Chapter V

Improving E-Learning Support and Infrastructure: An Evidence-Based Approach

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Abstract

This chapter reports a study conducted in 2004 at The Chinese University of Hong Kong (CUHK) aimed at obtaining a much clearer picture about the use of e-learning at the university so as to develop new strategic directions on a firm evidence base. Multiple sources of data were collected, including: site logs, experts’ review of selected active Web sites, and interviews with 26 teachers. The data illustrate that e-learning at CUHK is still largely in the “innovators” and “early adopters” stages (Rogers, 2003). There lies a “chasm” ahead inhibiting moving further into the “mainstream” area. The analysis of the data revealed that what the teachers want from the technology, what they actually do, and what they can have access to for support are not totally aligned. The focus of the chapter is on how to improve this alignment so as to bridge the chasm. The study has been successful in eliciting university support for changes to the e-learning support system.
Background

There is a growing worldwide trend in the use of Web technology for the support of learning and teaching in universities. While e-learning can mean any use of computer technology to support learning, in the context of this chapter, we are referring to materials and activities involving Web-based environments. The emphasis of this chapter is on institutional decision-making about e-learning support; however, it is relevant to set the scene by briefly commenting on why e-learning strategies are believed to have the potential to enhance student learning environments. [These comments are based on pedagogical considerations and not on technical matters of connectivity such as access to networked computers with sufficient bandwidth. In Hong Kong, the technical infrastructure is largely reliable and the vast majority of students have good access.]

Interactivity and Engagement

One key aspect of e-learning design is interactivity — how students interact with learning materials, with the teacher and with peer learners (Swan, 2003). Broadly, interactivity can be thought of as interactions with either the content which might be text, audio visual resources, graphics and static visual representations, scenarios, simulations, and/or quizzes; or with people via asynchronous online communication (threaded discussions/newsgroups) and/or synchronous communication (chat) (Kearsley, 2000). Interactivity is thought to enhance learning because feedback and reflections effectively help the construction of meaning and give structure to knowledge and information (Taylor & Maor, 2000; O’Connor, 1998).

Other writers emphasize the social aspects of Web-assisted learning. Both Laurillard (2001) and Wenger (1998) discussed how “communities of practice” can emerge through the use of Web technology. In these communities, learners can pursue shared enterprises through discussion and collaboration in a highly active form of learning. Similarly, Preece (2000) suggested that the Web has allowed learners to form into “online communities” that enable ongoing interactions in an “anytime, anywhere” format that can support the development of autonomy in learners.

One of the purposes of this study was to see to what extent the views of teachers at The Chinese University of Hong Kong (CUHK) echo the enthusiasm about the potential of e-learning that can be found in the literature.

Evaluation of E-Learning Designs

There is a growing literature on how educationally effective various e-learning designs and projects are. Some studies have focused on the potential of generic learning designs; for example, a recent Australian project (Learning designs, 2003; Hedberg, Wills, Oliver, Harper, & Agostinho, 2002) identified 52 technology-based learning design exemplars of which 28 were selected for evaluation. An international evaluation team of 64 members