The place of technology in networked learning

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Introduction

This symposium brings together three papers focused around the theme of technology and its relationship to networked learning. The definition of networked learning that has informed the conference series has always contained the notion that networked learning is related to the use of technology.

> Networked learning is "learning in which information and communication technology…is used to promote connections: between one learner and other learners, between learners and tutors; between a learning community and its learning resources" (Goodyear et al., 2004, p1).

This symposium is concerned with how to understand that relationship between digital and networked technologies and networked learning.

The development of networked learning as an idea has a history related to the development of the Internet and the Web. Early experiments in networked learning took place in the 1970s and two of the early pioneers in the use of Internet technologies for learning were related to this early work (see Dirckinck-Holmfeld and Jones 2009). The systems that were used in this period commonly included computer conferencing software such as FirstClass. Research concerning educational use of computer conferencing focused on interactions between people and the idea of cooperation or collaboration. It was also concerned with text and the forms of textual dialogue prevalent in computer conferencing and on the relative advantages of the synchronous and asynchronous interactions computer conferencing enabled. A general theme was that the different forms of education, for example distance and place based education, would converge (Mason & Kaye, 1990). The early research showed a concern with how the kinds of technology available via the Internet would interact with and shape the social and organisational forms found in traditional education. Narrow bandwidth applications had placed an emphasis on the largely written and text based interactions between people and between people and resources. This textual form of interaction was a familiar academic medium, even though there was a large amount of discussion about the newly emergent forms of online written text which seemed to have the flavour of informal speech rather than academic writing. Many of the ideas that later become systematised into the characterization of networked learning became current at this time (see Dirckinck-Holmfeld et al. 2011)

With the emergence of the Web in the mid 1990s an explosion of interest in what became known as e-learning took off. There was also a parallel increase in interest in proprietary learning management systems (e.g. Blackboard, WebCT), and group work software that was also used for teaching and learning (e.g. Lotus Notes/Learning Space). The scale of interventions moved from individual and small group experiments with new technologies to large scale departmental or institutional learning environments. Many universities having made the investment in new technologies required their staff to use the new systems. As a consequence some of the pioneers of online learning saw these changes as a retrograde step, with areas of functionality that had been included in pioneer systems being absent from a largely 'one size fits all' e-learning strategy. In contrast the conception of networked learning, as related to a dialogic approach to learning, was the inheritor of the first wave of Internet applications. This earlier approach emphasised communication, discussion and dialogue, all of which make use of the two-way or interactive nature of the Internet.

However the Web was an excellent medium for the delivery of resources rather than encouraging or enabling dialogue. In this way the early Web emphasised an acquisition model of education and downgraded the participation model emphasised in the early Internet systems (Sfard 1998). While the duality of acquisition and participation worked well with the definition of networked learning, because it identifies connections between people and people and their resources, networked learning also emphasised that delivery of resources required further work in order to make resources delivered via the Web available for learning. In some ways the early years of the Web can be seen as a partially retrograde step in which the technological platform encouraged more delivery mechanisms and an acquisition metaphor of learning. In more recent years higher bandwith

connections, mobile and wireless technology and the emergence of Web 2.0 have had a considerable impact on networked learning. Although Web 2.0 remains an elusive term (O'Reilly 2005) it helps to draw attention to the nature of a qualitative shift in the technology of the Web and it tries identify some of the emergent properties of this new form. The read write Web returns to some of the dialogic themes of the early Internet and advocates of Web 2.0 point to the capacity it releases for participation rather than simple acquisition. The important point of this history is that the technological platform has had a considerable bearing on what is available for deployment as a support for networked learning. Networked learning has to make use of technologies that are developed elsewhere, often for other purposes, and rarely relies on technology that is bespoke, designed for the particular needs of this approach. In this regard networked learning takes a different approach to Computer Supported Collaborative Learning (CSCL). The CSCL approach to technology and learning has often included the design of specific systems to enable and support a collaborative approach. Networked learning rarely has.

This symposium brings theory to bear on the relationship between networked learning and technology. The papers point to the causal and determining role often ascribed to technology in accounts which remain popular even though they have been subject to critique. Oliver explores issues around agency, reflexivity and the role of the social. It explores the ways in which technologies of learning can be understood in different ways, and how these sometimes divergent ontologies can be coordinated, drawing out implications from this for researchers. Walker and Creanor continue with the theme of ontology and argue that sociotechnical networks can form the basis for a non-determinist theory of learning technology. They argue that the idea of a sociotechnical network is compatible with a realist ontology and provides a clear alternative to actor network theory (ANT)-based views. They suggest a possible ontology of elements of learning technology and argue that it is helpful to distinguish between levels of learning; individual, group, social and organisational with the higher organisational levels of learning being emergent. Jones explores the relationship of networked learning to digital technology and asks what kinds of implications the digital nature of current technologies has for networked learning. He suggests that digital technologies are complex technologies that imply a degree of modularity and recursiveness. In learning technology the paper suggests that technology is usually met as part of an infrastructure, understood as a sociotechnical system. The paper also argues that despite this complexity there are analytically discernable features of digital technologies that can be thought of as affordances. The paper concludes by suggesting that research into networked learning needs a more detailed understanding of what kinds of affordances digital technologies make available.

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