are a large number of ethnic and minority groups that make up a small portion of Romania's population. Hungarians make up about seven percent of the population and the remainder comprises Germans, Ukranians, Croats, Serbs, Russians, Turks, and gypsies. Hungarians and gypsies are their primary minority groups. The official language is Romanian, but some of its population speaks Hungarian and German. The religious population of Romania is almost entirely Christian. More than 85 percent of its population is Orthodox; about five percent is Roman Catholic; another five percent is Reformed Protestant, Baptist, or Pentecostal; and a very small number are Greek Catholic or Jewish.

Forty-two percent of the Romanian workforce (about 9 million) is in agriculture; 38 percent is in industry and commerce; and the remaining workforce is in tourism and other occupations. Agriculture (e.g., corn, wheat, potatoes, and livestock) is about 16 percent of the gross domestic product (GDP) of Romania, industry (e.g., textiles, mining, machine building, and chemicals) makes up about 40 percent of the GDP; and services (e.g., tourism) makes up about 43 percent of the GDP. Romania's natural resources include oil, natural gas, timber, coal, salt, and iron ore. Its chief exports are textiles, fuels, metals, wood products, chemicals, and light manufactures. The GDP of the economy of Romania has been growing at rates as high as seven percent in the 1990s (in 1998). Its highly literate workforce (98 percent literacy) and its economic base in agriculture, energy, and tourism gives Romania great economic potential in the future (United States Department of State 2000).

Romania's history and politics has driven the intellectual development of their people. Throughout Romania's history the country has been on what has been called a ''path of a series of migrations and conquests'' (United States Department of State 2000). In 200 B.C. the area of Romania was settled by the Dacians, who were a Thracian tribe. In the second century A.D., Dacia (early Romania) was incorporated into the Roman Empire, but was abandoned by the Romans almost two centuries later. Remnants of early education, including Latin inscriptions, have been found from this time period. Romania was considered to be lost for a number of years, but reemerged in the middle ages as part of Moldova and Wallachia. There were church related schools beginning in 1000 A.D. The oldest known school in Romania was started in the monastery at Cenadul Vechi in the eleventh century.

Due to the influence of Rome in these early principalities, much of the instruction at this time was in Latin and continued to be so from the eleventh through sixteenth centuries. The first schools to teach in the Romanian language are rooted back to the sixteenth century. Like most schools of the time, these were church-related. In the seventeenth century, more schools were founded in the cities of Sighet, Tirgoviste, Jina, Lancram, Hateg, and Turda. Schools of Greek education were later founded in Bucharest and Tirgoviste. The first university was also founded in Moldavia in 1640 where philosophy and literature were the foundations of its curriculum.

It is important to note that a portion of Romania (e.g., Transylvania, Nasaud, and Tara Birsei) was influenced

by other empires such as the Austrio-Hungarian Empire and the Germans. This becomes important in Romanian history as Hungarians and Germans later become national minorities and education in their languages is suppressed by latter day Romanians.

Up until the 1700s, churches still dominated schools, but there began to be some schools under the administration of local communities. In the 1700s and 1800s, the majority of schools were tied to localities and varied in organization and curriculum. But starting in the late 1700s and into the 1800s, some of the schools were budgeted by communities, and local laws began to form and administer education systems. Teachers and professors became a profession separate from the clergy. Schools of music, medicine, and engineering were founded and there began to be some sense of equality in education where women and men were treated equally. Private schools also began to open that were not related to churches.

The Moldovian and Wallachian principalities, however, were badly managed under the Ottoman Empire and were eventually unified under a native prince, Alexander Ioan Cuza, in 1859. In 1864, the new Legislative Assembly provided Romania with a compulsory education system that included free primary education for the first four years, a system of secondary education for seven years, and three years of higher education. Romania is considered to be one of the first countries to provide compulsory education.

Romania became independent under the 1878 Treaty of Berlin after the War of 1877. Romania later crowned its first king in 1881. In this early period of Romania, numerous educational laws and regulations were handed down that set out the education system of Romania. Some of these laws provided for the selection and training of teachers, the extension of compulsory education, the exclusion of peasant children from secondary schools, and extensions in the curricula of secondary and higher education. Graduates of Romanian higher education before 1990 had to go through a period of compulsory employment after their studies (Reisz 1994). Through a propaganda program, higher education in Romania was considered elitist and came to be associated with institutions that produced doctors, teachers, engineers, economists, and lawyers.

Although Romania was located between the Hungarian, Russian, and Austro-Hungarian Empires, it garnered much of its educational, cultural, and administrative models from its complex history and from the west. In particular, influence came from trade relations with the French (United States Department of State 2000). Romania was an ally of the west in World War I and was granted more territory after the war in such areas as Transylvania, Bessarabia, and Buckovina. In 1918, the addition of Transylvania established the national state of Romania. Because Transylvania was a portion of the Austrio-Hungarian empire, Transylvania's education and culture were heavily influenced by the Hungarians. Schools in Transylvania, before its annexation by Romania, only permitted instruction in Hungarian. As a result, there were far more Hungarians than Romanians who were enrolled in secondary schools. This became an important foundation in Romanian educational history, because Romanians under communism required Hungarians to be taught in the Romanian language. The University of Cluj, for instance, began to offer instruction in Romanian for the first time.

Pre-World War II, Romania exhibited many of the qualities of a dictatorship although it had a constitutional monarchy. Much of the political thought pre-World War II was anticommunist, pronationalist, and held anti-foreign and anti-Jewish influence on its economy. Educational laws primarily sought to unify the new nation into a single education system. The education system became more egalitarian by the provision of free compulsory primary education and free books for those who could not afford them. Like Romanian politics, education was nationalist in its ideology.

During World War II, Romania, under the direction of General Antonescu, sided with the Axis powers and invaded the Soviet Union to retain some of its territories. In 1944, a coup was staged by King Michael that deposed the Antonescu dictatorship and placed the armies of Romania on the side of the Allied powers. Romanian armies, then, fought the Germans, the Transylvanians, the Hungarians, and the Czechs (United States Department of State 2000). As socialism began in Romania, so did the establishment of Marxist and Leninist thought into its education system.

After the Peace Treaty signings in Paris in 1947, Romania came under the influence of the Soviet Union and communism. The Romanian educational curriculum became socialist as well with the teachings of materialism, scientific socialism, and Marxist historical philosophy. The Bessarabian and the Northern Buckovian territories came under soviet annexation whereas the northern portion of Transylvania was returned from Hungary to Romania. The Soviets pressed for inclusion of Romania's Communist Party into the government and political opponents were eliminated. King Michael went into exile in 1947. This early phase of communist rule was dominated by the Soviet Union and the Hungarian minority in Romania (Gallagher 1995).

Under communism, the education system became state-controlled and intimately influenced by the communist revolution in Eastern Europe. Religious and private schools immediately came under state control. For exam-

ple, the first constitution of the Romanian Peoples Republic (April 1948) had attempted to abolish confessional general schools and the Educational Reform of 1948 abolished all private schools as well as religious teachings in the curriculum (Shafir 1985). This new education law transferred all private schools to state control and all church school property was taken by the state without compensation.

In the 1950s, the Romanian Communist Party was considered by a majority of Romanians to be a gang taking orders from the Russians, which were in turn directed by the Hungarians (Gallagher 1995). Thus, a very important part of Romanian education was a suppression of the Hungarian minority in Romania. This was done in part by an educational philosophy that ''Romanianized'' all minorities through the educational process. Because of the past Romanian encounters with Hungary, reforms in education after the 1960s made it very difficult, if not impossible, to learn or teach in the Hungarian language. Hungarian schools were merged with Romanian schools and beginning in 1956 this effort was stepped up (Gallagher 1995). One of the most important events in this regard was when, in 1959, the Hungarian Bolyai University was merged with its Romanian counterpart, the Babes University. Technical classes that were formerly taught in Hungarian were now taught in Romanian. In fact, it was nearly impossible to study applied sciences or engineering in the Hungarian language. Those courses that were taught in Hungarian were generally of an ideological nature. The ultimate result of this merger was a real blow to Hungarian language education. The number of Hungarian undergraduates dropped from 10.75 percent in 1957 to 5.7 percent in 1974 (Romania: Language, Education, and Cultural Heritage, 2001).

In the 1950s and into the 1960s, Romania began a nationalist communist regime that distanced itself from the Soviet Union both economically and socially. This new regime was influenced by the leadership of Gheorghiu-Dej and emphasized Romanian national values, history, and patriotism. As to education, this meant the building of a Romanian intelligentsia that promoted state-controlled education and communist thought. In addition, the vision of totalitarian Romania was an educational emphasis on preparing young people for industrial tasks (Gallagher 1995). Higher education in Romania was still elitist, but it did increase in the 1950s (Reisz 1994). Another important part of this movement in Romanian history was an abandonment of Russian and Soviet interpretations of Romanian history in the 1960s (Gallagher 1995).

After the death of Gheorghiu-Dej, the Romanian Communist Party was controlled by Nicolae Ceausescu. Ceausescu became head of state in 1967. Education under Ceausescu became much more communist and nationalist. Romania under Ceausescu from 1967 until the revolution in 1989, was a time of foreign policy that was independent from Russia. In 2000 the U.S. Department of State said that Romania's independence from Russia led to some respect by Western democracies that allowed Ceausescu's rule to become increasingly tyrannical in the 1970s. As the anticommunist revolution increased political inertia in the late 1980s, Ceausescu's policies, including education, became more and more nationalist and more and more geared toward the needs of the economy. There were severe cuts in the diversity of higher educational programs in the mid-1970s that led to 74 percent of students being enrolled in engineering and agricultural schools by 1988 (Reisz 1994). In addition, numerous reforms were undertaken to continue the domination of the Romanian language in education.

In 1989, the Ceausescu regime fell along with other communist dominated governments in Eastern Europe. Ceausescu and his wife were executed on Christmas Day in 1989 and the government was taken over by the National Salvation Front (NSF), which claimed that it had restored freedom and democracy. Elections were held in 1990 and Ion Iliescu, the NSF leader, won the vote and two-thirds of the seats in parliament. The NSF then began what was termed as ''cautious free market reforms'' (U.S. Department of State 2000). However, much of the country was impatient with the slow reform and blamed it on the intelligentsia and other communist devotees. As a result, protesters and miners who were angry with the progress led to an angry and brutal treatment of these Ceausescu-era intellectuals. The miners returned to Bucharest in 1991 and demanded higher wages. As a result of this unsettling political environment, the FSN split into two parties shortly after the parliament drafted a new democratic constitution in 1991 and after that constitution was approved by referendum in December of that same year.

Along with the fall of came a slow, but progressive set of reforms in Romanian society. The reforms in education included the slow decentralization of the education system, the increase in number of private schools in Romania, and the increased pressure by Hungarians to restore education in the Hungarian language. Progress has been hampered by the lack of resources, the slow progress of changing textbooks from communist to reform, and the remaining communist intelligentsia in Romania that dominated education and political life under communism (Gallagher 1995).

CONSTITUTIONAL & LEGAL FOUNDATIONS

Although Romania was one of the first countries with a compulsory education system, under socialism,

education was centralized, Marxist-based, and free. The centralization of education allowed for teaching communist party ethics and was, a very important role of government. At the local level, the education section of the local communist party administered education. The local communist party Executive Committees of the County People's Councils housed these education sections (Braham 1972). These People's Councils, as well as the education sections, usually acted in accordance with general guidelines or instructions that were issued by the Party and by the Ministry of Education. The Ministry of Education was the central government body charged with implementing education policy.

After the revolution in 1989, the Ministry of Education became the Ministry of National Education (MoNE) and the Constitution in Romania changed as the state moved from socialism to a progressively market oriented economy. Under the new Constitution of 1991, Romania provides a right to education regardless of social background, sex, political and religious affiliation, and any other restrictions that might injure any human right (The Educational System in Romania 2001). Therefore, one can see the change in constitutional emphasis in the language surrounding political and human rights equality issues. The prereform constitution also mentioned a right to education and equality of education for minorities. However, the constitution used separation of church and state language to prohibit religious education.

Three Important Historical Foundations of Romanian Education: There are three very important legal and historical foundations of Romanian education today. The first Romanianization of education came through communist party education or ''party teaching.'' The second Romanianization of education began in the 1950s where minority ideas were suppressed (e.g., the rooting out of Hungarian language education). The third important influence was the emphasis of Romanian education on industrial education at the expense of agricultural and other disciplines.

The Intelligentsia: Party Education Under Communism: With the increased nationalism in Romania in the 1960s, the Romanian Communist Party (RCP) saw a need in the early 1970s for more ''revolutionary consciousness.'' In the 1960s, cooption was used to bring intellectuals into the party. These intellectuals consisted of 46 percent of engineers and 50 percent of all teachers (Shafir 1985). As a result of this, there was a fear by Ceausescu of a ''red'' versus ''expert'' split in the country. This fear of a ''narrow professionalism'' among party members led to a minicultural revolution in 1971. The cultural revolution was used to bring the political minorities into the party that had wished to push beyond party limits on free speech. Thus, in 1971, the Stephen Gheorghiu Academy for Social and Political Education was reorganized to provide ''party higher education'' in order to produce individuals with satisfactory professional qualifications and correct ideological values. This reorganization led to two divisions of party education: one in charge of scientific management and the other in charge of party and mass organization.

In addition, in 1972, the RCP adopted a code of communist ethics. Party education was necessary for establishing the intelligentsia that comprised government offices and positions in education. ''Party teaching,'' was used to improve the level of RCP members and to create a loyal intelligentsia that would influence political and social life in the state. Party higher education under the Academy was up to four years long and was regarded as a major step toward their party careers. As a result of this, the totalitarian vision from the party was an emphasis on science and industrial education that prepared young people for industrial jobs (Gallagher 1995).

In the 1980s, as democratic movements began to assert themselves in Eastern Europe, party education became more important in Romania. In 1982, the Political Education Committee (PEC) recognized the poor efforts of party education and trained a group of propagandists that visited each county and spent four days a month training and educating local propagandists. These locals did ''party teaching.'' Party members were often forced to attend sessions or classes after work or school. One significant problem with the failure to ''party teach'' was that a plurality (47 percent) of all members had not yet completed high school. By 1983, over 200,000 party members had graduated from party schools (Shafir 1985).

Suppression of Minorities in Education: Romanianization was the primary policy beginning in the second communist wave of the 1950s. Assimilation, and even elimination, of ethnic and political minorities was a policy that had a great impact on Romanian education in the Ceausescu years and in the reform years after his reign. Shafir notes that three primary policies aided in the suppression of minorities in education. First, education was used to assimilate Romanian ethics into Transylvania and to disperse non-Romanian ethics out of the region. Second, there was a policy and history of shrinkage of the number of schools providing education in minority languages (e.g., Hungarian and German). Third, there was a promotion of Romanian as the national language in early nationalist and communist politics.

For example, from the 1970s to the 1980s, minimum numbers of 25 students in primary schools and 36 students in secondary schools were required before a class

could be open to minority language instruction (Shafir 1985). This rule did not apply to Romanian language classes. In universities, minority language teaching was regulated by a provision that university study groups for minority languages could only be established if there was a minimum of 15 students. However, students were distributed among groups so that group numbers rarely reached 14 students.

In addition, the Educational Reform of 1973 was geared to transform the education system by making it two-thirds technical and one-third humanities in order to keep up with industrialization. However, as of 1985, this policy had not been applied to Hungarian language instruction. Because technical courses were only taught in the Romanian language, this further isolated Hungarian students in Romania from educational development (Romania: Language, Education, and Cultural History 2001). In 1974, only 1.4 percent of technical instruction was in Hungarian. From 1974 to 1985, only one out of four technical schools taught in minority languages and technical textbooks were rarely translated out of the Romanian language (Shafir 1985). Thus, Hungarian and German parents tried to register their children in Romanian language schools. This led to complaints by some party members, so Ceausescu had these applicants rejected when they applied to technical schools.

The educational foundation under communist and totalitarian Romania was a Romanianization of minority languages in education. In addition, non-Romanians were filtered away from training that would achieve for them the more important industrial jobs in Romanian society. With educational reform after the 1989 revolution, politically active Hungarians demanded steps toward inclusion in the education system. One very important demand was the reconstitution of Bolyai University (Gallagher 1995). The merger of Bolyai with the Romanian Babes University had eroded Hungarian language teaching in higher education and this became a major issue among education reforms in the 1990s.

Emphasis on Industrial Education: In the late 1960s Romania began to emphasize industrial and technical education. This, to some, came at the expense of training in the social sciences, arts, and humanities. This became a real issue for reform in the post- Ceausescu era and had a great effect on the education levels of rural students.

Much of the Romanian workforce in 1981 commuted from rural areas to fill industrial jobs in the cities (Shafir 1985). Most of these workers, however, were very poorly educated and unskilled laborers. Seventy percent of these workers were said to have only four years of elementary education. The migration of these undertrained workers to the city led to a real problem with fewer (and also poorly trained) workers in rural areas for agricultural jobs. As of 1982, there were lower levels of education for agricultural workers and agricultural jobs were low in income and low in prestige. Only children who did not pass entrance exams to other schools would attend agricultural schools; half of those who graduated from agricultural schools went to work in rural villages; and only 15 percent of these would be in agricultural jobs two to three years later.

Reform under Ceausescu attempted to remedy the rural and agricultural drain. One reform was to require most students who graduated the eighth grade in rural schools to attend high school (especially the vocational and agricultural variety) in their own areas. This was done to slow rural migration and the harm to the agricultural sector of the economy. A second reform was a decree that retired citizens and school children must help with agricultural work during the peak agricultural season. During peak farming months children aged 10 and above would work the fields and schools would close (if need arose) in order to weed the fields (Shafir 1985).

Therefore, Romanianization in party education, minority education, and industrial education had its effects on the education system. Party education became formal for members and it was an important socializing force for the creation of an intelligentsia that would become teachers and professors under Ceausescu. Party education also emphasized the necessity for scientific and industrial advancement that forced changes in the curricula of Romanian schools. This emphasis on industrial economy also led to serious problems with education in the agricultural sectors of society. Education in Romania had a very firm and important effect on assimilating minorities into a centralized Romanian culture. This was done, in part, by reforms that harmed the ability of minorities to study in their own languages.

EDUCATIONAL SYSTEM—OVERVIEW

In discussing Romanian education, it is quite important to provide an overview of education before the democratic revolution in 1989. The political reforms in 1989 greatly shaped the education system today.

Education Before 1989: Education in socialist Romania was a key component of socialist society and was centrally controlled. Every student from nursery school to graduate school was taught in a socialist environment controlled by the state and attendance was compulsory up through secondary school (Rabitte 2001). The centralized education system provided one notable success—literacy rates were estimated at 98 percent during communist rule (U.S. Department of State 2000).

The Ministry of Education (MOE) set the curriculum and the curriculum was heavily influenced by communist

doctrine. The Ministry also planned the number of students who would be accepted at institutions. Students were generally free to apply to the school that they chose, but acceptance was regulated by the state. The number of pupils to be accepted at schools of each level was planned during the summer by the MOE for the school year beginning in September (Rabitte 2001). The MOE and the state declared that all schools had the same quality of education, but it was clear that technical schools were the emphasis of the state. Agricultural and rural schools had fewer resources and were not sought after like technical schools, which included the sciences and engineering.

Education reforms in the 1970s provided a heavy emphasis on technical schools at a ratio of two-thirds technical schools to one-third humanity schools. This was, in part, due to Ceausescu's belief that study of the humanities was a waste of state resources and that intellectuals were not productive members of society like those trained in industry. The emphasis on technical education is exemplified by the different tracks of curricula available to students entering high school. Technical schools, at the high school level, were divided into three types and students were selected for these on the basis of entrance exam scores. The best students were placed into physics and math curricula, middle grade students were placed into electronics, and the lower level students were trained in mechanics (Rabitte 2001). Each high school student was also compelled to complete a one-month internship or apprenticeship per trimester.

Despite the technical emphasis of education, Rabitte (2001) notes that the curriculum was well balanced—even by Western standards. Students balanced their technical training with courses in Romanian literature and language, two additional foreign languages, history, sports, geography, biology, and drawing. It is not surprising that international estimates of literacy rates were reported so high. Schools taught the English, French, German, Spanish, and Italian languages. However, Russian was not taught in schools because of Ceausescu's severance of ties with the Soviet Union during the late 1960s.

Religious and private schooling was nonexistent in communist Romania and so the state curriculum was geared toward communist indoctrination. Courses were taught on the politics and economics of capitalism and socialism. The MOE selected the educational curriculum and books. Teaching methods focused on memorization of material for state exams. Very little emphasis was placed on critical thinking (Rabitte 2001).

Reform: Education After 1989: With the 1989 democratic revolution that brought down communism, the Romanian education system began the process of reform. Education reform was adopted, but implementation of that reform was a slow process. Shortly after the revolution, libraries were emptied of their communist writings and these were burned in the streets. This, of course, left the system with a need for newer, reform oriented books—a process that would take some time. In fact, Rabitte (2001) tells us that it took until 1992 for democratic reform textbooks to begin to show up in schools. Market reforms allowed several new publishing houses to open up and print books for the new national curriculum.

A great number of the qualified teachers in Romania during the immediate postrevolution were members of the communist intelligentsia and/or the communist party. Therefore, the implementation problem that existed in the postrevolution continued in a number of schools because new curricula had not been swiftly adopted and communist ideas remained among the teachers. One interesting reform allowed students the opportunity to dismiss teachers and professors that were not changing with society. In addition, all teachers who were active members of the communist party were forced to retire from teaching (Rabitte 2001).

One of the immediate reforms of education was to rid the country of socialist ideology classes. Religious education and other private schools began to emerge from socialism. Included in this was a growth of private universities. However, many of these schools were quite expensive for locals and the curricula were considered by some to be ''fly by night.'' Many who graduated found that their degrees were not valuable in the market. As reform continued, there were improvements in the private universities and many became nationally accredited. Rabitte (2001) suggests that these institutions have improved greatly and have sunk much of their profits into internal, capital improvements.

State run universities and their curricula also came under reform. Reisz (1994) argues that the initial reform of universities in the 1990s was an expansion of academic freedom. These included a development of new disciplines by academics along with the fall of barriers to international information (e.g., by the Internet). In particular, reform toward a more open society included a new emphasis on business, and the arts and humanities in education. However, the new government in 1991 continued to promote the industrialization of Romania and technical education remained important. This meant deemphasizing fields such as health and education to fund industrial priorities. These implementation problems are of particular concern to rural areas that are underfunded and without good facilities and textbooks. Raisz (1994) argues that the early reform experiment of ''absolute freedom'' in curricular affairs was considered to be un-

successful. Therefore, he suggests that academics in Romania have been held back by the Ministry of National Education and that this signals a return to more central control over education in Romania.

The Romanian curriculum also changed from an emphasis on memorization to an emphasis on critical thinking. International experts aided Romania with this transition in urban areas. However, this transition has been slower in the rural areas where teachers still follow the old teaching techniques. In higher education, Rabitte (2001) suggests that many university courses follow the American model of curriculum and testing. There was also a new emphasis on international education and international exchanges of both faculty and students.

Despite reform efforts since the 1989 revolution, many problems persist including what has been termed as ''chaotic growth'' (Smith 1995). Student enrollments increased from 164,505 in 1988-1989 to 256,690 in 1992-1993; the number of faculties tripled; and private universities grew to 73 by 1995. Along with this growth came a serious shortage of teachers. The number of teaching positions grew from 14,485 to 31,249 from 1989 to 1993. However, although the positions grew by 116 percent, the number of positions filled only grew by 64 percent. This becomes even more significant with the growth of student hours to 36-hour attendance weeks that are above other western schools.

Resources for education after the revolution improved overall and there was adoption of new curricula that was more democratic in focus. However, adoption does not mean implementation. The education system has been slow to change because efforts and budget priorities have focused on the construction of a market economy, a change in politics, and a continued emphasis on industrialization, technology, and business.

In 1990 Romania put forth objectives for educational reform. Wilson Barrett (1995-96) discusses the reform mission put forth in 1990 by Romania as a series of reforms that were in line with other national reforms (constitutional, political, economic, and social). The following objectives had priority. One was decentralization of educational administration by delegating responsibilities to inspectors and school principals; by increasing university autonomy and the accountability of education through a system of public responsibility for efficiency; and by creating boards to facilitate the participation of local officials, parents, trade, and industry. Other very important priorities included: modernization of education finance, reorganization of teacher training, restructuring of vocational and secondary technical schools, modification of curricula including books, and the abolition of the state monopoly over textbooks. Along with granting more autonomy, Romania also prioritized higher education reform to include academic evaluation, accreditation, and new financing systems. Finally, new government institutions were set up to implement education reform. These included the Department of Reform, Management, and Human Resources (under the Ministry of Education); the establishment of teacher centers in each county; regional managers of reform at the local level; a network of pilot schools organized by the Institute for Educational Services; the National Council for Educational Reform; and the National Council for Evaluation and Accreditation.

In a 1992 article, Dr. Gheorghe Stefan, the Minister of Education and Science recognized that early education reform in Romania necessitated building the ''bones'' of educational-legal foundations and that the ''flesh'' would be added later. Education reform in Romania is rather new and it will take time for reform goals to be adequately implemented in Romanian society. There have been great changes that have occurred very quickly in Romanian political and economic life. Education reform has been no different and in the future there will be typical implementation problems that occur when a country experiences societal upheaval.

School Technology: School technology has been a real problem in the pre- and post-reform eras of education. In a 1992 multiple case study of technology in schools, Diamandi wrote about a case study of a school in Bucharest, Romania. In his introduction, Diamandi argues that Romanian education was still dominated by the informative rather than formative style of educating. Technology was one way of providing formative education in schools.

With the enormous growth of students and a lack of resources, Romania has had problems affording and introducing computing into the classroom. In 1984, Romania introduced computer use into the education system. This occurred once national production of personal computers began in Romania. The first introduction of computers to the classroom consisted of: 1) the introduction of elementary computing within mathematics that included informatics and BASIC programming; 2) familiarizing the younger generation with new technologies through computer camps and special informatics classes (Again, BASIC was the primary language); and 3) research and financial support from government agencies to develop educational software and use of computers with pupils (Diamandi 1992). The central problem with these initiatives was the computer technology was not widely sold to the public and PC technology was quite expensive. Therefore, small school budgets and lack of a national program to introduce technology led to a very poor record of technology in schools.

To correct this, in 1985 the Ministry of Education endowed a number of secondary schools with Sinclair-

Spectrum compatible computers. This endowment led to the production of other Sinclair-Spectrum compatible systems and spurred a market in Romania. However, Diamandi (1992) points out that these systems were inadequate because of shortcomings such as a nonstandard operating mode, small internal memory capacity, and external data storage via tape.

Because of these issues, computer use was hard to integrate into the curriculum in the late 1980s in part because of poor hardware and because of the overuse of older languages such as BASIC.

The state of technology in 1992 was also problematic. Technology was integrated in the schools in a ''top-down'' fashion from secondary schools down to primary and elementary schools. These latter schools were not the priority schools and they did not obtain adequate technology (Diamandi 1992). Even at the secondary level, computing technology was a priority in the ''Informatics Secondary Schools'' and those that emphasized math. Another problem at all school levels is that technology was integrated into the curricula by local teachers that were poorly trained in computer use and instruction. Finally, there were problems in obtaining software for computing. Despite this, however, Diamandi argues that the computer skills of young people have made remarkable progress.

Some changes by the Institute for Computers (ITC) have been to project the requirements for producing hardware and software in Romania. In addition, since 1984, the ITC has fostered research on technology in schools that includes the testing of computers used in the schools and developing applications for the classroom. They have also researched and created courses for computing. Finally, there has been ongoing research that is based in schools with respect to integration of computing into the classroom.

In the late 1990s, the Ministry of National Education brought forth a new commitment to technology in Romanian schools in its creation of the Program for the Implementing of Information and Communications Technologies in Pre- University Education (Information and Communication Technology in Romanian Education System 2001). The core emphases of this program are to integrate technology into a national curriculum, train teachers in information and communication technology, provide computer technology to schools, and create partnerships with business and other organizations (e.g., NGOs and charities).

Education Rights: Every Romanian citizen is afforded a right to an education and that right extends to social class, sex, political affiliation, religion, and any other possible injury to human rights (The Education System in Romania 2001). Education is compulsory for eight years and access to education at all levels is open and free to citizens. The state also provides financial support to pupils that obtain very good grades and/or that prove special abilities in their field.

Education is provided in the Romanian language at all levels. However, given the past educational policies aimed at Hungarians, Romania provides the right for national minorities to be educated in their native tongue. Romanian education now consists of both public and private alternatives.

The education structure consists of preschool education (three levels of small, intermediate, and big); primer education grades (grades 1-4); secondary education with two levels (secondary school: grades 5-8; high school: grades 9-12); intermediary education (post-high school); and higher education (graduate and postgraduate).

PREPRIMARY & PRIMARY EDUCATION

The early stages of schooling in Romania include preschool education and primer education (The Educational System in Romania 2001). Preschool education usually includes children between the ages of three and seven. There are three levels of students, which are small, intermediate, and big. Education is developed in kindergarten with a normal, prolonged, and intermediate program. Education at this level is not compulsory and is typically positively correlated with income and social class (Romanian Educational System 2000). The last year of preprimary school is the ''school preparatory group,'' which is used to prepare students for primary education.

Data from the National Institute for Education indicate that just below 65 percent of three to six-year olds attended preprimary schools in 1998/1999. This has increased by about two percent compared to 1997/1998, but is still a large decrease from the 80 percent figure in 1989/1990 (Romanian Educational System 2000). Of those students who are not enrolled, most are poor, minority, have parents with low education levels, and live in areas where there are few museums and other supplementary educational opportunities. This presents a real problem that such students will be underprepared for school and that they will remain in poverty.

Preprimary education is not compulsory, classes are coed, and classes are organized according to age based on a national syllabus. There are, however, no nationally approved textbooks and education at this level generally varies by locality. Locals have more freedom to put together educational programs at this level.

Compulsory Education: Compulsory education traditionally consists of four years of primary education and

four years of lower secondary education or middle school (Romanian Educational System 2000). Students typically enter primary school at the age of seven, but may enter at age six if they are mentally capable. Students may leave secondary education at the age of 16 if they are not able to complete the educational requirements. In 1999, an education law changed the duration of compulsory education from eight to nine years.

Educational reforms in Romania have focused on changing the curriculum and books for compulsory education in grades one through eight as well as in high school through grades 12. As of 1999/2000, primary school education adopted alternative texts, but grades 4 through 12 had not. (Romanian Educational System 2000.) Assessment procedures have also begun in primary education. Teachers continuously assess primary school students throughout the curriculum. Regular school examinations are given and focus on the basic subjects of the curriculum. No examination is given at the end of the four-year primary cycle as it is at the higher levels of education.

SECONDARY EDUCATION

Secondary education in Romania is made up of secondary schools, which house students from the fifth through the eighth form, and high schools that educate students from the ninth form through the twelfth form. In each level of education, students graduate or pass with the passing of an ''ability'' or ''leaving'' examination. The first form of secondary school is lower secondary school and it is compulsory. Upper secondary school is not compulsory.

Lower Secondary School: The secondary school is typically found in schools that run through the eighth form or the twelfth form (The Educational System in Romania 2001). The ability examination for secondary schools is formed from a methodology produced by the Ministry of Education. Students are assessed regularly in their classrooms by examination. At the end of the eighth grade, students are given an ability exam. Students are tested in Romanian language and literature, mathematics, Romanian history, and Romanian geography. Students that do not pass the ability exam do not continue their studies in high school, but they can be given a grades certificate upon request. Eighth form graduates or vocational school graduates who earn an ability certificate can sign up to continue their education in high school.

Participation rates among the lower secondary age group (11 to 14 years old) have increased substantially (Romanian Educational System 2000). After a decline from 86.1 percent in 1992/93 to 84.6 percent in 1994/95, participation rates increased to 94.3 percent in 1996/97. The participation rate slipped a little in 1998/99, but still remained very high at 92.75 percent.

Dropping out of compulsory education is viewed to be a problem in Romania and the government has taken some action to promote student entry and reentry into school. The dropout rate in the 1990s ranged from 0.6 percent to 1 percent. High dropout rates were typically associated with truancy, excessive absences, and failure to be promoted to the next grade. Dropout rates were higher in rural areas than in urban areas and were even higher among some particularly disadvantaged or less affluent rural areas. Starting with the school year 1998/1999 actions were taken by the Ministry of Education to reduce the dropout rate of students in compulsory education. These actions included a program to make sure that students had the skills to obtain the next grade level and a World Bank sponsored program that focused on improving rural education.

High School: Entry into high school requires passing an admissions exam. High school education is offered from the ninth to twelfth forms during day school or from the ninth through thirteenth forms in night school or distance education (The Educational System in Romania 2001). There is an age limit of 16 for students who enter day school, but the night high school is open to any student who graduates the eighth form. Restrictions are tighter for ''normal schools'' and theological seminaries that require an age limit of 16, a test average of seven points or higher on the ability exam, and a record of good behavior. Romanians who have studied abroad can take the high school admissions exam after they pass the ''difference exams'' offered and established by the Ministry of National Education.

There are three primary options for upper secondary schooling (Romanian Educational System 2000). The first is an academic option that consists of *lyceu* (four- or five-year high schools). The second option is *scoala professionala* or vocational school, that consists of two-, three, or four-year options. Finally, there are *scoala de ucenici,* or apprentice schools, that have one-, two-, or three-year programs. These schools are all typically taught in Romanian, but national minorities may form schools that teach in their own language (e.g., German or Hungarian).

Public secondary school tuition is free and so are the textbooks (Romanian Educational System, 2000). As of 1999, there were almost 1,300 high schools, of which most were public. There has been an increase in recent years in the number of private schools since the fall of communist Romania.

High school curricula are generally focused in three areas, but this may vary by the type of upper secondary school. These orientations are 1) theoretical training (e.g., hard sciences and humanities); 2) technological training

(e.g., technical, services, and natural resources and environment); and 3) aptitude based (e.g., sports, artistic, military, and theological) (Romanian Educational System 2000).

Upper secondary school is based primarily on examination, but access to education at this level is an important consideration of government. Access is considered fairly tough for rural students. In the 1998/1999 school year, ''of the total number of 1,315 upper secondary institutions, 84.5 percent were located in urban areas, and about 93.7 percent of the total number of pupils were enrolled in these institutions'' (Romanian Educational System 2000).

The education participation rates in upper secondary schools of the average 15- to 19-years-old, are about 65 percent. One of the reasons for such low participation rates is the presence of admission exams. An additional reason may be the lack of such schools in rural areas.

Upper Secondary Admission Exam: Admission exams are required for entry into high school and also determine the type of high school a student can enter (The Educational System in Romania 2001). It's a written exam and covers Romanian language and literature (for all applicants), maternal language and literature (for national minority applicants), and mathematics (for all applicants). Those who wish to enter bilingual or special schools such as sports, marine studies, forestry, technical drawing for decorating, normal schools, and orthodox seminaries must pass special tests. These special tests are taken before the general admissions exams. If rejected by a low score on a special test, a student may still take the admissions exam to enter other high schools.

Upon passing the admissions exam or special exams, students may attend a wide variety of high schools. Two important types of high schools are theoretical high schools with concentrations on the sciences or humanities, and industrial schools, which prepare students in engineering and other industrial work. Other high schools include agricultural, forestry, economics, informatics, metallurgical, normal, arts, sports, military, the High School of the Ministry of Internal Affairs, and orthodox theological seminaries (The Educational System in Romania 2001).

In order to graduate from high school, a student must pass a series of ''leaving'' exams. These typically consist of five exams of which three are written and two are colloquies (The Educational System in Romania 2001). In all high schools, a student must pass the written exam and colloquy in Romanian language and literature. After graduation, a student can apply for work according to their education or can continue their education at the post-high school or higher educational level.

Post-high school education is more specialized and is organized by the Ministry of National Education (The Educational System in Romania 2001). These schools are created by the initiative of the Ministry or upon the request of companies or other institutions. Admission to post-high schools consists of an admission exam, which can be taken whether a student is a high school graduate or not. The only exception is admission to medical school, which requires passage of the high school leaving exam. Post-high school is typically one to three years in length and is completed by passing a leaving exam. Passing of the exam earns the student the right to obtain a skills certificate. The exam can usually be taken two more times within three years of the last courses.

Postsecondary schools are divided into two types: post-high schools and foreman schools. Each type provides advanced training for an educated, vocational workforce. Foreman schools are more like ''on the job'' training for jobs in industry and technology (Romanian Education System 2000). The post-high schools provide more specialized training in technological work as well as nontechnological careers. Post-high school provides education in technics and services such as environmental and resource jobs, assistants in administration, and personnel for banks.

Special Education: Special education exists for children with deficiencies and disabilities in order to prepare and integrate them into society. There is a special education network that exists at all levels of schools including preprimary, primary, lower secondary, upper secondary, and postsecondary schools (Romanian Education System 2000).

The program's goal is for public school attendance of every child with learning or development problems along with ''making available the necessary psychopedagogical and specialized assistance.'' The program is aimed at integrating children into society. The program works to make communities aware of special education students so that they can be placed. In the 1999/2000 school year, eight counties were included in the integration program and in 2000/2001 the program was to be operational throughout Romania. The Ministry of National Education is cooperating in this program with UNICEF.

HIGHER EDUCATION

Since the revolution in 1989, scholars report that higher education has grown dramatically in both enrollments and numbers of institutions (Eismon et al. 1999). Enrollments have particularly grown in the fields of the social sciences. This is due, in part, to an ideological shift in education from technical, scientific, and industrial education since the fall of socialism. Part of the growth of

institutions has been found in an exponential increase in the number of private colleges and universities. With this increase in demand for education, Eismon and his colleagues report that there have been difficulties with finding resources for higher education. In addition, the growth of private education, coupled with a lack of qualified teachers, has led to concerns about the quality of these institutions. Therefore, there have been a number of reforms instituted by the Ministry of Education and other national councils for higher education.

As of 1998/1999, there were 58 private higher education institutions and 54 state universities operating in Romania. As to participation, Romania ranked poorly in Europe being ''last but two in Europe in 1994/1995, with only 1,483 students per 100,000 inhabitants'' (Romanian Education System 2000). In 2000, Romania registered a rate of 1,990 students per 100,000.

Structure: Higher education is organized into universities, colleges, academies, faculties, conservatories, and other postsecondary vocational institutes. Higher education is primarily structured into graduate education and postgraduate education (The Educational System in Romania 2001).

Graduate Education: Graduate education is broken into types: short and long duration. Short duration education is found in colleges and generally takes from two to three years. Colleges are usually organized in parallel to the long duration form and their mission is to prepare executive specialists for business careers and others. Long duration graduate education is found in universities, institutes, academies, conservatories, and faculties. This education is generally four to six years in length and prepares students for employment as higher executives and specialists.

Graduate classes are generally offered in the day, evening, and by distance learning. Students who wish to study in a public or private institution of this sort must take an admission exam and have a high school leaving certificate (The Educational System in Romania 2001). This exam consists of several written exams on a variety of subjects and will often fit the specialization of the institution. Graduate education studies are generally completed with a ''license'' exam, which includes a series of written exams and a paper or project.

Postgraduate Education: Postgraduate education is designed to provide training in more specialized fields and is typically done through further education studies, postgraduate, postgraduate academic studies, and specialization studies and courses (The Educational System in Romania 2001). Access to postgraduate training is typically through an admission exam for further education, postgraduate, and postgraduate academic studies. Further education studies is typically one to three years in duration and after graduating, students obtain a ''master'' or ''magister'' diploma. Students may take several masters simultaneously or successively. A student may be granted a scholarship for only one master studies.

The postgraduate (PG) is the highest form of scientific professional education in Romania. The duration of PG is typically four years for day courses and about six years if studying through distance learning. The postgraduate education is coordinated by two graduate school advisors. These advisors can both be from Romania or one may be from a foreign county. The Ministry of National Education approves foreign coordinators and approves any decisions for the study to be in a foreign language.

PG programs typically begin with two years (four years distance) of preparation for gathering material, data, and other studies. The thesis preparation is generally another two to four years depending upon whether or not the student is studying by distance.

Students enter the PG on an admission exam and most students who qualify can obtain a variety of scholarships for study including Praiseworthy, Study, and Social Support. Social support scholarships are typically awarded to students who are orphans or who have financial or medical deficiencies. The other scholarships are based on testing and on the basis of prizes won in international competition.

Postsecondary Vocational Institutes: Students who fail to gain entrance to a public university or who cannot afford entry into private universities typically attend postsecondary vocational institutes (Eismon et al. 1999). Postsecondary training typically ranges from one to three years in duration. By 1993, Eismon and his colleagues report that over 420 vocational institutes existed in Romania—up from 161 in 1990-1991. These institutes are typically attached to secondary schools and train students in teaching, technical training, tourism, and business administration.

Growth of Higher Education after Reform: Higher education has grown dramatically since the fall of Romanian communism in 1989. Higher education participation rates have doubled and about 20 percent of college aged students are enrolled in public or private institutions (Eismon et al. 1999). The 1993 enrollment statistics for vocational students were 37,000, which was an increase from only 18,000 students in 1990-1991. However, Eismon and his colleagues also report that the number of entering students is declining as opportunities for university spots grow. In public higher education, enrollments grew from

164,507 in 1989-1990 to over 240,000 in 1992-1993. The number of institutions grew in this same period from 44 to 56.

There have also been great shifts in enrollments based on field of study. Because higher education used to be focused primarily on technical and scientific training, reform has brought an increase in study in new fields. Enrollments have shifted away from science and engineering toward business, law, and the social sciences (Eismon et al. 1999). From 1980-1990 to 1992-1993, Eismon and colleagues reported a drop in engineering enrollment from 65 percent to 38 percent. On the other hand, study in the arts tripled from one percent to three percent, sciences, social sciences, and humanities increased from 10 percent to 25 percent, and economics increased from 9 percent to 20 percent in the same time period.

With these changes in enrollments, there has been a severe problem with resource allocation and with staffing. Although the overall student to faculty ratio changed very little, the shift of enrollments to other disciplines led to real staffing problems. For example, as economics and business enrollments doubled, the number of staff members in the field remained constant (Eismon et al. 1999).

Reform of Higher Education in Postcommunism: Early reforms in higher education after 1989 included changes to public universities. Public universities amended their charters, declared themselves politically autonomous, adopted participatory governance in administration, and purged the Ceausescuappointees (Eismon et al. 1999). Admissions constraints were lifted at most universities and the strong attachment to the central state was minimized. Finally, a very large number of private universities formed and began graduating students.

With the enormous growth of higher education, there have been problems with a dearth of instructional resources, a lack of full-time staff, and diversity in educational training. In response to these and other problems, there were reforms in the early 1990s and the Ministry of National Education adopted a strategy of higher education reform in 1994. This strategy, according to Eismon (1999) and his colleagues is now being implemented in the country. This strategy consisted of the establishment in 1994 of the National Council on Higher Education Financing that sought to find ways to diversify the financing of higher education (Eismon et al. 1999). A portion of the finance strategy was to improve efficiency by cutting instruction hours from 36 to 22-24 hours per week for undergraduates and from 24 to 12 hours for graduate students. As to budget reforms, in 1999 Romania began to move from financing its schools based on the amount of university inputs (staff, physical plant, administration) to a more competitive system based on students (Romanian Educational System 2000).

There were also severe staffing problems in public and private higher educational institutions. Staff shortages led to high employment opportunities, but many jobs were filled by young faculty without doctoral degrees. In most universities and colleges, there were heavy teaching loads that discouraged faculty research and development. Some of the reforms made in this area include an increase in the number of faculty that may supervise doctoral degrees (an increase of seven times from 1990 to 1992), the development of a differentiated higher education system by changing academic employment (e.g., promotion and tenure, changing faculty responsibilities), and changes in salary structure.

Diversity in higher educational opportunity was (and will likely continue to be) a real problem in Romania due in large part to the educational policies during the Ceausescu era. In prereform Romania, most of the higher educational opportunities were in technical fields and in the sciences. In postsecondary vocational education problems included unclear educational missions, overspecialized programs in technical fields, and poor articulation of their programs (Eismon et al. 1999). Among the problems in the PGs and other institutes is a shortage of professors. This has made it difficult to diversify the studiees in higher education. Among the government reforms in this area are: 1) encouraging the development of short and long-cycle courses; 2) the phaseout of many overspecialized undergraduate programs; 3) allowing multiple specialization in certificate and degree programs; and 4) establishing masters programs as a prerequisite to doctoral studies. These reforms, however, are thought to be contingent on the role of the state in allowing institutions more room to manage themselves and on reform in financing higher education. The growth of private universities as alternatives is also a hope of some scholars for diversity in the subject areas that are taught in higher education in Romania.

Finally, study abroad opportunities have increased as well in postreform Romania. Romanians living abroad and foreigners have access to all levels of education in Romania. Foreign applicants are regulated and handled by the International Relations Department of the Ministry of Education (The Educational System in Romania 2001). Students wishing admission are usually tested in a written or oral fashion and they start their studies by learning the Romanian language. Study abroad opportunities are numerous for Romanian citizens and are encouraged with scholarship support. These opportunities have increased with the advent of the European Union (EU) in such programs as ERASMUS, which offers opportunities for student and teacher mobility among Euro-

pean universities. In addition, the LINGUA program offers opportunities to study foreign languages within the EU. Finally, there is the TEMPUS program that is a trans-European program of cooperation in higher education. TEMPUS is designed to promote exchanges to promote economic and social reconstruction in Central and Eastern European countries (a program called PHARE) and to promote similar reconstruction in the new independent states of the former USSR (a program called TACIS).

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

The Ministry of National Education (MoNE) is the chief national administrative agency for the Romanian education system. The MoNE is made up of seven general departments and 31 departments that have the general goals of controlling and coordinating the national education system, making educational policy, coordinating financial and human resources policy in education, and social protection through education (Ministry of National Education 2001). The primary departments include the Minister's Office, the General Secretariat, the State Secretariat for Pre-University Education, the State Secretariat for Higher Education, the State Secretariat for National Minorities, other Consultative Bodies Supporting the MoNE, and other Consultative Bodies Subordinated to the MoNE.

The Minister's Office has the primary responsibilities of administrative control and international relations on the education front. It has a mission of cooperating with other international states, of promoting the image of Romanian education internationally, and of achieving the recognition of diplomas and education awards in international settings.

The General Secretariat handles the primary administrative duties of public relations, record keeping, and information technology. There are three subordinate departments that fulfill each of these duties.

The State Secretariat of Pre-University Education has the responsibilities of primary and lower secondary education, upper secondary education, private and alternative schools at this level, and teaching equipment. Its functions include approving the national curriculum, approving national assessment, organizing and implementing the functions of these educational units, the duties of special education, administration of the school calendar, and approving textbooks and teacher equipment. Reporting to this department is the Human Resources General Department that administers the school network, sets up schools at this level, evaluates the schools on national standards, ensures staff and teacher mobility, and has responsibility for adult and continuing education.

The State Secretariat for Higher Education administers university education and administers the financial operations of the education system. Each of these responsibilities is housed in a separate department and the Secretariat also includes departments for the World Bank Higher Education Reform Project and the PHARE Reform Education Department. The General Department of Finance provides documentation for the budget bill for education and executes the budget. The Department of Higher Education and Scientific Research administers the higher education system in Romania, coordinates admission to higher education facilities, and promotes scientific research at the university level.

The State Secretariat for National Minorities has the function of ensuring education in the mother tongue of national minorities. This is an important reform in response to Romania's history of suppressing the education of minorities. Reporting to the Secretariat, are specific departments for the Hungarian and German minorities in Romania. In addition, the Secretariat houses the General Department of the Patrimony, which has the responsibilities of school physical plants and libraries.

There are also other legal institutions that include consultative bodies that support the MoNE and consultative bodies that report to the MoNE. Those that support the MoNE include a variety of National Councils with such issue agendas as research, reform of higher education, libraries, and lifelong learning. Those bodies reporting to the MoNE include a variety of councils and centers dedicated to numerous educational functions.

NONFORMAL EDUCATION

Evening schooling and distance learning, are offered in Romania as expanded educational opportunities. Evening schooling is offered in high school as well as in higher education. Although, with the reform era, there has been a decrease in enrollments. The percentage of evening students enrolled in higher education decreased from 36 percent to 19 percent from 1989 to 1992 (Eismon et al. 1999). This may, in part, be due to the fact that so many educational opportunities have opened in day schooling.

With distance learning it takes a few years longer to obtain a degree than it does attending day classes. However, distance learning has improved access to higher education for many Romanians and has provided opportunities for retraining of managers, engineers, teachers, physicians, and other professionals (Eismon et al. 1999). Distance learning enrollments in higher education have remained steady or slightly increased from six percent to seven percent from 1989 to 1992.

TEACHING PROFESSION

There has been a shortage of teachers at all levels in the Romanian education system. One of the reasons is the

purging of educators after the revolution in 1989. However, other reasons are more practical, including the aging of the profession (Romanian Educational System 2000) lower salaries for teachers (Eismon et al. 1999), and the dramatic increase in enrollments (Smith 1995). Eismon and his colleagues (1999) mention that the teaching and medical sectors, which are public employees, are becoming less attractive because of the movement of individuals into business and the social sciences. Smith (1995) reports statistics showing that the number of teaching positions grew by 116 percent from 1989 to 1993.

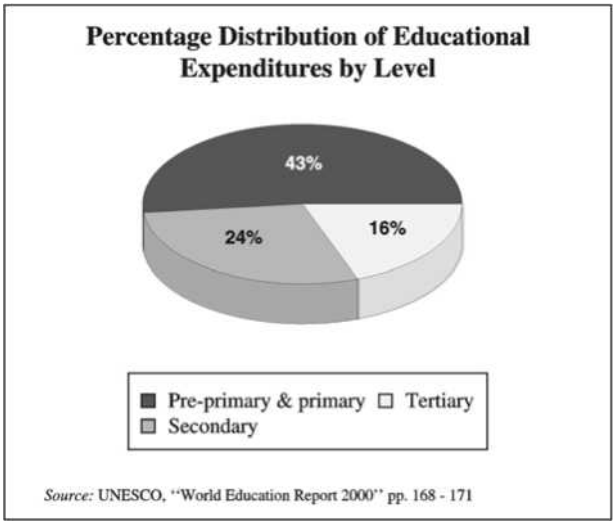
At the university level, Eismon and his colleagues (1999) write that there have been severe shortages of professors and that the state has undertaken considerable reform efforts to staff higher education. These measures include placing more faculty in position to direct dissertations, a decrease in the research requirements of young faculty, and decreasing the qualifications for teaching from doctorates to masters degrees. In the interim, chronic staff shortages have led to the recruitment of many young faculty without doctorate degrees and these individuals are teaching large numbers of courses with little opportunity to do research. A number of reforms have been instituted that would make teaching at the university level more attractive. These reforms include attaching significance to rank between contract and tenured faculty, designing a credit system to relate rank and salary for staff, and developing a two-track promotion system for those who wish to teach and those who wish to teach and research.

One measure aimed at enhancing access to higher education is the transformation of pedagogical high schools into teacher training university colleges (Romanian Educational System 2000). One hope for this change is to attract more individuals into the teaching profession as well as decreasing the increased enrollment in other institutions. Of the primary education reforms that are often listed by education advocates, ''reorganization of teacher training systems'' is common (Barrett 1995-96).

Teachers and professor are also in position in the late 1990s to obtain additional training in computers and communication technology. The Ministry of National Education has instituted a number of reforms for this purpose and these include classes and seminars to train teachers in new computing skills and in designing curricula for the integration of computing into the classroom.

SUMMARY

The Romanian education system, like its political system, has undergone enormous changes. Many of these changes include great advancements in human rights, which include the broadening of education to all levels of society. In particular, higher education enrollments have exploded, there has been a diversity of degrees sought, and there has been an explosion in private education and religious education at all levels. Also of importance is the real reform in allowing national minorities more access to education, including in the language of their mother tongue. Like prereform Romania, the literacy rate in the country is still a very high 98 percent.



However, despite these changes, reforms have also brought serious problems. Many of the reforms have been implemented too slowly. Although the law has changed, people have not. For example, the purging of Ceausescu era teachers has led to a real shortage in educators. Those who are left are older and young people are turning towards the professions of business rather than government employment, which pays less. The communist intelligentsia led to human rights violations, but it also gave great prominence to the education profession that may be losing ground in reform-minded Romania. Textbooks were also slow to change from the communist philosophy to newer market and democratic based textbooks. In addition, the explosion in higher education enrollments is also a problem in governing and accrediting the private institutions that have formed to meet the demand.

Finally, the disparity between urban and rural education is still evident and educational leaders have sought to reform this aspect of education as well. For example, one serious problem is the lack of educational advancement for those in poverty or in rural areas. For example, preprimary education generally is based on class and income and excludes the poor, minorities, and children from families with low education levels. This presents a problem for upward mobility and may necessitate reforms similar to the American ''Head Start'' program. There are also few supplementary educational facilities such as libraries and museums in impoverished areas.

Romania has undergone great changes and its education system is not an exception. It is, in fact, too soon to tell where reform will take the country in the realm of education. However, the structure of reform law is in place; the Ministry of National Education has dedicated time and resources to the problems in the country; and the formation of world partnerships will help this transition. The future of Romanian education looks quite bright, but the process is bound to be slow and the achievements will take time.

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—Roger E. Hartley

RUSSIAN FEDERATION

BASIC DATA

Official Country Name:	Russian Federation
Region:	Russia
Population:	146,001,176
Language(s):	Russian
Literacy Rate:	98%
Number of Primary Schools:	66,235
Compulsory Schooling:	9 years
Public Expenditure on Education:	3.5%
Foreign Students in National Universities:	73,172
Libraries:	96,177
Educational Enrollment:	Primary: 7,738,000 Secondary: 13,732,000 Higher: 4,458,363
Educational Enrollment Rate:	Primary: 107% Higher: 43%
Teachers:	Primary: 395,000 Higher: 382,897
Student-Teacher Ratio:	Primary: 20:1
Female Enrollment Rate:	Primary: 107% Higher: 49%

HISTORY & BACKGROUND

The Russian Federation is a multinational state in Eastern Europe and Northern Asia, stretching from the Baltic Sea to the Pacific Ocean, and from the Arctic

Ocean to the Chinese border. Established as an independent country in 1991 upon the breakup of the Soviet Union, it is the biggest country in the world with a territory of 6,592,844 square miles (17,075,400 square kilometers). It is divided into 21 autonomous republics, 49 *oblasts,* and 6 *krays.* The population is composed of almost 120 nationalities and ethnic groups: 81.5 percent Russians, 3.8 percent Tartars, 3 percent Ukrainians, 1.2 percent Chuvashes, 0.9 percent Bashkirs, 0.8 percent Belarusians, 0.7 percent Moldavians, and 8.1 percent others. Moscow is the capital and the largest city.

The territory of Russia was originally settled by Slavic tribes, which began migrating from the West in the fifth century A.D. The first Russian state, centering in Novgorod and Kiev, was established in the ninth century. The Russian, Ukrainian, and Belarusian peoples developed on the basis of the ancient Russian ethnicity. The origin of Russian education is usually associated with the emergence of the Cyrillic alphabet. The penetration of Greek priesthood into Russia and the need to translate the Greek Scriptures into Slavic languages encouraged the Byzantine scholar and philosopher Cyril (827-869) and his brother Methodius (826-885) to create a new system of characters. It was called the Glagolitic alphabet, or *glagolitsa* (which meant *speaking*), and its later version was called the Cyrillic alphabet, or *kirillitsa.*

The first known Slavic literary monuments date back to the tenth century. The creation of schools (*uchilishcha*) started after the Christening of Russia (988).

The history of Russian education opens up with the handwritten chronicles from the early eleventh century about the Grand Princes Vladimir and Yaroslav, who started building churches and schools of ''book learning'' in Kiev and Novgorod and started obliging Byzantine priests to teach children. The schools, which offered courses of seven liberal arts, became important centers of ancient Russian culture, disseminating religious knowledge and translations of foreign authors. ''Book knowledge'' was preceded by learning to read and write, as well as acquaintance with foreign languages.

Beginning with the twelfth century it became common for well-to-do families to hire tutors. The education was largely centered on life experiences, family, and community relationships.

A new genre called *poucheniya* (precepts) emerged between the eleventh and twelfth centuries in the form of manuals for family education. The most famous precepts were written by Vladimir Monomakh (1053-1125), the Grand Prince of Kiev and a highly educated man, who was closely related to European royalties through the marriages of his children. His first wife was the daughter of the English king. Monomakh addressed the *poucheniya* to his own children to teach them how to love God, be honest, fair, behave in battle, and how to treat other people. He encouraged them to study and follow the example of their grandfather who had known five languages. Monomakh's writings became very popular with other families.

In 1037 the Metropolitan school founded in Kiev at the Cathedral of St. Sofia started to prepare priests. Between the twelfth and thirteenth centuries a number of monastery schools patronized by the Grand Russian Princes opened in Smolensk, Vladimir, Rostov the Great, and Nizhny Novgorod. These schools were attended by children of noble parents from other countries, including Western Europe.

Graffiti on church walls, old business documents, and ancient Russian chronicles proved that literacy was significantly spread among different social groups, and proved other aspects of Russian education history. Due to inconvenient script, reading in the ancient period was a very difficult art. Students wrote on waxed planks or on birch bark with special styluses. Letters were also employed for counting. One of the major subjects was singing. The teachers were poorly trained, and corporal punishment was a usual practice.

During the period of the Mongol invasion, which lasted almost 250 years (thirteenth to fifteenth centuries), numerous lands and cities were ravaged and many schools ceased to exist. In the 1300s southwestern Russia was seized by the Lithuanian state, which in 1386 was united with Poland. As a result, part of the Russian population found itself on the territories where Catholicism was the official religion. The Orthodox monasteries, however, continued to play an important role in preserving and sustaining the traditions of Orthodoxy, as well as Russian culture and identity.

Russia also faced the challenges of the European educational system. Western Orthodox brotherhoods started organizing new schools, which would serve the interests of the Orthodox church. The subjects included religious rules, rituals, church singing, the Bible, as well as languages, grammar, poetics, rhetoric, philosophy, and arithmetic. The schools were largely egalitarian and admitted children from all ranks of society. The discipline was strict, but allowed for elements of self-government.

The fourteenth to fifteenth centuries witnessed the formation of the Russian centralized state. The Moscow Great Principality stood as the state's core structure. The political and social changes, as well as the intensification of religious life, launched new educational initiatives. Numerous schools affiliated with churches and monasteries emerged in the Russian cities. Moscow was gradually becoming the center of chronicle writing. Literature, ar-

chitecture, and art progressed to a new stage. Brotherhoods of artisans and merchants, formed around town parishes, recruited literate citizens to teach youth reading, writing, and counting. The schools of the Moscow state made wide use of the Byzantine scholarly tradition. However, drastic military measures aimed to subordinate the Novgorod and Pskov republics to Moscow were harmful for the old centers of ''book knowledge'' and crafts.

The rule of Ivan the Terrible (1530-1584), the first Czar of Russia, brought about contradictory results. A highly educated person, he carried out a number of important reforms, developed the bureaucratic and military machine, and significantly extended the borders of Russia, which ultimately became a powerful kingdom. At the same time he was an unrestrained tyrant and governed using severe repression and terror. The system of Orthodox education established in 1551 for training the clergy was roughly divided into several stages: elementary (learning to write and read religious books); professional (which allowed one to conduct most of the religious services); and higher (mastering the Christian scholarship, which involved the study of ancient languages). The greatest chronicle of legal regulations summing up the ideas of the unity of Russia under the Czar was created in the 1570s. The emergence of printing (Ivan Fyodorov) advanced the dissemination of Orthodox educational literature.

The second half of the sixteenth century saw the introduction of new subjects into the school curricula. In Moscow there were many scholars with knowledge of ancient languages (namely Latin and Greek). The favorite popular genre was apocryphal literature about Adam and Eve, and Christ's childhood and his parents. The mid-1600s were marked by the creation of educational institutions similar to Western European grammar schools, as well as serious changes in principles and methods of teaching. Textbooks started to include more versatile materials. Children learned to read using ABC-books (*azbuki*) and entertainment books with pictures.

The Russian Empire achieved the height of its power and territorial influence under Peter the Great and Catherine the Great in the seventeenth and eighteenth centuries. Peter the Great (1672-1725), the first Russian Emperor, attempted to westernize Russia. He expected science and school to serve the practical needs of the army, navy, industry, trade, and state administration. His social, economic, and cultural reforms resulted in the secularization of learning, emergence of new types of educational institutions, and advancement of teacher training. The navigation, artillery, engineering, medical, and other schools created on his initiative became the prototype of the future professional training system. He also approved the establishment of the Academy of Sciences in 1724. The introduction of the civil script in 1701 made it easier to study reading and writing. In 1703 Arabic numerals replaced the formerly used letters. Compulsory education for the children of the clergy, merchants, artisans, and soldiers was declared in 1714. The statute of 1721 established a system of Orthodox schools, seminaries, and academies.

The most outstanding figure in the Russian education of the eighteenth century was Mikhail Lomonosov (1711-1765), the first Russian scientist and scholar of worldwide significance. He was also a poet, philologist, artist, and historian. He initiated numerous scientific, technical, and cultural innovations and devoted great efforts to the development of the Russian Academy of Sciences. His textbooks on grammar, science, rhetoric, and poetics were the first to be used at Moscow University, founded on his initiative in 1755. Lomonosov worked out regulations for the University and *gymnasiums* (secondary schools). His book *Russian Grammar* (1757) was published eleven times, translated into many languages, and widely used in Russian schools. His theoretical writings also dealt with the importance of teaching Russian language and history. The Ellyn-Greek school, which opened in Moscow in 1687, was later reorganized into the Slavic-Greek-Latin Academy and gave both theological and broad secular education. The period between 1730 and 1765 produced a number of closed institutions for aristocracy, among them the First Cadet School for future officers and the Smolny Institute for Noble Young Ladies.

The school reform carried out under Catherine the Great (1729-1796) was the first attempt to create a public educational system. She sent the leading scholars to study the systems of learning in various countries of Western Europe. They finally selected the Austrian model, adapted it to Russian conditions, and tested it for several years in St. Petersburg. In 1786 *The Charter of Public Schools* established two types of educational institutions: five-year major and two-year minor schools for townspeople. However, Catherine the Great acted along the lines of enlightened absolutism. She wrote in a letter to her associates: ''Plebeians should not be educated, otherwise they will know as much as you and I and will not obey us to the same extent as now.'' Due to this attitude and also because of the absence of funds and trained teachers, schools for peasants were virtually nonexistent.

By the beginning of the nineteenth century the Russian Empire had more than 300 schools with 20,000 students and 720 teachers. The development of education in the nineteenth to early twentieth centuries was a permanent struggle of reforms and counter-reforms reflecting the contradictory character of Russian social life. A fundamental educational reform, prepared by the closest as-

sociates of Czar Alexander I (1777-1825), created a hierarchical school system headed by the Ministry of Public Education and regulated by *The Charter of the Universities of the Russian Empire* (1803). It included six educational regions with four types of institutions beyond elementary schools: parish schools, *uyezd* (district) schools, *gymnasiums,* and universities. The negative reaction of the czarist government to the ideas of the French Revolution and Enlightenment in Europe brought about the revision of school and university curricula. A number of university professors were dismissed as ''unreliable, harmful books'' were withdrawn from the libraries. Educators were expected to convince students of the divine origin of monarchic power.

Russian education evolved with both minor and major changes. In 1828 the course of study at gymnasiums was extended to seven years, with priority given to classical education. Schools with instruction in Armenian, Georgian, and Azerbaijan languages were opened in the Caucasus. In the 1830s the Minister of Education declared the intention to adapt world education to the peculiarities of Russian life and spirit, and this idea launched the famous formula: ''Orthodoxy, autocracy, national roots.'' Meanwhile, it became evident that elementary schools, especially in rural areas, were the weakest part of the educational system. Churches intensified their missionary and enlightening activities: by the mid-nineteenth century there were 9,000 parish schools. In the 1835-1850 period Jewish, Muslim, and Caucasian schools were included in the state network.

The turning point in the development of the Russian educational system was the reform of the 1860s carried out as part of cardinal transformations under Czar Alexander II (1818-1881). *The Statute on Elementary Public Schools* of 1864 declared elementary education open to all social ranks. The reform strongly encouraged private and local initiative in establishing new schools. Special systems were set up for Poland and Finland, with education conducted in Latvian, Lithuanian, Estonian, and other native tongues.

Beginning with 1870, the Russian educational system started to involve adherents of Islam and Buddhism using oral languages and alphabets based on the Cyrillic characters. The statute of 1871 unified the curricula and limited the choice of textbooks. Emerging pedagogical and enlightenment societies supported the creative efforts of teachers and scholars.

Although there is evidence of the a school existing for females as early as 1086 in Kiev by Princess Anna Vsevolodovna, there has been a severe deficiency in women's education in Russian history. In the 1860s women's struggle for the right to education attracted keen public interest. As a consequence, the government gave permission to open female educational programs, but refused to finance them. Though the courses launched in Moscow and St. Petersburg did not give women higher education, they met the need for training elementary school teachers. The Bestuzhev higher courses for women who aspired for higher learning opened in St. Petersburg in 1878 and enrolled 800 female students. The best Petersburg professors taught there, often without any compensation.

Konstantin Ushinsky (1842-1870) is considered to be the founder of Russian pedagogy. A proponent of the ideas of social education, he was engaged both in theoretical research and school reform. The cornerstone of Ushinsky's pedagogical theory was the acknowledgment of the creative force of the people in the historical process and their right for adequate schooling. The system he developed was based on the demand for the democratization of public education, and the scholarly approach to the selection of teaching materials, which would reflect the peculiarities of the child's intellectual development. His anthropological position was expressed in his major work *The Human Being as an Object of Education.*

The aim of the counter-reforms of the 1870s-1880s was not so much to restructure the educational system, as to control society through education in order to preserve the inner security of the empire. The main emphasis was on centralization of power, restoration of social filters in access to studies, strict regulation of inner school life, and educational process.

Preparatory classes, which trained the underprivileged students, were closed. The number of Jews admitted to gymnasiums was strictly limited: 10 percent within Jewish communities, 5 percent outside, and 3 percent in St. Petersburg and Moscow. The teaching of religion in general education schools was intensified. Student meetings were banned. The fees were doubled and the state financing reduced. The statute on universities of 1884 actually eliminated their autonomy. In 1886 all the courses for women except the Bestuzhev courses were closed.

The government efforts were counterbalanced by the activities of progressive social groups and individuals who strove to develop innovative ideas, open schools and libraries for common people, and publish new textbooks and educational journals. The great Russian writer Leo Tolstoy (1828-1910) established a peasant school inside his estate, personally taught there, and encouraged other people to do the same. In order to advance his pedagogical ideas, Tolstoy organized a publishing house *Posrednik* (Intermediary).

According to the census of 1897, the level of literacy in Russia was 29.6 percent (44.4 percent among men and 15.4 percent women; 24.6 percent in rural areas). The

number of elementary schools gradually grew. By 1914-1915 there were more than 77,000 general education institutions with about 5,700,000 students and 167,000 teachers.

After the October Revolution of 1917 educational institutions of all types were nationalized. *Narkompros* (People's Commissariat for Education) headed by A. V. Lunacharsky (1875-1933) assumed the responsibility for the development and control of education through the network of local administrative organs. Lenin's wife Nadezhda Krupskaya (1869-1939) outlined the main organizational principles of unified labor school in her book *Public Education and Democracy.* In August 1918 the All-Russian Educational Convention approved the blueprint for the statute *On Unified Labor School* (1918) prepared by Lunacharsky and Krupskaya. It decreed the creation of the free, unified, labor compulsory school divided into two stages: five years of study, ages 8 to 13; and four years of study, ages 13 to 17, with the emphasis on polytechnic education and productive labor. The new legislation also abolished religious education, home assignments, grading, examinations, and uniforms as obvious characteristics of the czarist school. Teachers' and parental authority were rejected. The family was expected to wither away as a survival of capitalism and be replaced by ''the collective'' as the main agent of socialization. School was seen as an effective tool for indoctrinating communist ideology and bringing up ''the new Soviet person'' able to build socialism.

The workers' faculties (*rabfaki*) were organized in 1919 to prepare people from formerly underprivileged social groups for higher educational institutions. The statutes of the 1920s legalized the practice of giving preference to workers' children in admittance to school. During the 1921-1925 period the mass preparation of workers through the network of *FZU* (factory schools) and *technicums* (training schools for middle-level technicians and foremen) reflected the priorities assigned by the state.

After the end of the Civil War (1922) the voluntary society *Away with Illiteracy* began financing thousands of special schools for the elimination of adult illiteracy (*likbezy*). In 1925 they involved 1,400,000 people; as a result, by 1926 literacy in Russia advanced to 55 percent. *Narkompros* stimulated the development of education for different ethnic groups in their native tongues. The immediate concerns of the state also dealt with the need to take care of the homeless, vagabond children, alongside with efforts to overcome juvenile delinquency.

The atmosphere of enthusiasm and pursuit for radically new forms of instruction gave birth to numerous experiments: the ''complex system,'' ''project method,'' ''Dalton Plan,'' and group or brigade method. It was concluded, though, that traditional forms were much more effective, and the experimentation time was condemned as a period of impotence. The works by Lev Vygotsky (1896-1934) and other scholars contributed to the systematization of pedagogy. But in the 1930s the attempt to discuss the connection between personality and society was denounced as anti-Leninist. The resolution of 1936 On Pedological Distortions in the System of *Narkomprosses* (People's Commissariats of Education) brought many psychological investigations to a halt.

The state influence on school became even more pronounced in the mid-1920s with the announcement of the course towards industrialization, collectivization of agriculture, and cultural revolution. In the 1930s new transformations were initiated and personally monitored by Joseph Stalin. They envisaged centralized control at all levels, unification and regulation of the contents and methods of teaching, utilitarian attitude towards knowledge, obedience, and discipline. The legal decisions were materialized in standard obligatory curricula, syllabi, and textbooks worked out under the close scrutiny of the Communist Party.

The famous educator A. S. Makarenko (1888-1939) celebrated the idea of a highly disciplined learning collective as a model for the Soviet school committed to ''bringing up a generation capable of building communism.'' His contradictory ideas and the publication of his book *Pedagogical Poem* aroused great public interest and initiated much argument. He worked out a theory of the collective as a form of educational process (including its structure and organization, stages of its development, methods of labor and aesthetic education, and formation of conscious discipline). He also made special emphasis on the creation of positive emotional atmosphere among homeless children who had suffered the horrors of war, devastation, and famine. His other ideas dealt with pedagogical logic, issues of family education, and other subjects. Makarenko was criticized from every angle, both by his contemporaries and scholars of later generations.

The speedy development of industry and collectivized agriculture, as well as the significant gains of education during the Stalin era were overshadowed by political terror, ''purge'' trials, mass executions, and exiles to work camps. Stalin's search for ''enemies of the people'' resulted in a significant reduction of the number of intellectuals (*intelligentsia*) who in turn, became the primary target of the repression.

During World War II, the Nazis ruined 17,000 school buildings. To preserve the compulsory education system, new boarding schools opened in the eastern parts of the country for the children, evacuated from the regions under Nazi occupation. ''Prolonged day'' groups were organized. Upon the liberation of Soviet territories, schools were reconstructed or newly built. By the end of

the 1940s the educational network was restored. The Academy of Pedagogical Sciences and dozens of research institutes and experimental schools contributed to the introduction of mass secondary education.

After Stalin's death (1953) Nikita Khrushchev was elected First Secretary of the Communist Party. The twentieth CPSU Congress in 1956 denounced Stalin, started the ''de-Stalinization'' of the country, and sparked radical changes in all spheres of economic, political, and social life.

The 1958-1964 educational reform extended compulsory education from seven to eight years, combined general learning with productive labor (up to twenty hours a week at industrial enterprises), initiated structural and curricular innovations, and established special foreign-language schools. In 1959 it was claimed that 39 percent of workers and 21 percent of collective farmers had secondary or higher education. The reshaping of the school system initiated the experimental study of the problems of instruction and development, as well as innovative methods and technologies. After Khrushchev had been deposed in 1964, the Soviet government eliminated the major features of his educational reform.

The aim of the educational policies under Leonid Brezhnev was to meet the requirements of the ''scientific technical revolution.'' The statutes and regulations of the 1960s-1970s period introduced a revised secondary school curriculum with electives added at seventh grade and intensified vocational guidance and counseling. The efforts of the Academy of Pedagogical Sciences were directed towards the elaboration of the content of general secondary education, diversified and individual approaches to teaching science, practically oriented aspects of developmental education, and problems of adult education. The main trends of the 1970s-1980s period dealt with the optimization of the teaching process, use of technical aids, pedagogical psychology, computer education, and pedagogy of cooperation.

The propagation of Communist ideology through the *Octobrist* (ages 7 to 10), *Young Pioneer* (ages 10 to 14) and *Komsomol* (ages 14 to 28) organizations remained an important aspect of school and university life. By the mid-1970s the transfer to universal secondary education was achieved.

However, the qualitative growth could not make up for the disparity between the country's needs and capacities of the schooling system. Real education was substituted by the production of unrealistic data advertising the achievements of socialism. This crisis in education, which became evident in the 1980s, reflected general tendencies in Soviet society. The long-standing Russian educational tradition and accumulated intellectual property had come into conflict with the ideological pressure of the Soviet bureaucratic administrative machine. School, monopolized by the state, lacked initiative, diversity, and enthusiasm. It ultimately limited the intellectual potential of society. The educational reform attempted in 1984 did not only eliminate, but aggravated the crisis. School, seen primarily as an indoctrination tool, was insensitive to the students' individuality, national, and regional needs. Humanitarian subjects were permeated with ideology. Science syllabi oriented towards ''average'' capacities were equally ineffective for weak and strong students. The gap between the quality of schooling in urban and rural areas continued to grow. As a result, rural young people's social mobility and access to universities were limited.

Perestroika (restructuring) and *glasnost* (openness), the key notions of the revolutionary reforms initiated by Mikhail Gorbachev in 1987, had a profound influence on the educational system. The main principles of its further advancement, approved by the All-Union Educational Convention in 1988, included democratization, pluralism, diversity, humanization, and continuity. The new program unfolded in 1990 and continued in Russia, which reemerged as an independent republic after the disintegration of the USSR in 1991.

The Russian educational reforms of the post-Soviet period had a number of peculiarities. The school had finally acquired freedom and could move towards democratic forms of teaching. The late 1980s to early 1990s saw the rapid development of innovative approaches and their spontaneous introduction into practice. Though educators realized the necessity to devote more attention to each individual student, they came to the conclusion that it was far too complicated in classes of twenty-five to thirty people. It also became clear that the idea of humanization could be implemented only in conjunction with profound social changes. The main goals were formulated in the federal Law on Education (1992).

On the one hand, *perestroika* encouraged innovation and creativity; on the other, the deepening economic crisis brought about insufficient financing, reduction or complete termination of numerous educational programs, and concentration on the survival rather than the development of the educational system. School administrations had to deal with poorly maintained buildings, overcrowded classrooms, lack of equipment, shortages of textbooks, electricity, and heat in certain areas of the country, as well as other economic problems. The transitional period made the school life more chaotic. Young people's organizations, whose activities had been heavily loaded with ideology, ceased to exist, but their place remained vacant. Students became more inert, apathetic, less interested in social life and self-government. Discipline became more lax. The number of juvenile delinquents, orphans, and

children with mental problems started to grow. The partial shift from budget to non-budget financing, including the use of private funds, and the introduction of fees at certain institutions resulted in social differentiation and non-equal educational opportunities. The patience of teachers, who had previously been renowned for their enthusiasm and selflessness, was wearing thin because of low salaries and chronic delays in their payment.

This socioeconomic context made the reforms a long and painful process. The necessity to make economic adjustments partially overshadowed the educational tasks. The freedom given to educational institutions was not always used well and at times brought about undesirable consequences. Many teachers, who did not have sufficient professional training, psychological, and practical experience, started developing low-quality courses, textbooks, and methodological materials. These negative tendencies stimulated the establishment of the state standards. By 1999-2000 the situation had become more stable and was marked by systemic legal and conceptual changes in the educational system.

CONSTITUTIONAL & LEGAL FOUNDATIONS

According to Article 43 of the Constitution adopted in 1993, every Russian citizen is entitled to a free education. This right incorporates free provision of preschool, general primary, general secondary, and professional secondary education in state or municipal institutions, as well as access to free higher education on a competitive basis. Article 44 indicates that the church is separated from the state and education has a secular character.

The Law on Education, as well as numerous statutes and regulations of the Russian Federation, its autonomous republics, and other administrative units, give substance to these constitutional provisions. The Law on Education of the Russian Federation was adopted in 1992, upon the break up of the Soviet Union. After much argument, its amended version was approved in 1996. Corresponding laws have subsequently been enacted in the autonomous republics.

According to Article 2 of the Russian Federation Law, the main principles of Russian education include: its humanistic character, with priority given to humane values, human life, health, and free personality development; unity of the federal educational establishment, and protection of national cultures within a multicultural state; accessibility of education and its ability to adapt to different levels of student development and preparation; secularity; freedom and pluralism of education; and democratic character of administration and autonomy of educational institutions. The state educational standards established by the law include the federal, as well as national and regional components. Central (federal) organs generate the federal component, which specifies the mandatory minimum of the program content, maximum study load, and requirements for graduates. The state educational standard of basic general education is approved by the Russian Federation Supreme Soviet (Duma).

The law further outlines the legal framework of the educational system on a national scale, requirements to the academic process and its content, and defines the main goals of education. According to Article 8, the system of education in Russia included successive curricula and educational standards, a network of educational institutions of different types, and a system of administrative organs. Organizationally and legally educational institutions could be state, municipal, and non-state (private or affiliated with social and religious organizations). Articles 28 to 32 established the distribution of responsibilities between the federal, republic, regional, municipal administrative organs, and the educational institution itself. A newly organized institution had to receive a license from the state. Accreditation carried out by the federal organs defined the status of an educational institution, whereas attestation controlled the content, level, quality of student preparation, and their correspondence to the state standards. The law also regulated the economic and social aspects in the sphere of education and the international activities of institutions.

EDUCATIONAL SYSTEM—OVERVIEW

The Russian Federation inherited the major features of its educational system from the Soviet Union, where schooling was centralized and uniform. This explains why the educational patterns are basically the same all over the country. Preprimary education is optional and includes nursery schools for infants under three years of age and kindergartens for three to six-year olds. General education is represented by the primary and secondary levels, usually combined in one school. The length of study is 3 or 4 years in primary school, 5 years in basic secondary school, and 2 years in upper secondary school, which totals 10 or 11 years (from 6- or 7- to 17-years-old).

The secondary school system is essentially two-track: after the basic secondary course students can either go on to the upper level or enter one of the secondary professional schools: *PTU, technicum, uchilishche,* or college. Graduates of general secondary and professional secondary schools can get a job or enter a *VUZ* (higher educational institution). Higher professional education is represented by institutes, academies, and universities, which can award three types of degrees: Bachelor (four years of study), Certified Specialist (five years of study), and Master (six years of study). Those who aspire for an advanced scholarly degree can proceed to *aspirantura* to

earn the degree of *Kandidat nauk* and go further to *doktorantura* for the degree of *Doktornauk.*

Russia is a unique multicultural state with almost 120 ethnic units, which belong to 20 groups of the 4 biggest linguistic families and include from 30 to 130 million people. The Declaration of Rights of the Peoples of Russia (1917) proclaimed the right of all the citizens to be educated in their native tongue. From the very start bilingualism became the main principle of education for non- Russians. In the 1920s to 1930s, scholars created new alphabets for dozens of ethnic groups (first on the Latin and later on the Cyrillic basis). Scientific and instructional literature, as well as fiction was published in many native languages. Gradually, though, the sphere of their employment was significantly narrowed. At schools their use was practically limited to the elementary grades, whereas other levels were taught in Russian. In the 1970s to 1980s new efforts of linguists resulted in the development of alphabets for ethnic minorities of the Far North. The Federal Law on Languages (1991) guaranteed all ethnicities the right to study and be taught in their native language in the places of their compact habitation. It was further intensified by the Order of the Ministry of Education *On the Measures for Preservation and Development of the Languages of the Peoples of Russia* (1992).

According to the Constitution of 1993, Russian is the state language on the whole territory of the Russian Federation. In addition, republics have the right to establish their own state languages, which can be equally used in the state, republic, and local administrative organs. The state guarantees all its peoples the right to preserve and develop their native tongues. Article 6 of the Law on Education grants the citizens of Russia the right to choose the language of instruction within the options provided by the educational system. In all the accredited educational institutions, except preschools, the study of Russian, as well as the state languages of the republics, is regulated by the federal and republic laws.

Whereas the legal acts of the Russian Federation give the role of the intercultural communication tool to the Russian language, they leave room for the development of other languages and spheres of their use, as well as redistribution and coordination of their functions. The desire to preserve the cultural identity, along with the recent nationalistic tendencies, explains why the number of schools with instruction in the native tongue is steadily growing. Students have more opportunity to learn about the history, culture, and progressive traditions of ethnic groups living in particular regions. The goals of education have been reconsidered to match the needs of particular communities and ethnic groups. Teacher training includes the study of ethno-specific peculiarities under the conditions of bilingualism. After the break up of the Soviet Union, national languages have become a major political force. They have been used as a sign of national identity, as well as a tool of discrimination against nontitular nations. The traditional types of bilingual educational institutions include: 1) schools with instruction in the native language where Russian is taught as a subject; 2) schools with instruction in Russian where the native language is taught as a subject; 3) schools where the native language is taught only in elementary school; and 4) multinational schools where the native language is taught only as an elective. In the 1998-1999 academic year the schools of the Russian Federation were using 80 different languages of instruction. More than 20 million students were getting education in Russian and more than 1.1 million in their native (non-Russian) language.

PREPRIMARY & PRIMARY EDUCATION

Russian preschools of the eighteenth to nineteenth centuries predominantly existed in the form of shelters and orphanages. They were mostly based on charity and directed towards the disadvantaged. Pedagogical principles were first introduced in preprimary education in the mid-1900s. It was the time when big cities saw the emergence of private kindergartens with fees charged for specifically Russian programs of bringing up children. Such institutions were mostly located in St. Petersburg and were accessible only for the chosen few. The rules were strict; the subjects included reading, writing, counting, and two or three foreign languages. In the period between the late 1800s and the early 1900s progressive preschools started implementing the principles of free education, as well as Montessori's ideas. In spite of the growing need and interest for early- childhood education and upbringing, the network of free kindergartens was unfolding very slowly. In 1882 there were only 37 preschools, 14 out of them in St. Petersburg. In 1893 preschool institutions received the first subsidy from the Ministry of Public Education. By 1914 Russia already had 275 preschools.

The Declaration on Preschool Education adopted immediately after the Revolution of 1917 announced that preschools in the Soviet Republic were to become an organic part of the whole system of public education. The decree of 1918 subordinated all the state and private preschool institutions to *Narkompros.* The First Convention on Preschool Education (1919) came up with the initiative to create year-round kindergartens functioning nine or ten hours a day. In 1925 educators invented day summer playgrounds to accommodate peasants' children during the period of the most intensive field work. By 1927 the number of children on the summer playgrounds increased tenfold, from 15,000 to 150,000. By 1931 the number of children attending preschools reached 3,667,000.

The ideological pressure of the period between the late 1920s and the 1930s resulted in the development of preschool indoctrination programs, collectivist methods, and strict official control from above. The uniform program of 1932 and a number of statutes and regulations formulated the official requirements for preprimary education, seen as the first stage in creating ''the new Soviet person.'' Children's committees and meetings were organized. Dolls represented soldiers of the Red Army, workers, peasants, and Young Pioneers. New Year holidays were abolished as ''a survival of the past.'' Fairy-tales were seen as ''an obstacle to the formation of a materialistic outlook.'' Teachers interfered with the children's games if they were ''ideologically unacceptable.''

During World War II the number of preschool institutions continued to grow. The need to accommodate the growing number of orphans, as well as the young children from evacuated families required more boarding preschools and children's homes.

The three postwar decades (1950s to 1970s) witnessed a rapid growth of the network, especially in urban areas. By 1980 the network included 63,500 preschool institutions with 7,127,700 children. In the 1960s to 1980s the general crisis of the Soviet educational system revealed itself in the form of outdated preschool programs, exaggerated attention to ideology, unjustified unification, and a disregard for the children's individual peculiarities.

The political reforms of the period between the late 1980s and the early 1990s gave educators more independence and freedom to develop new diversified programs, personal approaches, and nationally specific forms of upbringing. At the same time the economic state of preschools noticeably deteriorated. Most of the institutions were subordinated to the municipal administrative organs and were no longer financed by industrial enterprises and government organizations. In the 1993-2000 period 20,000 preschool institutions were closed; the number of children attending them decreased by one third (2,400,000), thus satisfying only 50 percent of the demand. By the beginning of the 1998-1999 academic year there were 60,250 preschool facilities attended by 4,700,000 children.

Preschools have to be licensed and accredited as all the other educational institutions. Their network is administered by the Ministry of Education. Preschool teachers (*vospitateli,* literally ''upbringers'') are trained at 190 secondary pedagogical schools and more than 30 pedagogical institutions of higher learning.

Preprimary education in Russia exists in the form of nursery schools (*yasli*) for infants aged six-weeks- to three-years-old and kindergartens (*detsady*) for children aged three- to six-years-old. In many cases the two types are located in the same building. The facilities include half-day, all-day, and boarding schools. They vary from year-round to seasonal institutions, the latter predominantly in rural areas. Special facilities are set up for children with physical and mental disabilities. Private preschools are emerging in addition to the state ones. A recent development, family nursery schools and kindergartens, is gradually gaining popularity. Alongside with games and outdoor recreational activities, preschool programs, especially in the last year of kindergarten, include classes, which would prepare the children for primary school: language development, instruction in reading, writing, counting, singing, dancing, and art. The nationwide interest for foreign languages accounts for their introduction into preschool curricula. An important part of preprimary education is the organization of concerts and parties, especially for the national holidays.

Although specialists have different opinions about the future of preprimary education in Russia, they all agree that the main goal is to preserve and develop the existing facilities. On the average the network continues to lose 3,500 preschools a year. Over the last decade, the reduction amounted to almost 40 percent. The improved facilities accommodate a limited number of children from well-to-do families, while the demand for preschool education remains unsatisfied. The subordination of preschools to municipal organs in the 1990s created additional problems, the worst of which was insufficient financing. Educators suggest alternatives to the existing preschools: facilities with short-term stay (one to six hours) once or several times a week, on weekends, and with variable costs.

The plan of the government is to include preprimary institutions in the system of general compulsory education and develop flexible programs with an individual attendance schedule in order to prepare five- and six-year-olds for school. The changes in the organizational structure will be based on the distinction between preschool education and daycare as a form of federal aid to low-income families.

Another area that needs to be improved is the content of preschool education. It has been criticized for ''invading'' the primary school educational space. Teachers, doctors, and parents believe that it is unacceptable to overload children of preschool age and thus deprive them of the period of childhood, which has a value of its own. In order to reform the content of preschool education, a competition was organized in 2000. The winners' program has become the basis for the development of the state standards, which are expected to ensure the children's smooth transition from the preprimary to the primary school level.

General education school in Russia includes three stages: grades 1 to 4, elementary level; grades 5 to 9,

basic secondary level; and grades 10 to 11, upper secondary level. The complete course totals 11 years in the general education track. There is no formal division between the levels, and the students (called *ucheniki,* ''pupils'' in Russian) usually remain in the same building from grade one through eleven. Separate primary or basic secondary schools exist only in rural areas. Since the mid-1960s the government has been making serious efforts to restructure the school network by combining small schools into larger ones located in areas accessible for the local children. In the first grade students are divided into classes of 25 to 30 people who study as a group throughout all the years of school.

In the 1998-1999 academic year, Russia had 66,700 general education schools of different types with more than 21,100,000 students. As a result of the development of the private sector in education, there were 568 nonstate schools (0.8 percent of the total number with 0.2 percent students).

The history of Russian primary education is connected with monastery schools, which emerged in the eleventh century and gave children moral and religious instruction. In the fourteenth to sixteenth centuries, ''masters of literacy'' taught small groups of students or tutored them individually. The foundations of the primary schooling system were laid in the early 1700s under Peter the Great.

In 1782 the Commission on Establishing Schools worked out a structure of general primary education, which was introduced in 1786. *The Charter of Educational Establishments* of 1804 created a network of one-year parish schools. The mid-eighteenth century was marked by the development of primary schools for peasants and pronounced interest for educating female students. The reforms of the 1860s committed primary schools to disseminating basic knowledge and religion, establishing centralized administration of the school system, and introducing uniform curricula and textbooks. Primary education of this period was significantly influenced by the progressive social movement and the publication of pedagogical journals and books, especially by K.D. Ushinsky.

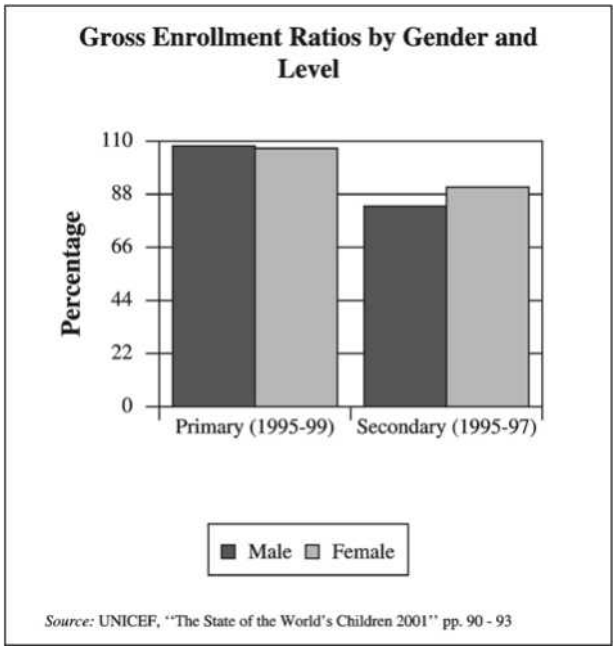
The Statute *On Unified Labor School* published in 1918 after the October Revolution decreed five years of primary schooling, which were later replaced by four years. In 1934, after the reconstruction of the Soviet school system, primary learning became the first stage of the unified general education system based on the principles of continuity and transferability.

Over the next decades the curricula and syllabi for primary schools were systematically revised and altered, depending on the political and economic situation in the country. In the 1970s the number of grades in primary school was reduced to three. The educational crisis of the 1980s made it obvious that the standardized school programs permeated with Communist ideology required urgent changes. The 1984 school reform lowered the school age to six, thus returning to a four-year primary school and trying to incorporate the world experience into Soviet education. The revolutionary political changes of the late 1980s initiated ''deideologization'' and ''depolitization'' of the school system.

However, most parents, teachers, and doctors did not enthusiastically hail the transition to four-year primary schooling. The reform could not be carried out for many socioeconomic reasons: insufficient numbers of classrooms and teachers, absence of necessary facilities and equipment, and inadequate psychological and professional teacher training. As a result, a two-track primary education system developed by the end of the 1990s. According to the new program, children can start school at six years of age and study for four years, before they go on to the secondary level. The alternative is to enter the first grade at the age of seven and follow the lines of the traditional, more intensive curriculum, when the same material is covered in three years. In this case children skip grade four of primary school and go directly to the fifth grade. Though this process is somewhat confusing, it preserves the uniformity on the secondary school level. Educators hope that the coexistence of the two tracks will allow them to complete the reform by gradual transition to the four-year primary school program.

The subjects taught on the primary level include Russian (and/or another native language for non-Russian students), reading, mathematics, nature studies, physical training, music, and art. Though the content of education is based on the state educational standards, schools and individual teachers have acquired more freedom in developing curricular and teaching materials. *Gymnasiums, lyceums,* and private schools introduce additional subjects (e. g., foreign languages, dancing). All the classes, except music, art, and physical training, are taught by one teacher who is also in charge of extracurricular activities (excursions, field trips, concerts, parties, and celebration of national holidays).

The school year always starts on September 1. Though uniforms are no longer enforced in most of the schools, children, especially first-graders, wear white shirts or blouses. Primary school students study five or six days a week and usually have four 40-45 minute classes a day. The intervals between classes vary from 5 to 25 minutes. Each student has a special record book (*dnevnik*) for writing down the schedule and home assignment every day of the week. The teacher uses the *dnevnik* to record the student's grades and remarks about his or her behavior. It is considered to be an effective



Source: UNICEF, ''The State of the World's Children 2001'' pp. 90 - 93

method of the teacher's communication with parents. The academic year is organized on a quarterly basis, with four vacations (a week in early November, two weeks for the New Year and Christmas, a week at the end of March, and three months in the summer). Students are graded for every subject at the end of each quarter and the academic year. The grading is numerical: five, excellent; four, good; three, fair; and two, poor (failure).

SECONDARY EDUCATION

Prior to the Revolution of 1917, the prototypes of modern secondary schools were *gymnasiums* and *lyceums.* The first *gymnasiums* opened in the early 1700s, with Russian as the language of instruction. These were followed by other secondary schools, which were affiliated with the Moscow (1755) and Kazan (1758) Universities. The *lyceums* introduced at the beginning of the nineteenth century were a combination of primary and secondary schools. The legislation of 1864 established two types of *gymnasiums:* classical and real. The curricula of the former included ancient history and classical languages, whereas the latter gave preference to sciences. The Charter of 1871 declared classical gymnasiums the only type of educational institutions representing complete secondary education. Only in 1912 did the graduates of real gymnasiums acquire the right to apply to universities.

The October Revolution (1917) declared the schools to be unified, labor, and polytechnic. As a result, general education in secondary schools was combined with vocational training. Strong emphasis was also made on the indoctrination courses expected to propagate Communist ideology. The regulation of 1934 established two types of secondary general education: incomplete seven-year and complete ten-year education. The law of 1959 extended the length of study in complete secondary schools to eleven years, but in 1966 it was cut back to ten years.

The socioeconomic crisis of the 1980s endangered the state of Russian secondary education: its uniformity, lack of educational choice, and social apathy alienated students from the school. The reform of 1984 declared a number of goals to enhance the quality of education, but the state failed to realize most of them. The decision to lower the school age from seven to six years once again extended complete education to a total of eleven years. In the early 1990s, schools acquired the right to choose curricula and textbooks, to diversify the teaching process and introduce different profiles of education.

Primary and secondary level grades are usually located in the same building and are regarded as one school. Nevertheless, there is a major difference between the levels: if in primary grades most of the classes are taught by the same teacher, on the secondary level there is a different teacher for each subject. Students are transferred from primary to secondary school as a class of about thirty, who continue on together as a group. One of the subject teachers is appointed their *klassny rukovoditel* (academic director) in order to give them guidance, watch their progress, provide leadership for extracurricular and recreational activities, and keep in touch with the parents. Parent-teacher conferences called ''parents meetings'' are devoted to the students' achievements, discipline, and organizational issues. They also elect representatives to the school parent committee, which assists the teachers and administration.

The academic year in all the schools begins on September 1, which is celebrated as the Day of Knowledge, and continued until the end of May, exclusive of the examination period. The year is divided into quarters. Students go to school five or six days a week (depending on the decision of the school administration) and have up to 36 lessons per week. Classes last 40 to 45 minutes. The intervals between them are from 5 to 25 minutes long, and there is no additional lunch break. Since most of the school buildings cannot accommodate all the students at once, schools usually operate on a shift schedule.

The subjects in the curricula are grouped into seven areas of knowledge: languages and literature (includes Russian, as well as other native and foreign languages; the number of hours allotted for the Russian language can be different and depends on the linguistic situation in the area, as well as peculiarities of a particular school); mathematics (includes algebra, geometry, logic, statistics); sciences (includes physics, chemistry, biology); society

(includes Russian and world history, law, foundations of modern civilization, world economics, international relations, and sociology); art (includes fine arts, music, world culture, and courses reflecting the cultural peculiarities of the region where the school is located); labor (includes labor education, professional training, and technical drawing); and physical training.

The number of hours in each area is subdivided into the federal, regional, and school components. The curricula comprise an invariable part, which is mandatory for all the schools, and a variable part, within which schools are free to make decisions of their own. The programs also provide for individual consultations, electives and optional courses, which are often taught by invited university professors, actors, artists, or people of other professions. For the last thirty years the number of subjects at schools have doubled. It can be as high as seventeen to twenty, therefore the schedule of classes is different every day of the week.

Though computer literacy instruction is part of the programs, it is ineffective because in most of the schools the equipment is outdated or nonexistent. The lessons of physical training take place in the gym or on the sports grounds. Due to the lack of adequate equipment and poor organization, sports activities are not very popular with Russian students. Insufficient state financing compels schools to look for sponsors and seek additional funds to improve their facilities. Some innovative schools also work in close conjunction with universities, local libraries, museums, and industrial enterprises.

Students in grades five to eight are evaluated at the end of each quarter, and students in grades ten to eleven twice a year (after the second and the fourth quarter). All secondary school students receive a cumulative grade in each subject at the end of the academic year. Officially the grading is based on a four-point scale: five, excellent; four, good; three, fair; and two, poor (failure). Grade one (very poor) is usually an emotional response to unsatisfactory performance and is used as a disciplinary measure. Students are promoted to the next grade on the basis of academic achievement during the year and the results of the annual examinations (oral or written) in Russian and mathematics (obligatory for all) and one or more subjects of their own choice. Those who fail in two or more disciplines either repeat the year or are transferred to a class of compensatory education. Students with a failing grade in one subject are allowed to go on to the next grade, but they have to complete their work on the subject. People who are unable to cope with a particular level cannot go on to the next one. Excellent students of grades five to eight are exempt from examinations. However, everybody is required to take exams after grade nine, because it is the final year of basic (incomplete) secondary school. After it some students go on to secondary professional schools; others continue with grades ten and eleven.

The examinations for the Certificate of Secondary Education, also called a ''maturity certificate,'' conclude the eleventh grade. They are prepared by the federal authorities and strictly monitored. The school can offer five or seven exams, which always include an essay on Russian literature and a written test in mathematics. Other subjects can be chosen by the student. Those who get all excellent grades for the last four semesters and the final examinations are awarded a gold medal. Students with a maximum of two good grades (all the others being excellent) receive a silver medal. The medals significantly improve their chances to be admitted to a competitive higher educational institution.

The democratization of the school system, greater flexibility in curricula development, and encouragement of innovations have opened up the way for numerous experiments at the secondary school level. In 1998-1999, alongside with regular secondary schools, the network included 2,547 lyceums and gymnasiums with 1,700,000 students. The old terms have acquired a new meaning. The word ''lyceum'' has come to denote an innovative secondary school with a specialization in a particular area (e.g., mathematics, law, ecology, pedagogy), which is attached to a higher educational institution. ''Gymnasium'' is a nontraditional humanitarian school with a comprehensive program and the study of at least two foreign languages. To be granted the status of a lyceum or gymnasium, schools are expected to prove that they have highly qualified teachers, advanced programs, and adequate facilities. Among the first institutions to receive this status were the schools with intensive foreign language programs, which had been established under Khrushchev (the 1960s) and had gained popularity for producing nearly bilingual graduates. Though officially these schools are expected to enroll all the children of eligible age from the local community, the entry there is becoming more and more competitive.

The schools for the gifted and talented, which work in conjunction with theaters and conservatories, provide advanced training in ballet, music, and performing arts. Children with outstanding abilities for mathematics, biology, physics, and other sciences selected during nationwide competitions (*Olympiads*) are enrolled in specialized educational establishments, which are affiliated with universities and serve as laboratory schools or experimental grounds.

Those who decide to combine work with parallel secondary education can study at part-time evening schools. Due to the low quality of instruction and the inability to compete with daytime institutions, enrollment

in such schools is steadily decreasing. Boarding schools, which in the late 1950s were seen as the Communist school of the future, now predominantly accommodate orphans, children deprived of proper parental care, and students from remote rural areas, who do not have a regular private school in their locality. In 1998-1999 the number of children in boarding schools and orphanages was more than 96,000. Most of such schools, as well as children's homes, are poorly financed and maintained. Their existence is a struggle for survival, rather than a strive for innovation.

The state also operates special facilities, which provide secondary education for the blind or partially sighted, deaf or partially hearing students, individuals with speech defects, and other health problems. The educational process in such schools is adjusted to the students' special needs and trains them in skills, which can be useful in their adult life. Alcoholism, crime and other social problems account for the growing number of institutions for mentally retarded and physically handicapped children, as well as closed correctional establishments for juvenile delinquents.

A school is headed by the Director who is personally responsible for the general management of the school life. As the main administrator, the Director deals with the educational process, staffing, the financial state of the school, the maintenance of its facilities, as well as food and security. Deputy directors (*zavuchi*) take care of particular areas of work (curricula, schedules, extracurricular activities, etc.). The highest organ of school self-government is the *pedsovet* (pedagogical council), which deals with fundamental aspects of the school life. It is chaired by the Director and includes all the deputy directors and educational staff. The *Pedsovet* adopts the school Charter (*Ustav*), defines the organizational structure of the school administration, makes decisions about educational programs, choice of curricula, forms and methods of teaching, approves the students' final grades, cooperates with the parents committee, educational institutions, and NGOs.

In the situation when schools have to deal with numerous economic difficulties, it has become vitally important to preserve and support the educational network, especially in the Far North, Siberia, and the Far East. Due to insufficient financing, only 46.3 percent of schools have the necessary facilities; and one third of the buildings need repairs. There is no construction of new educational establishments occurring in rural areas. Many schools are overcrowded, 32 percent of them have to work in two or three shifts.

Due to low social and territorial mobility of students and teachers, people living in different parts of the country do not have equal access to high-quality programs. It is necessary to improve and diversify the content of education, develop new methods, technologies, curricula, and textbooks. Another aim is to make various forms of education accessible for the gifted and talented students living in remote areas. The transition to a market economy requires paying more attention to professional orientation and programs for individuals who combine their education with work.

The principle of continuity between different stages of schooling is declared, but not truly implemented. The number of secondary school graduates, who can enter higher educational institutions without additional training (private tutoring), is steadily decreasing. Serious efforts have to be made to bridge the gap between the content of secondary and higher education. In order to support students from rural schools (68.9 percent of the total number), it is essential to intensify professional guidance, organize specialized classes, and search for other forms of cooperation between VUZs and rural schools. The introduction of unified state examinations is expected to make the admission to higher educational institutions more objective.

One of the long-term goals is a gradual transmission to a 12-year secondary education (4-6-2 model), which involves the development of new curricula, alleviates the students' work load, and allows for the individual choice of subjects according to the students interests and abilities. The reform is preceded by a period of experimentation: beginning in 2001, five educational institutions in every region are working along the lines of the new program. By 2015 the reform will embrace ninety percent of all the students.

The development of specialized professional education in Russia was strongly encouraged by Peter the Great and started with the opening of the Artillery School (1701), Medical School (1707), Engineering School (1709), Navy Academy (1715), and other institutions. By 1914-1915 there were more than 400 professional schools with 54,000 students, who were trained to work in construction, industry, transportation, medicine, and agriculture. During the first years after the October Revolution the Soviet government, which made special emphasis on vocational training, established 450 new institutions called *technicums.*

In the 1930s the network continued to grow; the night and correspondence departments were opened for those who combined studies with work. During the Second World War the vocational training system prepared 340,000 workers and specialists. When adults were recruited into the Army, teenage graduates replaced them in factory shops. By the late 1940s there were 4,000 vocational schools and technicums with 1,007,700 students. After three more decades of steady growth, the enroll-

ment figures became stabilized and in the 1990s started decreasing (4,611,000 students in 1980, 4,231,000 in 1990).

Vocational institutions were subordinated to the republic, regional, and local administrative organs in order to meet the needs of particular territories. New types of schools (professional colleges and lyceums) combined general and vocational training with the purpose to improve the students' economic, legal, and industrial competence. By 1998-1999 there were 2,649 state and municipal secondary professional schools with 2,052,000 students.

The system encompasses two levels of education. The initial level comprises professional technical schools (PTU) and centers of continuing professional education, which train skilled workers and paraprofessionals for blue-collar jobs. The course lasts from one to two years for professional training only, and three to four years if it is combined with general secondary education.

The types of schools at the secondary professional level include: *technicums* (or *polytechnicums*) (independent institutions, which predominantly train middle-level technicians, lower managers, shop foremen for industry, transport, construction, and agriculture); *uchilishcha* (schools, which prepare specialists for non-production spheres, including preprimary and primary school teachers, nurses, circus performers, and librarians); and colleges (secondary specialized institutions, which can be either independent or function as structural divisions of a university, institute, or academy).

Other types of vocational institutions are farmers' schools, commercial schools, and specialized schools aimed at the social rehabilitation of juvenile delinquents. Organizationally, all the schools are subdivided into state, municipal, and non-state institutions. In order to acquire a legal status, they have to be accredited by the state. The prerequisite for admission is basic (nine-year) or complete (eleven-year) secondary education. Prospective students have to take entrance examinations, which in some cases can be substituted by an interview. Preference in admission to free education is given to applicants who are getting professional training for the first time, as well as those who are referred to the institution by employment agencies.

The length of study at schools, which offer an mixture of professional and general education, is from three to four years. The state standards, adopted in 1992 and 1996, introduced a completely new approach to the structuring of the permanent and variable parts of the curricula. They include the federal, national, and regional components. The federal component defines the obligatory minimum content of educational programs, maximum workload, and the required level of student training. In their turn, the national and regional components reflect the specific needs of a particular locality and ethnic group. The standards have to be reviewed at least once every ten years. The new arrangement allows for adjustments, which take into consideration the peculiarities of the natural environment, climate, and the demand for certain skills and occupations. It aims at training specialists of wider profiles, who would have more professional mobility and adaptability to the changing social conditions. The mandatory minimum in the curriculum provides for the equivalency of training on all the territory of Russia.

The curricula, built along the lines of the state standards, include practical and theoretical courses. The annual number of hours can be from 4,418 to 5,744. Approximately one-third of them are devoted to general education (710 to 800 hours for humanitarian subjects, 500 to 680 hours for sciences, and 263 to 435 hours for electives and optional courses). In technical schools special emphasis is made on the basics of technology, economics, law, organization of production, intensive work methods, and use of new equipment. In addition to traditional topics, students get acquainted with new trends in commerce, management, marketing, auditing, and computer science. The educational process consists of lectures, tutorials, laboratory work, consultations, tests, excursions, simulation games, and practical training. The weekly study load is 36 to 38 hours. Students are organized in groups of 25 to 30 students (12 to 15 students for complex specialties). An academic director or a master of production training, attached to each group, is responsible for developing the students' vocational skills. Practical training usually takes place at the school shops or corresponding enterprises. At some schools the course culminates in the defense of a final paper called a diploma project.

Vocational schools are administered by a council representing all categories of employees, students, and other interested parties (enterprises, organizations, or parents). The council is chaired by the Director, who is responsible for the educational process, the school's financial state, the students' health and security, and recreational activities. In 1998-1999 there were 123,200 teachers employed in the network of secondary professional education. Most of them were graduates of industrial pedagogical institutes, higher, and specialized secondary institutions.

Educators are trying to find a rational correlation of theoretical and practical knowledge—a calculated balance of creative thinking and professional skills. In order to intensify the professional, social, and territorial mobility of specialists and make them more competitive on the job market, it is necessary to extend and combine the ex-

isting specialties and advance the quality of education. The educational tendencies encompass competitive enrollment; diversified curricula; financial reform of the network; cooperation of the state, businesses, trade unions, and educational institutions; and attraction of investments into the sphere of vocational training.

HIGHER EDUCATION

The first higher educational institution in Russia was the Slavic-Greek-Latin Academy reformed in the early eighteenth century by Peter the Great. The Moscow University founded in 1755 on the initiative of Lomonosov gradually became one of the leading educational establishments in Europe. The system of higher learning, which developed in the first half of the nineteenth century, was administered by the Ministry of Public Education and included universities, privileged lyceums, and specialized institutes. At the end of the nineteenth century there were 63 higher educational institutions with 30,000 students. By 1914 the number of the students grew fourfold and reached 120,000.

After the Revolution of 1917, preference in access to higher education was given to workers and members of the Communist party. In the 1921-1933 period ''institutes of red professorship'' trained students to become lecturers on Marxism-Leninism, History, Political Economy, and other social sciences. In spite of the dramatic losses during the Second World War, the network of higher educational institutions was preserved. The postwar period was marked by a strict unification of curricula and priority given to engineering education, often at the expense of other areas, for the sake of training specialists for the defense complex. Though the number of graduating students was steadily growing, the level of education did not adequately meet the demands of the country and its regions. Absence of choice within the programs and prevalence of courses indoctrinating Communist ideology in the curricula resulted in low motivation, inability to make independent decisions, and social apathy.

The reform of higher education, which started in the USSR in the late 1980s, continued in the Russian Federation after it had become an independent state in 1991. It was aimed at the development of a uniform federal policy in higher education, democratization, establishment of self-government, and diversification of curricula. The Federal Law on Higher and Post-Graduate Professional Education of 1996 outlined the structure of the educational system and defined its priorities. Though the period of transition to a market economy caused a number of serious problems for professors and graduates (insufficient financing, low salaries, problems with finding jobs), the popularity of higher education continued to grow. By 1998-1999 there were 584 state higher educational institutions with more than 3,300,000 students and 334 nonstate institutions with 250,700 students.

The generic term *VUZ* (Russian acronym for ''higher educational institution'') is used to denote all types of higher schools, including: Universities (which provide graduate and post-graduate education in a wide variety of specialties, carry out fundamental and applied research in different areas of knowledge, are leading scholarly and methodological centers in the spheres of their activities); Academies (which also give graduate and post-graduate degrees, but in a particular area of knowledge); and Institutes (which are similar to academies, but do not necessarily have post-graduate programs; they can function either independently or as part of a university).

VUZs are administered by the Academic Council, an elected organ, which makes fundamental decisions about the institution's policy, teaching process, and future development. The Rector, chief administrative officer and head of the Council, is elected by secret ballot at a general meeting or conference for a period of five years and approved by a supervising administrative organ. The Rector must be under sixty-five years of age at the time of the election, and the period of the work in this position can be legally extended until the age of seventy. Heads of higher educational institutions are members of the Union of Rectors of the Russian Federation. *Prorectors* who are responsible for particular areas (academic affairs, research, international contacts) are not elected, but have contract positions.

Approximately the same structure is repeated on the level of faculties, or schools (*facul'tety*), organized in accordance with areas of knowledge and including both professors and students. Each *facul'tet* is headed by a Dean (*dekan*), head of the faculty council on which students are also represented. The Dean, together with Associate Deans, is in charge of academic work, student and faculty research, curricula, schedule, and extracurricular activities. Professors are organized in departments (*kafedry*) according to the discipline they are teaching. There is no tenure, and they have to be reelected every five years by the faculty council. The procedure of reelection or election to a higher position requires the proof of active academic activities, research, publications, and extracurricular work.

Since specialization in Russian VUZs starts at the freshmen level, applicants must make an early decision about the major area of study and their future profession. A prerequisite for admission is the Certificate of Secondary Education. Students are selected on the basis of entrance examinations. Educational institutions have the right to decide which examinations to offer, but they have to choose the subjects from the list worked out on the fed-

eral level: Russian language (mandatory for all in the form of an essay), literature, mathematics, physics, chemistry, biology, geography, history of Russia, social science, and a foreign language. The would-be students have the right to answer the exam in Russian or a titular language of a republic. Theoretically, the examinations have to be based on the material covered in secondary school, but due to keen competition to particular VUZs, there is a gap between the school and university entrance requirements. In order to enter a university that is much sought after young people have to study with individual tutors for a year or two before they apply. There was a time when the average secondary school grade was taken into account during the entry procedures, but in 1984 this practice was relinquished.

Students with gold and silver medals are exempt from all the entrance examinations, except the profile one (English for the School of Foreign Languages) and are admitted if they receive an excellent grade. Among all those who have successfully passed the exams, preference is given to orphans, individuals left without proper parental care, physically handicapped, people demobilized from the army service, and war participants. Other benefits exist for the winners of national and international Olympiads (competitions) in school subjects. A certain number of places can be allotted to rural school graduates, whose level of training does not allow them to compete with their urban peers, due to the rural/city divide in the quality of secondary school training. The total number of male and female applicants is about equal. Women usually predominate in humanitarian departments, whereas men are more numerous in technical schools. Since VUZs have acquired more freedom, they are trying to regulate the stream of applicants and search for ways to control their enrollment. If competitive schools offer highly demanding entrance tests, in less popular schools examinations can be substituted by an interview.

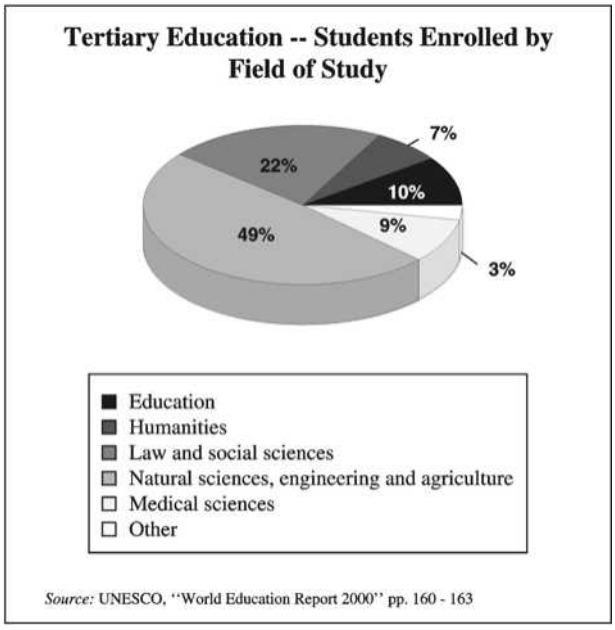
Final examinations in secondary school followed by entrance exams to a VUZ are a double stress for the young people. VUZs do not trust the school transcripts, because they fear that teachers can give their students good grades under the parents' pressure. On the other hand, bribery and nepotism in admissions to higher educational institutions have soared to an unprecedented level. In order to solve the problem, the Ministry of Education has come up with the idea of introducing a national examination (analogous to the SAT in the United States). It has set up a special council, headed by the Minister of Education, to supervise the project. The system of centralized testing has existed since the mid-1990s, but it is voluntary for the applicants as well as VUZs, the latter can decide whether to accept the results or not. Therefore this form of testing embraces only a limited number of students. During the first stage of the project the system will be tried out in several provincial towns. The tests will be then sent to Moscow to be graded by independent specialists.

The project managers will also have to deal with emerging problems, such as non-sanctioned teachers' assistance at schools, informational security, and imbalance in enrollment between different VUZs, organization, and curricula. Upon entrance, freshmen are divided into permanent groups of 20 to 25 people and stay as a group until they graduate. In regards to foreign language classes and other subjects, which require more individualized approach, they are further distributed into subgroups of about ten people.

The academic year lasts from September 1 until the middle or end of June (depending on the year of study) and is divided into two semesters. There are two weeks of vacations in late January, early February and two months in the summer. Classes take place five or six days a week in the form of lectures (for 50 to 100 students), seminars (20 to 30 students), and practical or laboratory work (10 to 12 students). The period lasts from 80 to 90 minutes. The schedule is made for the whole group. Elective and optional courses are usually scheduled at the same time, and students can choose a subject as a group or individually.

The principles of the curricula organization are similar to those used at the secondary school level. All the disciplines are divided into several categories: general humanitarian and socioeconomic subjects, mathematics and sciences, general professional subjects, and specialized subjects. Each of the categories includes the federal component (70 percent of the curriculum), that is defined by the central authorities; a national and regional component reflecting the needs and peculiarities of a particular territory or ethnic group; and a VUZ component established by a particular institution. This arrangement ensures uniform requirements on the national scale and at the same time allows for innovative approaches and diversification of the VUZ programs. Legally students can study as many subjects offered by the institution as they wish, but because of the heavy workload they seldom attend classes outside their main curriculum. In order to graduate, students have to write and defend a thesis and take final state examinations. Most of them are oral and taken in front of a panel, which consists of university professors and is headed by a colleague invited from a different institution.

Students who graduate with honors receive a red certificate. Most of the higher educational institutions are concentrated in big cities, whereas suburban campuses are uncommon. In 1998, a total of 63.4 percent students studied full-time, 6.9 percent in part-time night, and 29.7



percent in extension-correspondence divisions. Other forms of education offered by VUZs comprise training and retraining programs, short-term courses, and professional development seminars. A form gaining popularity is second higher education, when part of the subjects studied previously is counted towards the second degree.

Current assessment of the students work is done throughout the semester. Unlike in secondary schools, numerical grades are seldom used. Examinations sessions take place at the end of each semester, and the grades are verbal: excellent, good, satisfactory, and unsatisfactory (failure) or pass/fail. All the examination grades are recorded in the students credit book colloquially called *zachotka.* Some VUZs are developing assessment approaches for example rating systems, which employ percentage or cumulative grades. Evaluation is done openly, and public opinion is supposed to stimulate the students' performance. Full-time students who successfully fulfill all the requirements receive a small stipend.

Academic degrees were introduced in Russia in the nineteenth century. Beginning with 1803 it was decided to award three types of degrees in philosophical and law university departments: Kandidat, Master, and Doktor. The system developed mainly under the influence of European standards. After the Revolution of 1917 the degrees were eliminated. However, because of the necessity to differentiate between levels of qualification, the degrees of Kandidat and Doktor were restored correspondingly in 1934 and 1937 with a partially changed meaning. VAK (Supreme Attestation Commission) was instituted in 1934.

The state standard of professional higher education of the Russian Federation has stipulated three levels of study: Level 1 represents incomplete higher education, which is based on fundamental general subjects and lasts at least two years with the receipt of a corresponding certificate. Level 2 requires four years of study and leads to a Bachelor's degree. Level 3 is represented by two types of degrees: Certified Specialist earned upon completion of a five-year program, or Master, which entails six years of study. Individuals interested in advanced postgraduate research can enter aspirantura, leading to the degree of Kandidat nauk (literally Candidate of sciences), and subsequently doktorantura, culminating in the receipt of a Doktor's degree. Another track leading to advanced degrees is a part-time position of *soiskatel* (literally, *seeker*), which allows a scholar to do research without leaving the main job.

The degree of *Kandidat nauk* requires at least three years of study beyond the five- or six-year VUZ program, success in three Kandidat's examinations (major specialty, philosophy, and foreign language), and the defense of a dissertation. It is roughly equivalent to Ph.D. in the United States. *Doktor nauk* (Doctor of sciences) is the highest academic degree awarded in Russia and has no equivalent in the United States, as well as some other countries. The prerequisites comprise a well-established reputation in the chosen field, a considerable number of publications including a monograph, and experience in supervising undergraduate and graduate research. For the Doktorantura the main track leading to this degree is a three-year sabbatical with provision of a stipend and paid trips to conferences and central libraries.

Dissertation boards at VUZs are established by the Supreme Attestation Committee (VAK). In 1998 their total number was 1,868. According to the statute of 2000, VAK was formed of the leading specialists in science, technology, and culture. Its main functions encompassed attestation of scholars of the highest qualification; creation, coordination, and control of the activities of dissertation boards; and analysis of defended dissertations. Included in its competence were the decisions to confer the degree of a Doktor, approve the degree of a Kandidat, advance scholars to the rank of a Professor, and cancel academic degrees.

Contract faculty positions comprise (in order of importance): assistant, *starshy prepodavatel* (senior teacher), *dotsent* (usually for a holder of the Kandidat's degree), and professor (usually requiring the Doktor's degree). Academic ranks (*zvaniya*) are a form of expressing official appreciation of scholarly achievements and include *Dotsent* and Professor. The ranks are awarded to the scholars who have worked in the corresponding faculty position for at least a year, have post-defense publica-

tions, and who have answered a number of other criteria established by VAK. The highest honorable ranks conferred by Academies are Corresponding Academy Member and Full Academy Member. The four major research Academies in Russia are the Academy of Sciences, the Academy of Medical Sciences, the Academy of Agricultural Sciences, and the Academy of Education.

Higher education has been affected by the economic crisis of the 1990s, like the rest of Russian society. Deteriorating buildings, limited access to modern equipment, as well as the poor state of libraries, cafeterias, and sports facilities are only some of the problems facing higher educational institutions. Since 1990 the financing of research has decreased over thirty times in comparable prices. Low salaries and lack of social protection have significantly influenced the prestige of the teaching profession. Due to the ''brain drain,'' many talented scholars and university professors have left the country. There is a steady tendency towards the aging of faculty, including holders of advanced degrees. The attempt to shift the financial burden from the budget to non-budget funds, which contradicts the law, has become a common practice. It disturbed the socioeconomic balance in higher education, making it inaccessible for young people from low-income families.

The emergence of paid institutions and departments has opened the doors of VUZs to applicants, whose level of knowledge would not allow them to compete in the entrance examinations for free education. As a result, the level of students paying fees is usually lower, as compared to those who study for free. A number of non-state VUZs cannot recruit qualified faculty and therefore are unable to ensure an adequate quality of education.

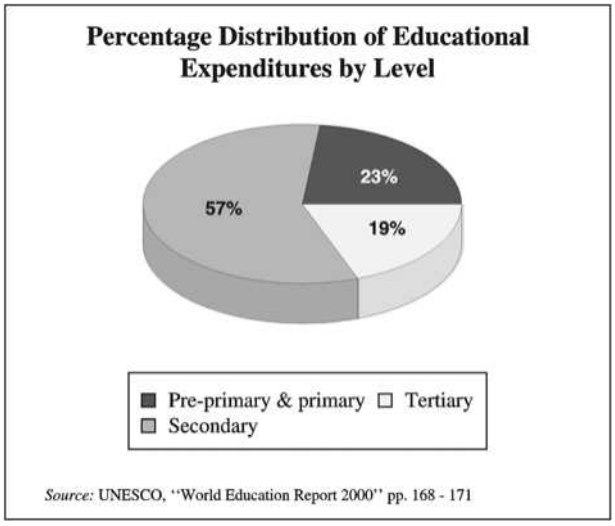
The governmental program of the development of higher school has formulated the following goals, which combine the interests of individuals, different social groups, and the state in the sphere of education: to enhance the academic independence of VUZs; to reinforce the institutions responsibility for the results of their work; to provide broader access to professional education at the expense of the federal budget; to ensure gradual transition to the university system with the preservation of the strong sector of specialized institutions; to create and develop regional systems of higher education; to support the practice of teaching Russian abroad as a language of the UNO and other international organizations; to advance distance education; and to develop computer networks.

ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Russian education functions under the jurisdiction of the federal (central), republic, regional, and local (municipal) administrative organs. Among other responsibilities, their competence includes the realization of federal and international programs, accreditation of institutions, attestation of staff members, direct financing and control of educational activities. The Law on Education regulates the distribution of powers between administrative organs of different levels. The competence of the federal organs includes the development and implementation of the educational policy, establishment, reorganization, and elimination of institutions, setting up educational standards, and formation of educational infrastructure. Republic, regional, and municipal organs make decisions relating to their territory, whereas federal powers have the right to control their activities.

Previously the system of administration consisted of specialized organs: Ministry of Education, Ministry of Higher and Secondary Specialized Education, and the State Committee of Vocational Technical Training. It reflected the necessity to regulate specific areas, but at the same time brought about a number of negative consequences. The educational process was torn between different agencies; schools were separated from VUZs and the network of secondary professional training. The Academy of Pedagogical Sciences was subordinated to the Ministry of Education; as a consequence, areas headed by other agencies were not adequately embraced by the research. The administration of VUZs was distributed between 70 ministries, which brought about disproportion in staffing, location of facilities, financing, and equipment. By the year 2000 the functions of different agencies had been combined under the jurisdiction of the Ministry of Education of the Russian Federation. The main features of the administrative reform were: democratization; elimination of the state monopoly in managing the system; decentralization through giving more powers to regional and municipal organs; more independence granted to institutions; multiple forms of property; and self-determination of national schools.

The educational sphere is financed as part of the national and municipal budget. In 1992 the share of expenses on education from the federal budget was 5.65 percent, in 1998 it dropped to 3.45 percent. Further data reflect some positive tendencies: 3.63 percent in 1999 to 3.75 percent in 2000. Yet, only one-fourth of the need for financing throughout the country was satisfied from the budget. Monetary problems included chronic nonpayment of salaries to school teachers, disconnection of educational institutions from electricity and heat, and lack of funds for maintenance of buildings and other facilities. One of the government's goals was to develop mechanisms, which would provide multichannel financing of education, both from the state and private sources. Educational institutions were exempt from all kinds of taxes. Other taxation benefits encouraged sponsorship,



investments in the sphere of education, and renting buildings to educational institutions.

The Doctrine on Education, adopted in 2000, established three stages of gradual change in the financing: First stage (until 2004): the tempos of growth of the financing of the educational sphere will be faster than the general expenditure from the budget; additional funds will be received from non-budget sources and fees paid by families. In the Second stage (until 2010) financing will grow in accordance with the increase of the gross internal product, with additional funds coming from family budgets and enterprises. For the third stage (until 2025): the tempos of growth of the budget financing will be preserved; there will be a significant increase of funding from non-budget sources.

NONFORMAL EDUCATION

Nonformal education is represented by a network of more than 7,600 institutions of different types with 6,300,000 students engaged in technical work, tourism, biology, sports, music, art, and other activities. The economic and political reforms of the late 1980s to 1990s have freed the extracurricular programs of the ideological Communist influence, but have also brought about considerable reduction of financing of nonformal education. The Octobrist, Young Pioneer, and *Komsomol* (Young Communist League) organizations, which used to engage young people in all kinds of extracurricular activities, were disbanded in 1991 and have not been adequately replaced. The numbers of facilities and program participants have significantly decreased. Cultural and political education offerings for adults, which were widely spread in the USSR, have largely become the things of the past. The remaining institutions are learning to survive under new socioeconomic conditions.

Due to the long-established tradition and high value of all-rounded education in Russia, parents regard additional education for their children as a priority and are willing to pay for it. Former Young Pioneer palaces and houses, which have been transformed into children centers, Young Naturalist stations, technical stations, youth clubs, and vacation camps continue to provide both educational and recreational activities. Part-time music, art, and sports schools are reorganized on new principles. Emerging types of institutions include multifunctional children centers, teenage clubs, ecological and health centers, schools of folk culture and crafts, religion-related schools, as well as institutions of Noble Young Ladies trying to revive pre-revolutionary values. Aerobic classes and foreign language courses are very popular with teenagers and adults. In big cities, especially Moscow and St. Petersburg, numerous courses prepare young people for study abroad. Another widely spread form of nonformal education, which is a major expense for families with teenage children, is private tuition mostly used to coach secondary school students for higher education entrance exams.

The plans for the improvement of nonformal education were aimed at the development of its legal basis, extension of the network, and introduction of new organizational forms and services. Adult education, which was largely ignored in the late 1980s to 1990s, also needed improvement. In 1997 the heads of the CIS governments signed an ''Agreement on Operation in the Field of Disseminating Knowledge and Education for Adults'' and established an Interstate Committee for the realization of the program. It was aimed at solving both educational and social problems (unemployment, and training of specialists for new areas of knowledge).

TEACHING PROFESSION

In 1998-1999 teachers were trained at 670 educational institutions, including 81 pedagogical universities and institutes, 61 classical universities, 22 other VUZs, 183 pedagogical colleges, 163 pedagogical secondary schools, as well as 96 institutions of advanced training and professional retraining. The number of teachers employed in secondary education exceeded 2,000,000. Out of 1,700,000 teachers working at state schools, 75 percent had a higher education. The share of teachers with specialized secondary education was 23.0 percent in general secondary education and 72.5 percent in preschools.

The secondary professional level of teacher training is represented by pedagogical schools (*uchilishcha*) and pedagogical colleges, the latter usually affiliated with higher educational institutions. *Uchilishcha* and colleges train preprimary, primary, and incomplete secondary school teachers. The length of study is two or three years.

The specialization may be in labor, art, technical drawing, music, singing, or physical training. An important part in the curricula belongs to the subjects of the psychological and pedagogical cycle: anatomy, physiology, hygiene, psychology, and methods of teaching. Great attention is also devoted to the profile disciplines, which provide the necessary professional level in a particular area. This kind of education is regarded as the initial stage of teacher training. Graduates can go on to study at higher educational institutions. Joint programs established between VUZs and secondary pedagogical schools or colleges (complexes of continuing education: school, VUZ, or pedagogical college VUZ) allow students to proceed directly to the second or third year of the institute or university.

The second stage, higher pedagogical education, exists either as the traditional five-year model, or the new multilevel model (four plus two years), which consists of module-blocks, rather than traditional subject cycles. The six areas of knowledge constituting the curricula include: ''Natural Sciences,'' ''Socioeconomic Issues,'' ''Humanitarian Issues,'' ''Professional Training,'' ''Pedagogy,'' and ''Art.'' Students are regularly required to engage in teaching practice, which lasts several weeks. Most of the teachers are trained in two specialties, but only 30 percent of them use their minor in practice. The teachers' usual workload is 18 hours a week. They receive extra pay for the work done above this norm or for additional responsibilities (acting as class academic director).

Every five years teachers have to participate in advanced training organized by specialized institutes or departments. Some 78 teacher training VUZs have postgraduate programs in 14 areas of knowledge (more than 80 specialties with 3,000 students). Schools usually maintain close contacts with local methodological councils and institutes of advanced training. The latter offer traditional short-term courses, a combination of full-time and part-time studies, independent work, individual consultations, and problem solving seminars. Teachers also take part in professional development seminars and conferences, attend lectures delivered by university professors, and discuss their colleagues' demonstration classes. State social organizations, such as the Council for Teacher Training Education, the Association of Pedagogical Universities and Institutes, and local councils of directors of secondary pedagogical institutions, play an important part in the unfolding of an effective teachers' network. Participation in advanced training is counted in the process of attestation.

In 1992 the Ministry of Education developed unified principles for the attestation of primary and secondary school teachers. It established twelve qualification groups and four categories that would reflect the teacher's professional level. The teacher's qualification is assessed every five years by special commissions and involves two stages: a qualification test in the form of an examination, interview, report, or defense of a project; and an analysis of the teacher's lessons; testing the students' knowledge; colleague, parent, and student evaluation of the teacher's work. The first category is the highest and requires significant teaching experience, excellent knowledge of the subject, use of innovative methods and materials, leadership, creativity, and active participation in extracurricular events. The salary depends on the assigned category.

There is no special training for university professors. They are usually recruited from capable graduates with good research potential. Their total annual workload, including all kinds of activities (teaching, research, methodological and extracurricular work) is 1,550 hours. The decision about the number of classroom hours (from 150 to 900) is made individually for each faculty member. University professors also have to upgrade their qualification once every five years. They can take a sabbatical (from one to twelve months long) in order to study the experience of their colleagues at other universities, consult with senior scholars, or do research of their own. *Aspirantura* and *doktorantura* are also considered to be forms of advanced training. After five years of work in a particular faculty position, university teachers have to go through a competition process. In reality, it is not so much a competition, but rather a report on the previous five years of work with recommendations for the future made by immediate supervisors and colleagues.

The most influential research institution is the Russian Academy of Education (RAO). It was established in 1991, upon the disintegration of the Soviet Union, on the basis of the USSR Academy of Pedagogical Science. RAO has five regional branches: Siberian (Krasnoyarsk), North-Western (St. Petersburg), Southern (Rostov), Central (Moscow), and Volga Region (Kazan). The staff of the Academy is engaged in fundamental research, which deals with the history and theory of education and upbringing, the development of methodological aspects and basic principles of schooling, and other issues.

Limited resources in the educational sphere, nonpayment of salaries, and distrust of the official promises to improve the state of schools have significantly injured the reputation of the teaching profession. Consequently, more than 11 percent of teaching positions in preschool and general secondary education (89,100 spaces) is vacant. The situation is especially bad in rural areas, where only 40 percent of schools and 19.5 percent preschools have enough teachers (in the city correspondingly 59.0 percent and 80.5 percent). In the late 1990s the teachers'

trade union organized a number of strikes to demand the payment of salaries from the government. The teachers, traditionally used to the role of the conscience of society, detested the idea of going on strike, but for many of them it was the last resort in the struggle for the right to be paid for their work. Another problem is the lack of male influence in secondary schools, because teaching has become predominantly a female occupation; in 1998-1999 more than 80 percent of teachers were women.

Because of the development of personality-oriented pedagogy, teacher training institutions are increasingly charged with the task of diversifying their programs. The establishment of schools of new types (lyceums, gymnasiums, colleges, etc) requires a supply of teachers with in-depth knowledge of particular subjects and a greater research potential. On the other hand, numerous institutions for children with health problems and deviant behavior create the demand for defectologists, psychologists, and specialists of other profiles. The flow of refugees from the former republics of the Soviet Union accounts for great numbers of children with insufficient knowledge of Russian and different levels of preparation in basic subjects. Institutions also face the necessity to train teachers for the sociocultural sphere and the expanding network of non-formal education. All these factors indicate that the areas and types of activities for teachers with higher education have substantially extended. There are 42 officially distinguished pedagogical specialties.

Among the priorities of the Russian government is the development of legal, economic, and cultural conditions for continuous teacher training, enhancing the prestige, social status, and the living conditions of teachers. The decision to increase the share of expenses on education in the federal budget is expected to bring the teachers' salaries up to the level of average wages in industry.

The National Doctrine of Education, the laws ''On Education,'' ''On Higher and Post-Graduate Education,'' and the Program of the Development of Teacher Training Education in Russia in 2001 to 2010 have formulated the following requirements to the system of teacher training: to provide higher education for all the teachers employed in preprimary and general educational institutions; to create conditions for their further professional growth through advanced training; to attract talented specialists to the educational system; and to ensure adequate conditions for the work of specialist with advanced degrees in institutions of higher learning.

SUMMARY

The longstanding humanistic tradition of Russian education was revived during the socioeconomic reforms of the 1990s. At the same time political cataclysms and financial problems created serious obstacles on the way of educational development. Profound democratic changes and new requirements of society brought about the need for innovations in the Russian educational system. Its priorities and goals were laid out in the Federal Program of the Development of Education (1999) and the National Doctrine of Education (2000). The main objectives were further formulated in republic, regional, and local programs, with regard to national, territorial, socioeconomic, ecological, cultural, demographic, and other peculiarities. The necessity to function in the context of a market economy calls forth for the introduction of new economic mechanisms, encouragement of nongovernmental investments in education, and attracting businesses and prospective employers to social partnership with educational institutions. Other major challenges facing Russian education are: the development of the legal and normative bases, state standards and corresponding curricula; social support of teachers and students; harmonization of national and ethnocultural relations; preservation of all languages and cultures of the Russian Federation, including ethnic minorities; enhancing the prestige of the Russian language as one of the uniting factors in the multinational state; and integrating the Russian educational system in the world educational community. Educators believe that the democratization of the school life will allow to bring up personalities, capable of humanistically oriented choice and individual intellectual effort, respecting themselves and others, independent in thought, and open to unexpected ideas and alternative opinions.

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—Olga Leontovich

RWANDA

BASIC DATA

Official Country Name:	Rwandese Republic
Region:	Africa
Population:	7,229,129
Language(s):	Kinyarwanda, French, English, Kiswahili (Swahili)
Literacy Rate:	60.5%
Academic Year:	September-June
Number of Primary Schools:	1,710
Compulsory Schooling:	6 years
Educational Enrollment:	Primary: 1,104,902 Secondary: 94,586 Higher: 1,987
Teachers:	Primary: 18,937 Secondary: 3,413 Higher: 331
Student-Teacher Ratio:	Primary: 58:1

HISTORY & BACKGROUND

A small, landlocked nation in Central Africa, Rwanda faces significant economic, social, and political challenges. In 2000, Rwanda had an approximate population of 7.23 million and was the most densely populated nation in Africa. With an extremely low per capita income and a life expectancy of 41, Rwanda is one of the poorest and most underdeveloped nations in the world (CIA 2000). A horrific period of genocide in 1994 severely undermined the nation's institutions, infrastructure, and social fabric. Since 1994 there have been extensive government and international efforts to rebuild. However, many challenges remain including poverty reduction, human capital formation, national reconciliation, and the rampant spread of the HIV virus that leads to AIDS.

The population is divided into two primary ethnic groups, the Hutu (approximately 84 percent) and the Tutsis (approximately 15 percent), who share a common language, Kinyarwanda. These groups have a long history of conflict, including the 1994 genocide in which approximately 800,000 Tutsis and moderate Hutus were killed, nearly two million Hutu refugees fled to neighboring countries, and approximately 300,000 children were separated from their families or orphaned.

Rwanda is divided into 11 provinces of prefectures and 147 communes. Kigali, the capital, is the largest urban center. Approximately 90 percent of the population live in rural areas and farms for subsistence. Some agricultural products including tea, coffee, and rice generate export earnings. Availability of food is a continual concern in the region due to high population growth, deforestation, and lack of development.

Rwanda was a German colony from 1900 until the end of World War I. Belgium administered the country from 1917 until its independence on July 1, 1962. Under Belgian rule, the minority Tutsis dominated the government. The education system was also controlled by the Tutsis and favored enrollment of Tutsi children. In 1920 the Ruanda-Urundi (now Rwanda and Burundi) territory had 123 schools and only 6,000 students (Duarte 1995). From World War I to World War II, Belgium, under a League of Nations mandate, developed a plan to offer primary school to as many children as possible. Most schools were administered by religious institutions and received government funding if they followed the curriculum and other guidelines established by the Belgians. Secondary service was limited to training for civil service and the priesthood. After World War II, Belgium pledged in a United Nations' agreement to improve the education system under a trusteeship system. Education remained limited by inadequate government inspections, few resources, and limited accessibility. By 1957 fewer than three percent of children finished six years of primary school (Duarte 1995). Under Belgian rule, no institute of higher education existed in Rwanda and by 1960 only 100 natives had received postsecondary education

abroad. Religious schools provided adult education, literacy, and religious instruction to approximately 650,000 adult students (Duarte 1995).

After independence in 1962, the First Republic (1962-1973) opened the educational system to all children and founded the National University of Rwanda (NUR). Since 1962, the Rwandan government has actively sought to democratize educational access and to use the education system to produce a skilled labor force.

In 1994, the genocide and refugee crisis dramatically impacted the education system through destruction of schools, communities, and infrastructure and massive social displacement. Since 1994, the government and international organizations have been committed to rebuilding and enhancing the education system as a fundamental strategy for broad development. However, education services remain limited and challenges raised by the genocide, subsequent refugee flight, and economic underdevelopment continue. A 1996 survey by the government and United Nations Population Fund found that 59.6 percent of the population age six and over had a primary education, 3.9 percent had completed secondary school and only .2 percent had a university education (CIA 2000).

Since 1995, the Rwandan government has worked closely with local and international nongovernmental organizations to provide services to children. The government has been committed to improving educational services and to reuniting children separated from their families or orphaned by the 1994 genocide and 1996 repatriation. By 1999, some 85 percent of these children had been reunited with their families or placed in foster homes (CIA 2000). In January 2001, President Paul Kagame reported that since 1995, the number of students in tertiary institutions increased from approximately 3,000 to approximately 7,000, and enrollment in secondary schools rose to 124,000. Rwandan schools have also eliminated an ethnic quota system for admittance, which had existed since the 1960s (Rwanda News Agency 2001).

Constitutional & Legal Foundations

The Ministry of Education (MINEDUC) centrally controls the Rwandan education system and there is a national curriculum in public schools. Many other ministries operate educational programs including literary classes offered by the Ministry of Local Government; special programs for girls' education implemented by the Ministry of Gender, Family and Social Affairs; and the operation of a continuing education center system by the Ministry of the Interior. The Rwanda National Examinations Council coordinates a unified national examination system. In the late 1990s, some efforts were made to decentralize education and to encourage more community involvement and management.

Rwanda has ratified the 1990 World Conference on Education for All and has established a target for achieving universal primary education by 2010. MINEDUC's other goals include improving the rate of transition to secondary schools; increasing the number of teachers; improving teacher qualification; introducing new curricula; increasing the supply of instructional materials; and improving human resource development (CCA 2000).

Educational System—Overview

Rwandan students are required to begin school at age seven. Both primary and secondary school are six years in length. The academic year is centrally determined and lasts from September to July. Entry into secondary school is by examination and most primary school students do not continue on to secondary school. Rwandan families are required to pay school fees and to purchase uniforms to enroll their children, but the government routinely waives fees for orphans.

International organizations have been influential in Rwandan education since the Germans and Belgians colonized the area. Religious and private schools have been active since colonization and remain significant today. Since 1995, international aid agencies, foreign governments, and international financial institutions have been actively involved in reconstructing the education system.

Preprimary & Primary Education

Prior to 1991, preschool education was provided informally by parents and/or communities. In 1991, the Division of Preschool Education was created. This division seeks to set standards, train teachers, and promote enrollment of children from age two-and-a-half to age six. The Rwandan government has prioritized the expansion of facilities for and quality of preprimary education with a focus upon a community-based approach. In 2000, the World Bank reported that there were approximately two million children under the age of five and that the preschool-aged population was likely to double by 2022. In 2000, Rwanda had approximately 160 to 200 privately run early child education programs with an enrollment of about 6,000 children (less than 1 percent of children under seven) (World Bank 2000).

The 1994 genocide dramatically impacted primary school education. UNICEF estimates that approximately 600 primary schools (32 percent of the pregenocide total) were destroyed and 3,000 or more primary school teachers were lost. In 1998, just 45 percent of primary school teachers were qualified creating a 124:1 student to quali-

fied teacher ratio. By 1999, there were 2,061 primary schools in Rwanda and the net primary enrollment ratio had reached 65 percent. Gender equity is improving with 69 percent male and 61 percent female net enrollment.

Despite improvements in the education system, the task of educating children under age 14, who make up 43 percent of the Rwandan population, remains enormous. Although net enrollment rates are increasing, they have not yet reached pregenocide levels of approximately 71 percent (CCA 2000). Additionally, enrollment figures vary substantively across prefectures. Completion and attendance figures suggest high drop out rates, although accurate data is difficult due to the substantial population shifts that occurred from 1994-1996.

The six-year primary school curriculum is nationally determined and teaching instruction is formal. The curriculum was revised in 1996, but the new version had not been widely disseminated by 2000. The new curriculum will include civics, peace education, national reconciliation, and new life skills approaches. Textbook coverage is limited, with UNICEF estimating only 22 percent coverage in 1998.

SECONDARY EDUCATION

Transition rates from primary to secondary school are low. Approximately 20 percent of students who finished primary school in 1998 continued on to public secondary schools, and another 10 percent enrolled in private schools. The gross enrollment for secondary schools was only 7 percent in 1998. Nearly half of secondary students are female (49 percent). Secondary school admission is no longer based on a regional or racial quota system. However, many schools are associated with ethnic conflict, as many were damaged and others were used as torture centers during the genocide.

The six-year secondary education program in Rwanda includes two cycles—a common core focusing on basic skills, and a second cycle providing more academic choices. Students can also complete the second cycle at teaching, nursing, or technical training schools. Student-to-teacher ratios are greatly reduced in secondary school, with estimates at about 22:1 (CCA 2000).

Data on secondary schools and evaluation of the quality of their instruction is limited, as numerous schools were constructed or opened after 1995. Secondary education quality concerns include low standards for entrants, insufficient instruction materials, poorly qualified teachers, and curriculum with low relevance to employment opportunities or life skills.

HIGHER EDUCATION

Higher, or tertiary, education opportunities dramatically increased after independence. Since 1967, the National University of Rwanda (NUR) has graduated approximately 450 students per year (CCA 2000). However, in 1994, nearly the entire staff of the NUR was lost. Since then, the university has depended on visiting professors, who in 1996 made up 71 percent of the faculty (CCA 2000).

Although the NUR is the largest tertiary institution, there are also religious, military, and other vocational and technical institutions. Several ministries and private institutions provide opportunities for apprenticeships and training in specific employment opportunities. Since 1995, new institutions have been opened with international support including the Kigali Institute of Science and Technology (KIST), the Kigali Institute for Education (KIE), and the Kigali Health Institute (KHI).

Higher education suffers from weaknesses similar to those of secondary education. Students are often under prepared by secondary curricula, instruction materials are limited, and many instructors lack doctoral degrees. Additionally, there is a significant gender gap at the tertiary level, with women making up only 28 percent of students (CCA 2000).

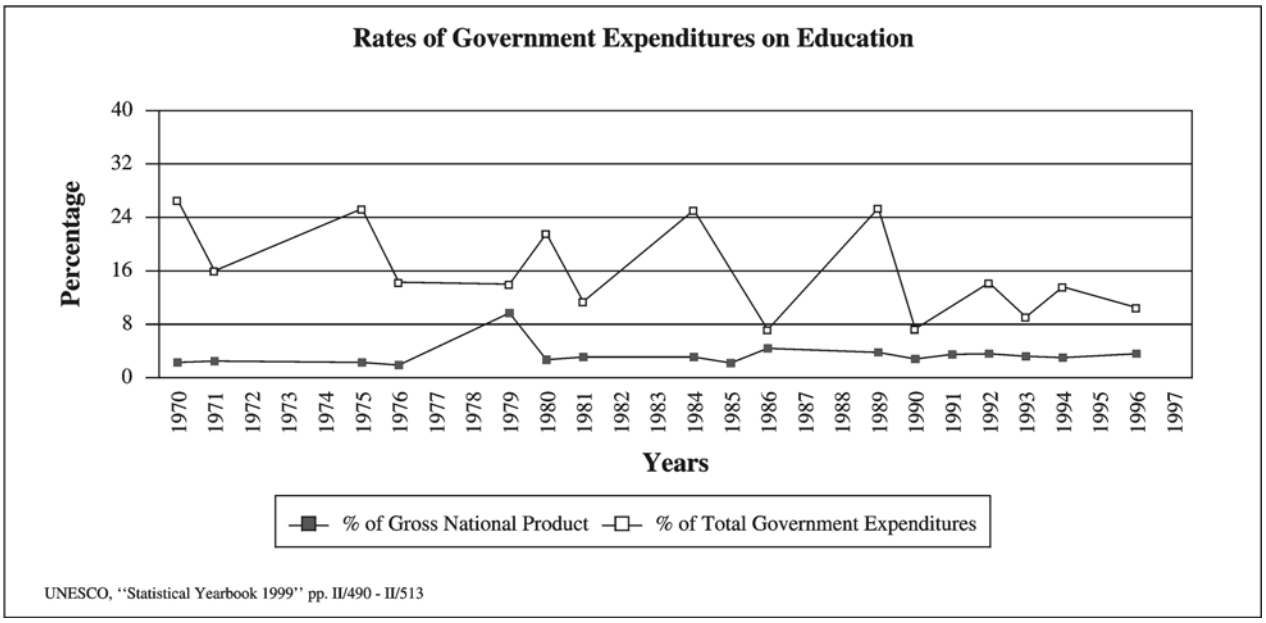
ADMINISTRATION, FINANCE, & EDUCATIONAL RESEARCH

Prior to the 1994 genocide the Rwandan government emphasized education spending. In 1984, for example, 27.5 percent of Rwanda's national budget was allocated to education (Dorsey 1994). Although education expenditures after the genocide were reduced, possibly due to a need to focus on security issues, they have been steadily rising since 1996. In 1999, some 22.7 percent of the national budget was devoted to education (World Bank 1999). Additionally, Rwanda has received extensive financial support for its educational programs from international sources. The government's broad goals for improving education require an extensive, ongoing financial commitment to education and continued international support.

NONFORMAL EDUCATION

Vocational training institutes operated by the Ministry of Youth serve out-of-school young people and adults through both six-month and three-year training programs. There is also a growing system of apprenticeship available through the private sector.

Distance learning courses are being conducted at both KIST and the NUR. It is hoped that distance learning can help to overcome a lack of qualified professors at Rwanda's institutions of higher learning. Nonformal education is hampered by a lack of media and technological resources. There is no daily paper in Rwanda, al-



though there are several privately owned weekly papers. The government owns one national radio station and the only television station, which offers five hours of daily programming. The government is also the only Internet service provider (CIA 2000).

TEACHING PROFESSION

Teacher training begins with the second cycle of secondary education. Training occurs in Primary Teachers' Colleges. The government is striving to open teachers' colleges in each prefecture. Religious and private schools also continue to train teachers. The rapid expansion of the educational system has led to a shortage of teachers at all levels.

SUMMARY

The education system in Rwanda, despite extensive efforts, remains inadequate for the current and rapidly expanding population of children. Nearly 70 percent of children do not continue beyond the six years of primary school. Although illiteracy figures vary, estimates are that at least one-third of the population remains illiterate. Teacher shortages, lack of supplies, rapid population growth, and limited school facilities continue to negatively impact the educational system. In some western border regions, disruptions from regional conflict have continued and many schools have been closed.

A large number of children remain in economic or social circumstances that make educational attendance difficult. UNICEF estimates that there are over 60,000 children age 18 or younger who head households that include 300,000 school-age children. Child labor is a problem as evidenced by street children, underage domestic workers, and agricultural labor. Additionally, increasing HIV/AIDS infection rates are challenging both the nation and the education system. There is growing government interest in incorporating HIV/AIDS education at each level of the education system. However, curriculum limitations and teacher training have made implementation of this goal difficult.

Thus, Rwanda faces numerous challenges as the government, in cooperation with international organizations, seeks to rebuild and to expand its educational system. Current efforts to decentralize, to implement new curriculums, to improve organizational efficiency, and to address quality concerns may help meet these challenges. At higher education levels, emphasis upon developing instruction that facilitates future employment and has life-skills relevance, as well as efforts to move beyond reliance on foreign instructors, should continue. Addressing current educational needs and meeting the demands of a rapidly increasing population will require a significant, on-going financial and political commitment from both the Rwandan government and the international community.

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