Chapter 21
Implications of Mobile Devices in a Bachelor of Education Program

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ABSTRACT

The purpose of this chapter is to describe a study that investigated if and how mobile devices could be used to support the required program outcomes in a blended Bachelor or Education (B.Ed.) program. All students enrolled in an educational technology course during the Fall 2011 semester were provided with a ViewSonic Tablet. Through faculty interviews, student online surveys, and a post-course focus group, the study participants indicated that mobile devices could be useful for supporting future professional responsibilities (e.g., career-long learning, collaboration) and facilitating student learning but less effective for planning, assessment, and managing the classroom environment.

INTRODUCTION

The idea of blending different learning experiences has been in existence ever since humans started thinking about teaching (Williams, 2003). What has recently brought this term into the limelight is the infusion of web-based technologies into the learning and teaching process (Allen & Seaman, 2010; Clark, 2003). These technologies have created new opportunities for students to interact with their peers, teachers, and content.

Blended learning is often defined as the combination of face-to-face and online learning (Sharpe et al., 2006; Williams, 2002). Ron Bleed, the former Vice Chancellor of Information Technologies at Maricopa College, argues that this is not a sufficient definition for blended learning as it simply implies "bolting" technology onto a traditional course, using technology as an add-on to teach a difficult concept or adding supplemental information. He suggests that instead, blended learning should be viewed as an opportunity

Figure 1. Bachelor of education approach to blended learning
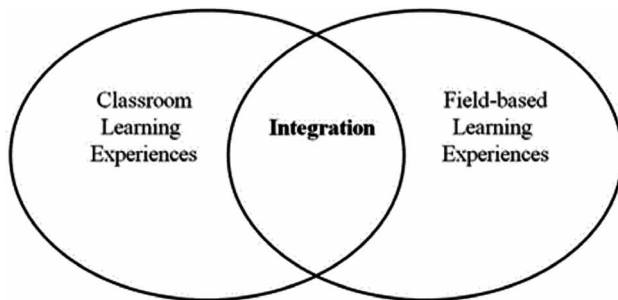
to redesign the way that courses are developed, scheduled, and delivered through a combination of physical and virtual instruction, "bricks and clicks" (Bleed, 2001). The goal of this redesigned approach to education should be to join the best features of in-class teaching with the best features of online learning to promote active, self-directed learning opportunities for students with added flexibility (Garnham & Kaleta, 2002; Littlejohn & Pegler, 2007; Norberg, Dziuban, Moskol, 2011). This sentiment is echoed by Garrison and Vaughan (2008) who state that "blended learning is the organic integration of thoughtfully selected and complementary face-to-face and online approaches and technologies" (p.148).

Most of the recent definitions for blended courses indicate that this approach to learning offers potential for improving the manner in which we deal with content, social interaction, reflection, higher order thinking and problem solving, collaborative learning, and more authentic assessment in higher education (Graham, 2006; Mayadas & Picciano, 2007; Norberg, Dziuban, Moskal, 2011). Dziuban and Moskal (2013) further suggest that "blended learning has become an evolving, responsive, and dynamic process that in many respects is organic, defying all attempts at universal definition" (p.16). For the purpose of this research study, blended learning is defined as the intentional integration of classroom and field-based learning experiences through the use of digital technologies such as mobile devices (Figure 1).

There have been a variety of definitions used for the concept of mobile learning. It has been suggested by Brasher and Taylor (2005) that mobile learning is "any sort of learning that happens when a learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunity offered by mobile technologies" (p.33). The Mobile Learning Network (2013) in the United Kingdom states that mobile learning is ". . . the exploitation of ubiquitous handheld technologies, together with wireless and mobile phone networks, to facilitate, support, enhance and extend the reach of teaching and learning" (What is Mobile Learning? section, para 1). Ally (2009) indicates that *M-learning* focuses on the delivery of electronic learning materials, with built-in learning strategies, on mobile computing devices to allow access from anywhere and at anytimehttp://www.google.com/url?q=http%3A%2F%2Fnet.educause.edu%2Fir%2Flibrary%2Fpdf%2FELI3022.pdf&sa=D&sntz=1&usg=AFQjCNG8M8FIkAgR_Xu4g-z8sk8lIekweRQ while *E-learning* involves the delivery of electronic learning materials on desktop and notebook computers. And, the EDUCAUSE Learning Initiative (Brown & Diaz. 2010) attempts to create classifications for mobile learning based on the size of the device. For example, *highly mobile devices* are cell-phone sized devices that can fit in a pocket: feature phones (supporting cell and SMS service only), smartphones, and other devices like Flip cameras. *Very mobile devices* are slates, pads, and netbooks. *Mobile devices* are larger devices such as laptops. This classification system was utilized in this study in order to differentiate the affordances that different sizes and types of mobile devices have on supporting the required program outcomes in a blended pre-service teacher education degree.

There have been previous research studies about the use of mobile devices in higher education (Gikas & Grant, 2013; West, 2012; Zhu et al., 2012). These studies have primarily investigated the advantages and disadvantages of using these

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