

Chapter 1

Emerging Frontiers of Learning Online: Digital Ecosystems, Blended Learning and Implications for Adult Learning

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ABSTRACT

The potential for online education for adult learning have been well argued, and in recent times there have been eLearning initiatives to realise the potential offered by online education. Adult learning institutions, particularly Universities, have adopted and introduced infrastructure to support Learning Management Systems (LMS), Local Area Networks (LAN), Learning Management Content Systems (LMCS), and Virtual Learning Environments (VLE). Following discussion of those eLearning environments, this chapter will suggest that the limitations of those digital systems is leading to the next phase with the development of digital ecosystems conceptualised as learning platforms which keeps learning central, enables interoperability, and forms a base for building upon through use of new technologies and increased capabilities of educators to use information and communication technologies (ICT) for curriculum, pedagogy and assessment (Ingvarson & Gaffney, 2008). Digital ecosystems enable the integration of student administration, LAN (requiring teacher and student logins and passwords), VLE, content repository, community links, utilise Web 2.0 (social networking) technologies, and can have the adult learner as the central focus of the design of the platform and its functionalities. Subsequently, the chapter draws upon the findings of a research project (Sun, Tsai, Finger, Chen, & Yeh, 2007) which

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identified the critical functionalities for eLearner satisfaction to provide suggestions that the architecture and design of an eLearning system should be informed by the adult learners' perceived usefulness of the system (Pitnuch & Lee, 2006). More recently, the presentation of face to face teaching and online learning as alternatives has been superseded by conceptualisations of blended learning. Through presenting these learning environments in terms of their possibilities and limitations, and the emergence of blended learning, implications for adult learning will be synthesised.

INTRODUCTION

The importance of learners engaging online has increasingly been recognized in an information rich, digital networked world. As Sharpe et al. (2006) indicate, in relation to higher education and research into the impact of eLearning for institutions, practitioners and students, "We are now at a point where 95% [of] higher education institutions are operating at least one virtual learning environment [VLE]" (JISC, 2005) cited in Sharpe et al., 2006). Moreover, there is evidence to indicate that traditional face to face teaching is being blended with eLearning through the use of VLEs to supplement face to face teaching (Browne & Jenkins, 2003; Sharpe et al., 2006). Furthermore, Sharpe et al. (2006), in elaborating on these trends, refer to the Higher Education Funding Council for England (HEFCE) strategy for eLearning, which, in response to input from post-16 education sector, codifies "the prevalence of face to face teaching blended with e-learning (HEFCE, 2005).

In this chapter, the use of the terms 'online learning' and 'eLearning' are used to refer to the use of information and communication technologies (ICT) for learning. Unlike traditional timetabled instruction which takes place in buildings such as classrooms and schools, eLearning is characterised by web-based and Internet enabled systems that enable both the instructors and students the ability to access information, to study, and to communicate irrespective of time and their physical location. Blended learning is used to refer to the use of ICT to engage students and to enrich the

quality of the student experience through interactive learning activities, particularly with the aim of achieving learning experiences not able to be realised through only face to face learning. In addition to VLEs, blending technologies is evident through adult learning institutions, particularly Universities, adopting infrastructure to support Learning Management Systems (LMS), Local Area Networks (LAN), Learning Management Content Systems (LMCS), and Virtual Learning Environments (VLE). In relation to these emerging frontiers of learning online, research is needed to accompany this adoption to inform effective teaching and learning practices.

Following discussion of those eLearning environments, this chapter will suggest that the limitations of those digital systems is leading to the next phase with the development of Digital Ecosystems conceptualised as learning platforms which keeps learning central, enables interoperability, and forms a base for building upon through use of new technologies and increased capabilities of educators to use ICT for curriculum, pedagogy and assessment (Ingvarson & Gaffney, 2008). This chapter will argue that digital ecosystems enable the integration of student administration, LAN (requiring teacher and student logins and passwords), VLE, content repository, community links, utilise Web 2.0 (social networking) technologies, and can have the adult learner as the central focus of the design of the platform and its functionalities.

Subsequently, the chapter draws upon the findings of a research project (Sun, Tsai, Finger, Chen, & Yeh, 2007) which identified the critical

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