

Chapter 62

Learning With Mobile Devices

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ABSTRACT

The concept of learning with small portable computers was developed by Alan Kay in 1972. Since that early conception, scholars, such as Traxler, Sharples, and Soloway are the pioneering scholars who paved the way to a better understanding of the philosophical, pedagogical, and conceptual underpinnings of mobile learning today. In this chapter, an overview is provided to explicate the initial foundations of the emerging field of mobile learning (mlearning). Next, current scientific knowledge is delineated with explicit references to the early scholars. This chapter concludes with a preview of the future research directions in mobile learning.

INTRODUCTION

Mobile devices are being used to extend learning in both the global north and the global south. The launch of the International Journal of Mobile and Blended Learning is one of several indicators that mobile learning globally is reaching a critical and sustainable momentum and identity. The past decade has seen a host of pilots and initiatives across sectors and across countries. Mobile learning is being used to extend pedagogies to develop new ways of learning more aligned to empirical understandings of how students learn. Mobile learning is also taking learning to individuals, communities and countries where access to learning was challenging or problematic.

Environmental factors have meant that this development has often been haphazard. As researchers try to examine these new learning opportunities they are faced with a set of methodologies that were developed for use with tethered technologies with learning and evaluation methods being static (Sharples, Sanchez, Milrad, & Vavoula, 2009). In mobile learning context can vary significantly. This has expanded the field of mobile learning to have researchers examining learning that happens in a formal typical educational setting, non-formal non-intended serendipitous environments (Crompton; 2013a), and informal atypical settings (e.g. museums and science centers: National Research Council, 2009). With

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learning that happens in personal contexts, the researcher has the added difficulty in collecting valid research data without interfering with the learning happening in those contexts Beale's (2007). This is becoming increasingly difficult in recent years with the pervasive ubiquitous nature of the devices today.

As the scholarly understanding of mobile learning is still relatively new and emerging, the mobile learning community is also now faced with broader challenges of scale, durability, equity, embedding and blending in addition to the earlier and more specific challenges of pedagogy and technology, but these developments take place in the context of societies where mobile devices, systems and technologies have a far wider impact than just mobile learning as it is currently conceived.

BACKGROUND

The concept of learning with small portable computers was developed by Alan Kay in 1972. Since that early conception, scholars, such as Traxler, Sharples, and Soloway are the pioneering scholars who have paved the way to a better understanding of the philosophical, pedagogical, and conceptual underpinnings of mobile learning today. Kay began with the initial idea of a portable device for learning. Traxler, Sharples and colleagues have explored the emerging theoretical frameworks of mobile learning to provide us with a better understanding of this field. Soloway and Norris have focused their work on how the affordances of mobile learning can extend traditional classroom pedagogies.

Defining Mobile Learning

We need to define what we mean by 'mobile learning', not merely as a way of establishing a shared understanding but also as a way of exploring the evolution and direction of mobile learning and as a way of identifying the community of practitioners and researchers. In discussing how we define mobile learning we address many wider issues in terms of explaining, understanding and conceptualising it.

'Mobile learning' is certainly not merely the conjunction of 'mobile' and 'learning'; it has always implicitly meant 'mobile e-learning' and its history and development have to be understood as both a continuation of 'conventional' e-learning and a reaction to this 'conventional' e-learning and its perceived inadequacies and limitations. Over the last ten or so years this 'conventional' e-learning has been exemplified technologically by the rise of virtual learning environments (VLEs) and the demise of computer assisted learning (CAL) 'packages', and pedagogically by the rise of social constructivist models of learning over the behaviourist ones, by the growth of the learning object approach, by expectations of ever increasing multi-media interactivity and of ever-increasing power, speed, functionality and bandwidth in networked PC platforms. These are some of the points of departure for mobile learning. They refer back to 'conventional' e-learning and perhaps this is the mark of early 'mobile learning immigrants' and not the mark of the growing number of 'mobile learning natives'.

We have to recognise that attempts at identifying and defining mobile learning grow out of difference, out of attempts by emergent communities to separate themselves from some older and more established communities and move on from perceived inadequate practices. Interestingly, at the first mLearn conference in the spring of 2002, in Birmingham UK, a key-note speaker predicted that mobile learning would have a separate identity for perhaps five years before blending into general e-learning. This has still yet to happen and mobile learning continues to gain identity and definition rather than lose it.

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