Chapter 4
The Next Generation:
Design and the Infrastructure for Learning in a Mobile and Networked World

Agnes Kukulska-Hulme
The Open University, UK

Chris Jones
The Open University, UK

ABSTRACT

Focusing on intermediate and institutional levels of design for learning, this chapter explores how institutional decisions relate to design, using recent experience at The Open University as a case study. To illuminate the relationship between institutional decisions and learner-focused design, we review and bring together some of the research on learner practices in mobile and networked learning. We take a critical stance in relation to the concept of generation, which has been applied to understanding learners of different ages using terms such as net generation and digital natives. Following on from this, we propose an integrated pedagogical design approach that takes account of learner practices, spaces for learning, and technologies. The chapter also proposes future research directions focused on the changing context for learning, a distinction between place and space and an understanding of how the different levels of educational systems interact with mobile and networked technologies.

INTRODUCTION

In recent years a number of studies have investigated how new generations of students, including mature learners returning to study, draw on a range of personal experience with online and mobile tools and services to support their learning (Bullen et al., 2009; Hargittai, 2010; Jones et al., 2010; Kennedy et al., 2008; Pedró, 2009). Although the studies show that students are often adept at using these tools and services in creative ways that benefit their learning, there are also

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strong reminders that not all members of any age-defined 'generation' have the same levels and extent of expertise. In particular, the younger age group is by no means homogenous in its use and understanding of technology. Nevertheless there are significant age-related changes taking place in students' and young peoples' use of new media and digital and networked technologies (Jones et al., 2010; Ofcom, 2009). Bennett et al. (2008) argue that although there are age-related differences they do not lead to a deficit in which teachers can be thought of as simply lagging behind their students in this regard.

The public rhetoric has emphasised the risk that, as a wave of more competent or adventurous learners (spanning all ages) forges ahead with ever more sophisticated uses of technology, taking their peers with them, there will be increasing dissonance between educators' ideas about learning and those of their students. To assess and if necessary manage this risk, we can analyze the characteristics of learning in a mobile and networked world and provide educators, both individuals and institutions, with conceptual tools for more appropriate designs for learning. The groundwork for this has already been done (Beetham & Sharpe, 2007), with a number of conceptual tools being available for mapping mediating technologies onto the tasks they can help support (Laurillard, 2002), analyzing the implications of how people learn (Mayes & de Freitas, 2004) and learner differences (Beetham, 2007), using checklists for activity design (Beetham, 2007) and for course design (Sharpe & Oliver, 2007a), using a taxonomy of learning activities (Conole, 2007) or a typology of effective interventions for e-learning practice (Sharpe & Oliver, 2007b). However, a world in which mobile and networked technologies have gained prominence but are no longer separate entities calls for a new approach, synthesizing research and practice from these two communities to give a more holistic account of learner experience and a perspective on the implications of physical, virtual and 'hybrid' space.

The potential for a mismatch between the technology experience of educators and learners (Becta, 2006) is not the only tension we need to consider. Students' experience with mobile and networked technologies is based partly on everyday interactions for social reasons or informal learning, but it is also influenced by their use of technology in previous formal settings, such as school and college, or work contexts if they are part-time workers returning to study or continuing their professional development. Therefore institutional or organisational views of how technology supports or does not support learning, and the infrastructures provided for learning, are powerful factors. Higher Education institutions are frequently driven by imperatives such as organisational strategy, including IT procurement strategies and plans for the development of their estates. When we confront this with the aspirations of university teachers to try out new technologies or new ways of using technology, it is possible to identify some overlaps, but also some areas of disjunction. We wish to argue that by building continual research on student practices with technology into the practice of teaching, we can create environments where students and teachers are in ongoing dialogue and this in turn has the potential to inform and transform institutional strategy.

This chapter provides a review of recent research relating to the use of networked and mobile technology by learners in different age groups, whilst taking a critical stance in relation to the concept of 'generation'. Our main objectives for this chapter are the following:

- To explore how institutional factors relate to design by setting the parameters within which specific instances of design can take place
- To review and bring together research on learner practices with technology from two communities, namely mobile learning and networked learning