Dialogue Paper; Bridging Contexts; Preparing the institution for emerging technologies

Theme; Explore how emerging technologies from diverse fields (e.g. gaming, AI, biotech, ubiquitous computing) might offer new environments for learning

Background

In this paper we will review what has been learnt from new ways of using mobile technologies and Web 2.0 tools to support learning and how that might by used to help prepare institutions to support a range of new environments for learning. As researchers we tend to look at the affordances new technologies might offer us for learning, however in this Dialogue paper we are looking at what institutions might do to provide the affordances for the adoption of new technology. We will look at both the practical work undertaken at Unitec Auckland New Zealand and their model of using both web 2.0 technologies and mobiles to “bridge learning contexts,” and also at a framework for the broader institutional adoption of mobile technologies, and then use that to refine a proposed model.

Discussion

The Beyond The Classroom report (2009) was an expert review of the evidence gathered in the REVEEL eduserv project on “What is the evidence for the evidence for the effectiveness of post-16 e-learning?” Its recommendations were structured for key stakeholders such as Vice-Chancellors. One recommendation was that they should “support the use of multiple contexts for learning.” How this might be achieved was not examined but it was recognised that HE institutions lacked mechanisms for recognising and supporting new learning environments.

In the Literature Review of the Use of Web 2.0 tools in Higher Education Conole and Alevizou (2010) examine how Web 2.0 tools have been taken-up and used in various HE institutions, but they also identify a number of factors that inhibit new technology take-up. Web 2.0 tools represent a useful proxy example of the problems in the institutional adoption of known new technologies as they have been available for learning some years without being embedded satisfactorily into everyday use.

As well as recognising that they have participatory affordances which set fresh pedagogical challenges Conole & Alevizou identify two key critical factors (amongst others) in the lack of successful adoption of Web 2.0 in HE, namely both ‘the maturity of the technological infrastructure to levels of adoption’ and existing ‘teaching cultures.’

Cochrane (2010) reports on a model of course development based on course teams being put together using a ‘technology steward’ (Wenger 2009), to help identify new technologies which can support learning using a pedagogical framework for identifying the learning purpose of relevant technologies. This has created a pro-active ‘teaching culture’ within the course teams, where teachers readily adopt new learning technologies, and which seems to address the ‘teaching culture’ problem identified by Conole.

Whilst celebrating the effectiveness of the new technology adoption Cochrane also identifies that the key “to mlearning sustainability” and the continually evolving use of new technologies as being “the development of an institutional cultural and strategic shift” to support this.

We believe that elements of these required shifts can be found in the proposed ‘Mobile Architecture of Participation’ as Ecclesfield (2010) argues that, in part, the strategic ability to develop ‘the maturity of the technological infrastructure’ is a key attribute of enabling the use of new mobile technologies within HEIs. In the light of Cochrane’s experience of the value of a collaborative approach to designing the use of new technologies, critically supported by a technology steward, by the course team using a pedagogic framework in designing the integrated use of both Web 2.0 tools and mlearning within a degree we believe we can apply a similarly collegiate approach at the strategic level.

The mobile Architecture of Participation (mAoP) identifies some of the institutional shifts that could facilitate a greater embedding of mobile use, part of which includes the use of a ‘maturity framework’ to
help with the adoption of new technologies. However the mAoP doesn't examine how the institutional management culture might be energised with the inclusion of a 'Technology Steward' at the strategic level to facilitate the adoption process.

In fact in Digital Habitats Wenger is actually arguing for institutional 'technology stewards' and we will argue that applying this at the strategic level as part of senior management teams might help the recognition of the value of new environments for learning. Supported by an overall maturity framework for new technology adoption, and as part of an overall organisational Architecture of Participation (Ecclesfield 2008), a Technology Steward at the strategic level might effect a similar transformation in the management culture to that achieved to the 'teaching culture' at Unitec. In this way HEI's might develop the institutional affordances for the adoption of new technologies as they emerge variously from research labs, the open source community and commercial organisations.

References;


Conole G., & Alezeviou P., 2010 Literature Review of the Use of Web 2.0 tools in Higher Education, HEA, Milton Keynes


Ecclesfield N. & Garnett F., 2008, Colloquim; A organisational Architecture of Participation, BJET Vol. 39 No. 3


Keywords: Mobile learning, Technology stewards, Architecture of participation