

Digital Content, Mobile Learning, and Technology Integration Models in Teacher Education



Handbook of Research on Digital Content, Mobile Learning, and Technology Integration Models in Teacher Education

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Neal Shambaugh, West Virginia University, USA

Kimberly Floyd, West Virginia University, USA

Universal Design for Learning (UDL) guidelines provide recommendations for flexible technology integration in teacher education. Section one of this chapter describes the legal and administrative context for accessibility, the UDL conceptual framework, technology integration in teacher education, the TPCK model for technology integration, and the use of mobile devices in teacher education. Section two provides recommendations for applying UDL principles to mobile devices in public schools.

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Cindy Cummings, Lamar University, USA

Dwayne Harapnuik, Lamar University, USA

Tilisa Thibodeaux, Lamar University, USA

Active learning pedagogies using digital technologies hold much promise. However, despite all the advances we see in how technology impacts most aspects of society, the advances in our educational institutions have been much smaller. This chapters reveals how we have built a Master's program that uses the active learning principles of choice, ownership, and voice through authentic learning (COVA approach) and how we have created a significant learning environment (CSLE) that fully engages and equips our learners to be digital leaders.

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Case Study: Preparing Students for Active Engagement in Online and Blended Learning Environments	45
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Sophia Palahicky, Royal Roads University, Canada

Adrianna Andrews-Brown, Royal Roads University, Canada

This chapter presents a case study that describes the design, development, implementation, and evaluation of the online orientation modules for new students at a Canadian postsecondary institution that offers primarily blended and online programs.

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Technology and Teaching: Technology and Student-Centered Pedagogy in 21st Century Classrooms	69
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David Feist, St. Gabriel High School, Canada

Doug Reid, Grant MacEwan University, Canada

This chapter examines whether a shift in teacher practices could impact student engagement and success. The results were positive: many students had more academic success when student-centered learning activities were incorporated into their schooling. In theory, this means student learning that includes non-linear learning approaches can work in more generalizable settings than what have been expansively published in the current literature. In practice, the findings may help to inform schools dealing with current societal pressures to help their students find greater success through the use of pedagogically appropriate technology implementations and teacher support.

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David Ikenouye, University of Calgary, Canada

Veronika Bohac Clarke, University of Calgary, Canada

This chapter explores teachers' attitudes toward, and integration of, technology from multiple perspectives. In order to gain a rich and contextualized understanding of how teachers genuinely use technology in the classroom, integral methodological pluralism was used as a framework to orient the study, to organize the research questions and to provide the conceptual framework for the research methodology. This chapter is an overview of the analysis of the differing and sometimes conflicting practices, beliefs and views on the adoption of technology in the classroom, from the four quadrant perspectives of the Integral Model.

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The purpose of this chapter is to explore the significance of technology as a tool for professional development in a postgraduate program in higher education in Namibia. The findings reveal that the use of the flipped classroom approach and the use of the reflective e-portfolio enhance the quality of teaching and learning in the delivery of the postgraduate program as well as in the participants' teaching practice.

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Choosing and Adapting a Mobile Learning Model for Teacher Education..... 132

Bonface Ngari Ireri, University of Free State, South Africa

Ruth Diko Wario, University of Free State, South Africa

Irene Mukiri Mwingirwa, Africa Nazarene University, Kenya

This chapter examines the Technological Pedagogical Content Knowledge (TPACK) model in teacher training. Content Relevance and Serving, Content Format and Packaging, Learner Attention, Learner Feedback and Context Awareness are identified as critical factors when making a choice for an instructional design model to adopt.

Chapter 8

Different Enhanced Technology Used in Core Counselor Education Courses: What Are They and Their Effectiveness?..... 149

Levette S. Dames, North Carolina Central University, USA

Jennifer Barrow, North Carolina Central University, USA

For counselor education programs to enter the 21st century, technology and media devices should be embraced in all of the eight core counseling areas. This chapter examined the usefulness and effectiveness of enhanced-technology and media devices of five of the eight core counseling areas for advancement and improvement of effective skills for counselors-in-training (CIT). University web-base and audio/video media devices were the common enhanced-technology devices used among five of the core counseling areas. In addition, the school counseling program technologies and implications are discussed.

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Irene Mwingirwa Mukiri, Africa Nazarene University, Kenya

Bonface Ngari Ireri, Africa Nazarene University, Kenya

This chapter examines technology integration at various levels of school, ranging from primary to tertiary levels. The students' scores in examinations showed that the students learning using the selected application known as GeoGebra performed better and girls performed equally as well as boys when taught mathematics in a technology environment. The chapter underscores the importance of technology to improve teaching and learning process and it has promise to bridge the gap in performance between boys and girls in Science Technology Engineering and Mathematics (STEM).

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Assessment for Learning (AfL) is a process in measuring the learning outcome in students. In the light of this process, this chapter attempts to showcase how various Artificial Intelligence (AI)-based solutions, such as Expert Control System (ECS)-based tutoring platform and Agent-based tutoring systems (AbS) can be used for the AfL, which in turn, improve ABeL and AtoL in students.