Preface

Many educators agree that mobile technology has great potential not only to improve our educational practices but also to change traditional learning platforms and classroom learning environments. There are also many advantages to integrating mobile technologies into the 21st century classrooms to support teaching and learning. Mobile technology tools such as iPads, iPad minis, mobile applications, tablets, palm devices, e-readers, and smartphones are becoming real-world tools that should be integrated into modern instructional practices to support digital learners and to promote meaningful learning. Educators are harnessing mobile devices within and beyond the classroom due to the flexibility, portability, affordability, and popularity of those devices.

Similarly, educators are looking at implementing mobile technologies within faculty development, pre-service teacher training, and in K-12 to assist with student achievement and meaningful learning, and to reach students in remote places that might not be able to have access to education otherwise (Gronn, Romeo, McNamara, & Teo, 2013; Martin & Ertzberger, 2013). There is also evidence to suggest positive results when Mobile Learning (M-Learning) best-practices and trends are implemented into the teaching and learning process to engage the digital natives and promote real-world learning and to further the professional development of K-20 teachers (Merchant, 2012). Mobile devices (and appropriate instructional practices, such as inquiry-based learning) have the capability to help motivate students, encourage persistence on challenging tasks and real-world problems, allow students to be self-directed, and create a personal learning environment suited to each learner (Jones, Scanlon, & Clough, 2013).

In most cases, traditional learning pedagogies have changed to reflect an authentic and real-world approach to learning and teaching with a focus on inquiry-based learning and technology integration. Additionally, although there is great promise to integrate mobile technology as a learning tool, there are several issues, challenges, and concerns to be addressed. Some of the main concerns are practicality and sustainability within educational environments. There are also concerns that the multiple functions available could inhibit or distract from learning (Wood, Zivcakova, Gentile, Archer, De Pasquale, & Nosko, 2011).

The emergence of technologies in the real-world and in education reflect the need for professional development required by teachers in this area to prepare the next generation of learners for the 21st century. To this end, *Advancing Higher Education with Mobile Learning Technologies: Cases, Trends, and Inquiry-Based Methods* brings together researchers who study and professionals who utilize mobile technologies in educational settings for meaningful learning to share paradigms, perspectives, insights, best practices, challenges, and effective models. Further, the book explores the effectiveness of mobile technologies within 21st century classrooms and the constructivist or inquiry-based learning environments on the teaching and learning processes and outcomes.
Chapter 1 examines the potential of mobile social media to be used as a catalyst for collaborative curriculum redesign. A case study is critiqued for implementing a mobile social media framework for creative pedagogies and the implications of this framework are drawn out for wider educational contexts. An effective mobile social media framework for collaborative curriculum redesign must meet three goals: model the building of learning communities, explore the unique affordances of mobile social media to enable new pedagogies, and establish a supporting technology infrastructure.

Chapter 2 examines how department chairs are uniquely situated to bridge the world of technology and the contemporary campus, and through strategic and intentional faculty development, they have the potential to successfully bring mobile learning to higher education. Throughout the chapter, strategies outline how to use adult learning to build faculty development programs that encourage the effective use of m-learning as an instructional strategy.

Chapter 3 discusses a program that was designed to provide rich learning experiences with the use of Apple iPads that would be reliable with intermittent Internet connections. This program allows students to learn while on the move and provides opportunity for studying when it might be otherwise difficult or impossible.

Chapter 4 provides an overview between mobile learning technologies and the nature of teaching and learning. It specifically reviews the current trends, strategies, and issues related to the development of mobile learning and outlines the current challenges and impacts within teaching and training.

Chapter 5 discusses the professional development that prepares teachers to implement iPads into the classroom. It describes the training and support that builds teachers’ development of a Metacognitive Technological Pedagogical Framework (M-TPACK) for integrating iPads. It focuses on the positive dispositions towards technology integration as a key factor in ensuring that teachers implement knowledge of content, technology, pedagogy, and students. This chapter also presents authentic and relevant examples for teacher development with mobile technologies.

Chapter 6 discusses how teacher preparation programs can be implemented into candidate field supervision using video conferencing via mobile technology to increase the ability to conduct observations in schools and in a more efficient manner. It also explores the security of video conferencing applications and the issues related to using video conferencing in special education classrooms, where student confidentiality is of high importance.

Chapter 7 explores the integration of mobile technology within STEM educational settings to provide learning opportunities that are flexible and feasible enough to increase student understanding using critical inquiry. This chapter also examines the replication and transferability patterns related to the use of a mobile technology devices within and across multiple instructors, settings, context, and content areas.

Chapter 8 describes some of the problems faced by a teacher education program, triggered by the use of Work Integrated Learning (WIL), to connect theory taught in universities to the realities of a teacher’s life. The authors explain their belief that there needs to be critical discourse about the teaching and learning models used to engage students in the art of workplace learning; that this critical discourse needs to be based on facilitating a teaching and learning environment that is highly effective; and that the nexus is that the student’s Work Integrated Learning (WIL) experience will not be counterproductive. A concrete example is highlighted by how one university implemented these beliefs in a structured and proactive manner.

Chapter 9 examines the benefits and challenges in employing mobile telephony to improve the quality of teaching and learning. The chapter explores challenges including cultural inhibitions and at times oral language cognitive costs, and the ethical issues relating to the “privacy” of a cell phone.
Chapter 10 addresses the theme of Mobile Learning Technologies and Applications in Education, specifically regarding digital reading in learning, and particularly in foreign language learning with tablets. Practical suggestions for teachers and educational designers for promoting strategic reading using the iBooks Author application are also discussed.

Chapter 11 describes efforts to use the TPACK framework (Mishra & Koehler, 2006) to investigate how students use iPad computers during their student teaching and design appropriate supports. Implications for developing supportive learning environments for 21st century student teachers are also discussed.

Chapter 12 describes a design and development roadmap for the adaptation of traditional higher education classroom activities into engaging iPad-based digital learning activities. The chapter provides an overview of rationale and design considerations of the authentic iPad learning design implementation project and the positive outcomes and improvements (made over time) related to this project.

Chapter 13 discusses how mobile or handheld devices can be used to promote inquiry-based learning and constructivist and authentic pedagogies. Additionally, the chapter discusses Koole’s FRAME model, which is also used to guide the implementation of an inquiry-based instructional unit incorporating mobile or handheld devices.

Chapter 14 explores the role of mobile technologies such as Global Positioning System (GPS) and cell phones and tablet PC technologies in higher education and professional development. It offers creative strategies and possibilities for integrating GPS and mobile technologies into the curriculum with limited resources, outlines participants’ projects, and demonstrates examples that integrate Maps, Mathematics, and Media Education using cell phones, tablet PCs, and GPS devices in a gallery walk.

Chapter 15 investigates the use of Web 2.0 technologies in learning in Kenyan universities. Web 2.0 technologies are technologies on the Internet such as blogs, wikis, and online forums that allow people to create, share, collaborate, and communicate their ideas. Despite the enormous potential and apparent cost effectiveness of new learning media for facilitating social-networked learning, problem-based learning, and promoting group work, its application by institutions of higher learning in developing African countries is low. The study findings reveal that Web 2.0 technology use by students in Kenyan universities was quite low. Finally, other implications need to be explored in the context of the study, including the learners and the Web 2.0 technology resources available.

Our hope is that the research and information presented in this book will further the agenda and advance the discussion on the implementation of mobile technology within the field of education in accordance with inquiry-based and authentic learning settings. Furthermore, it is our hope that the book becomes an excellent reference resource for professionals working in the field, including faculty, teachers, school administrators, technology staff, directors of teaching and learning centers, and other educational and technology stakeholders.

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REFERENCES


