

# Chapter 66

## A Psychological Perspective on Mobile Learning

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### **ABSTRACT**

*The mobile internet offers 24/7 access to a wide range of social, commercial, and educational opportunities. If the educational opportunities are to be maximized, then a full understanding of user skills, motivations, preferences, and learning profiles is required. The authors propose that this detailed understanding is best informed by adopting a psychological perspective on the mobile learning process. Therefore, this chapter considers the insights that can be derived from viewing mobile learning through a psychological lens: in particular the psychological challenges that mobile learning presents and the importance of considering individual differences in learner skills and behaviors. They also consider the insights that psychology offers in addressing these challenges, especially the importance of media literacy skills, the presentation of learning resources in a way that considers the limited cognitive resources of the learner, and the importance of context and contextualized behavior.*

### **INTRODUCTION**

The mobile internet offers 24/7 access to a wide range of social, commercial and educational opportunities. If the educational opportunities are to be maximized then a full understanding of user skills, motivations, preferences and learning profile is required. We propose that this detailed understanding is best informed by adopting a psychological perspective on the mobile learning process. Therefore this article considers the insights that can be derived from viewing mobile learning through a psychological lens: in particular the psychological challenges that mobile learning presents and the importance of considering individual differences in learner skills and behaviours. We will also consider the insights that psychology offers in addressing these challenges, especially the importance of media literacy skills, the presentation of learning resources in a way that considers the limited cognitive resources of the learner

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and the importance of context and contextualized behavior. In so doing, we demonstrate the persuasive case for embedding psychologically driven insights in future multi-disciplinary research and practice.

## **BACKGROUND: APPROACHES TO MOBILE LEARNING**

Rapid technological advancements are substantially influencing the educational landscape, offering learners, providers and developers a range of new platforms for learning. One of the most exciting platforms is mobile learning. Mobile learning can be defined as the use of wirelessly connected devices to augment learning and teaching within and between different psychological, social, physical and temporal contexts. Mobile learning has recently been identified as one of the key facilitators of learning across the globe (UNESCO, 2013). If these learning opportunities are to be maximised then a detailed understanding of the determinants and influences on uptake, use and effectiveness is required. Just as educators have to understand how we learn in traditional contexts, we now have to understand how we learn using mobile devices. Psychology is well placed to offer detailed insight into the necessary skills, preferences and behaviours necessary for successful mobile learning to occur. In the following section we outline the different perspectives on mobile learning.

The evidence base for mobile learning is rapidly developing and reflects understanding of the nature, process and influences on mobile learning from a number of different, but often complementary, perspectives. One of the first and most influential approaches is that of Mike Sharples who advanced an early definition in his seminal paper on mobile lifelong learning: “a new genre of educational technology - personal (handheld or wearable) computer systems that support learning from any location throughout a lifetime” (Sharples, 2000, p.177). Sharples subsequently developed guidelines for the design and delivery of mobile teaching and learning which emphasised how mobile learning is different from other forms of learning and how learners “artfully engage with their surroundings” (Sharples, Taylor and Vavoula, 2007, p.2), be observant of state of the art best practice and of the availability of personal technologies. This latter point was further emphasised by Vavoula and Sharples (2008) in their recognition of the distinguishing role of context for mobile learning, in particular for the need to evaluate learning in and across the contexts in which it occurs. More recently, mobile devices have been found to be effective in supporting enquiry-based learning both within and beyond formal scheduled learning contexts (Sharples et al, 2015). Roleplay-based games delivered via short messaging (SMS) have also proven instrumental in the development of the critical thinking skills of peer educators (Roy and Sharples, 2015).

The situated, contextual nature of mobile learning is also recognised by Norbert Pachler who in collaboration with Bachmair, and Cook (2010) takes an ecological stance on mobile learning by emphasising the importance of “understanding and knowing how to utilize our everyday life-worlds as learning spaces” (p. 6), thus highlighting the role of sociocultural influences upon learning behaviour. More recently, the importance of understanding the specific affordances of mobile learning and the role of mobile devices as “cultural transformational tools” (p. 938) has been emphasised in mobile learning design, in the quest to design for it appropriately (Bannan et al, 2016). The use of mobile technology and the learning opportunities it offers for young children within the context of the home has been examined by Marsh (2015) who investigated family practices concerning mobile technologies such as laptops, tablets, and mobile phones in and around the home and found that children typically use a mobile device such as a tablet alongside a parent, rather than alone. Research evidence indicates that parents play an important

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