

## Chapter 65

# Integrating Mobile Learning in an Undergraduate Course: An Exploration of Affordances and Challenges for Learners in UAE

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### ABSTRACT

*This study investigated students' perceptions towards the affordances and challenges of integrating mobile learning (m-learning) into an undergraduate course. It also examined the impact of students' gender on their perceived affordances and challenges. The relationship between students' perceived affordances and perceived challenges of m-learning was also explored. Questionnaires distributed to 76 students and semi-structured interviews conducted with 17 students were used for collecting data to answer the research questions. The results revealed that students' perceptions towards the affordances of m-learning were particularly positive. They indicated that m-learning can provide an active, flexible, contextualised, and situated learning environment. However, several challenges are associated with m-learning integration. Most notable are: distraction, small device screens, plagiarism, cost, and parents' negative attitudes toward m-learning. The study also revealed that students' gender significantly impacted on the perceived affordances and challenges of m-learning. Finally, a negative significant correlation was found between mobile technology affordances and challenges.*

### INTRODUCTION

Many researchers argue that pervasive and ubiquitous access to mobile technologies will have a role to play in the way we learn (Churchill, Fox & King, 2012; Klopfer, Squire & Jenkins, 2002; Liaw, Hatala & Huang, 2010; Mockus, et al.,

2011; Naismith, Lonsdale, Vavoula, & Sharples, 2004; Patten, Sa´nchez & Tangney, 2006). Mobile technologies that include a wide variety of devices connected to different kinds of networks such as cell phones, personal digital assistants (PDAs), digital cameras, portable media players, smart phones, and tablets (Mockus, et al., 2011), enable

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learners to learn at anytime, anywhere, transforming e-learning into mobile learning (m-learning), which has emerged as an innovative learning approach (Garrison, 2011).

Educational institutions in the United Arab Emirates (UAE) are becoming more engaged with the new m-technologies as a tool to revolutionize and improve the way students learn and how they are taught. For example, the UAE Federal higher education institutions embarked on a historic initiative to move education into the m-learning era by introducing iPad-based teaching and learning. The tablets were put into use by approximately 14,000 students in September, 2012. The objective of the initiative was to improve higher education in the UAE and motivate and engage students in their intellectual development (United Arab Emirates University, 2012). Another example is the launch of Mohammed bin Rashid Initiative for Smart Learning. The AED1-billion project, which will be piloted over a period of five years in public schools, aims to establish a unique learning environment in schools through the introduction of 'Smart Classes', with students utilizing computer tablets and high-speed 4G networks as a means of acquiring knowledge (Ibrahim, 2012). In addition to these governmental initiatives, it is noticeable that most students in the UAE own several mobile devices with advanced features and they bring them to school. According to the United Nations Educational, Scientific and Cultural Organization {UNESCO}, (2012), the mobile technology penetration rate reaches more than 100% in the UAE. These developments have led to several attempts to use mobile technology in both formal and informal learning in the country.

It is evident that m-learning and its technologies have created great possibilities and new innovative practices in education. However, it is important to understand the affordances of m-learning well enough to sufficiently improve learning outcomes and respond to the demands of educational reform initiatives. In addition, there are existing factors that might hinder the effectiveness of m-learning

adoption. The literature suggests that the use of new technology in teaching and learning is influenced by individuals' beliefs that this technology will afford learning in some way (Barnes, 2000). According to Schellens, Van Keer, & Valcke (2005), individuals' perception of a learning task defines the challenge, difficulty, and the balance of motivation necessary to address it. M-learning is one of the topics that have gained a lot of attention in the western educational literature. However, there is a lack of empirical research in the area of m-learning integration in the Arab world. Thus, this study was set up to explore learners' perspectives of the affordances and challenges surrounding m-learning integration in an undergraduate course, and the impact of students' gender on the perceived affordances and challenges of m-learning in the UAE.

## **LITERATURE REVIEW**

M-learning has been defined in various ways. Each of these reflects the interests of the groups using it (Peng, Su, Chou, & Tsai, 2009). Hummel, Hlavacs, and Weissenböck (2002) argue that mobility is one of the main characteristics of m-learning, as "mobility itself will influence the way of learning, fostering the utilization of small free time slices for learning and attending lectures" (p. 5). According to Seppälä and Alamäki (2003), mobility allows teachers and students to take advantage of the convenience, expediency, and immediacy of mobile devices. Another definition of m-learning focuses on ubiquitous computing (Peng et al., 2009). Ubiquitous computing was defined by Hummel and Hlavacs (2003) as:

*A situation in which a multitude of connected and embedded systems and devices work together to build an ambient computing environment..., allowing [users] to access learning content from anywhere at any time, and to communicate with colleagues or lecturers synchronously and asynchronously much more frequently (p. 6).*

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