

## Chapter 15

# Work-Based Mobile Learning Environments: Contributing to a Socio-Cultural Ecology of Mobile Learning

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### ABSTRACT

*This paper examines the idea of a Work Oriented Mobile Learning Environment (WOMBLE) and considers the potential affordances of mobile devices for supporting developmental and informal learning in the workplace. The authors look at the nature and pedagogy of work-based learning and how technologies are being used in the workplace for informal learning. The paper examines the nature of Work Process Knowledge and how individuals are shaping or appropriating technologies, often developed or designed for different purposes, for social learning at work. The paper goes on to describe three different use cases for a Work Oriented Mobile Learning Environment. The final section of the paper considers how the idea of the WOMBLE can contribute to a socio-cultural ecology for learning, and the interplay of agency, cultural practices, and structures within mobile work-based learning.*

### UNDERSTANDING MOBILE LEARNING

There is growing interest in the potential of the use of mobile devices for learning. ‘M-learning’, as it has been called, is variously seen as offering opportunities for access to learning for those with

limited access to traditional educational opportunities and technologies, as providing ubiquitous access to learning and as facilitating contextualized learning. However, there is limited evidence on which to base such expectations. As yet practice has generally been limited to short-term small-scale pilots and trials. Traxler (2007) notes that whilst “there is a taxonomy emerging from these pilots and trials that suggests tacit and pragmatic

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conceptualisations of mobile learning”, what has “developed less confidently within this community is any theoretical conceptualization of mobile learning and with it any evaluation methodologies specifically aligned to the unique attributes of mobile learning.”

This paper is based on the conceptual development of a Work Oriented Mobile Learning Environment (WOMBLE). It is particularly concerned with the potential affordances of mobile devices for supporting developmental learning and informal learning in the workplace. It is based on a premise that the use of mobile devices may facilitate the development of e-learning in the workplace in a way which has not previously been possible. Thus the first theoretical underpinning for the paper is the nature and pedagogy of work-based learning. The paper is also based on conceptual and theoretical work being undertaken by the London Mobile Learning Group, which proposes a socio-cultural ecology for learning, based on the “new possibilities for the relationship between learning in and across formal and informal contexts, between the classroom and other sites of learning.” Such an ecology is based on the interplay between agency, cultural practices and structures.

The first section of the paper will consider the use of technology-enhanced learning to support learning at work. The second section will describe the conceptual and pedagogic background to the Work Based Mobile Learning Environment and will develop use scenarios. The third section will consider how the idea of the WOMBLE can contribute to a socio-cultural ecology for learning, and the interplay of agency, cultural practices and structures within mobile work-based learning

## USING TECHNOLOGY TO SUPPORT WORK BASED LEARNING

### Work-Based Learning

A series of studies have pointed to an increase in work-based learning (Livingstone & Scholtz, 2006; Felstead, Gallie, Green, & Zhou, 2007). Felstead et al. (2007) report on a survey noting that

*The proportion strongly agreeing to the statement ‘my job requires that I keep learning new things’ has consistently moved upwards during the 1992-2006 period – rising from 26% in 1992 to 30% in 2001 and then to 35% in 2006.*

This may be due to a number of reasons: probably foremost are the pressures of technological change and changing products, work processes and occupational profiles (Guile, 2002). Work-based learning is seen as more efficient and effective and facilitates situated learning. The move towards work-based learning has been accompanied in some countries by a revival in apprenticeship training (see, for example, Learning and Skills Council, 2008). Some industries, for example in computing, have seen the spread of informal mentorship models for work-based learning ‘borrowed’ from traditional craft-based models of training (Hoover, 2009). It has also been accompanied by a spread of the training function (Attwell & Baumgartl, 2008), with increasing numbers of workers taking some responsibility for training as part of their job.

### Technology-Enhanced Learning

The move towards increased work-based training has also been accompanied by the widespread use of technology-enhanced learning, at least in larger companies. However, this has not been unproblematic. Technology-enhanced learning may be very effective where the work processes themselves involve the use of computers. It is also

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