Chapter XIII

Using IT to Augment Authentic Learning Environments

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Abstract

This chapter discusses how information technology (IT) can be used to augment the authenticity of the learning experience in student-centred learning environments. It argues that technology provides the opportunity to embed students in learning activity by bridging the gap between the “real world” and the classroom. The particular learning environment used to illustrate this is a restaurant complex with a number of outlets that was designed by the author to provide a common work environment. Using the Distributed Learning System (DLS) to which all students have access, the author was able to increase the authenticity of the “case” by first, having students access information (as employees and/or lessees’) about the commercial conditions facing the company, and its policies and practices). Second, “employees” were able to communicate through discussion boards. Third, students were able to access resources through hyperlinks to external Web sites. The author concludes that there is need for a mixture of face-to-face and virtual learning opportunities in order to add real-world authenticity to experiential learning opportunities.

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Introduction

Universities are confronted by enormous challenges as the sophisticated knowledge economy develops. Allee (1999) states that in order to develop a knowledge culture there is need for a fundamental change in human thinking. Brown (1999) takes a similar expansive view of the change required, and states that there is need for change that involves multiple, intertwining forces of content, context, and community. He states that the real formula for success in a knowledge economy is continuous learning to see and do things differently. To meet these challenges, employees need to not only have advanced skill, systems understanding, and intuition, but also need to be self-motivated and creative.

The need for graduates with broad capabilities provides challenges for universities that, as is argued elsewhere, have not traditionally taught these skills (Davenport & Prusak, 1998). What is needed is a new, more student-centred, co-operative learning environment in which teachers create “a context of learning which encourages students actively to engage in subject matter” (Ramsden, 1992, p. 114). This context requires teachers to become “guides, coaches, motivators and facilitators,” and students to become active “doers” — presenting, analysing, solving and constructing ways to develop the knowledge provided by the teacher into skills required to function effectively. Laurillard (1994) describes this as an educational environment in which students move from acquirers of knowledge, to collaborators in the educational process.

Others have argued that as well as changing the nature of the teacher-student relationship, for learning to occur conceptual knowledge needs to be placed in its cultural context. Brown, Collins and Duguid (1989) advocate design of “authentic” learning environments in which “activities of a domain are framed by its culture. Their meaning and purpose are socially constructed through negotiations among past and present members … are most simply defined as the ordinary practices of the culture” (p. 4).

This authenticity is difficult to create in a classroom environment where the context is inevitably transmuted into “classroom tasks and part of the school culture” (Brown, Collins, & Duguid, 1989, p. 4). Rather, they argue that learning should be part of a “cognitive apprenticeship” in which tasks are embedded in familiar activity and particular tasks through which students generate their own solution paths to develop problem solving. This has led to calls for work-integrated learning and action-based learning as the means to develop authentic learning environments. Schön (1985, 1987) argues that students should be encouraged to analyse and reflect upon their own work experiences. Quasi-experiential, real-world experience presented by practitioners speaking of their own experiences, case-studies of real-world events, videos, photographs, and