Chapter 11

Evaluating WebCT use in Relation to Students' Attitude and Performance

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ABSTRACT

This chapter presents and discusses the results of a study we carried out to investigate students' attitude and performance to using a managed online learning environment known as WebCT. The chapter starts off with an overview of the literature in this area of research, including a definition of the main technical terms referred to in the research literature. The chapter then goes on to provide a detailed description of the study set-up and presents the main findings obtained from this study. The results are then discussed in relation to previous findings in the research literature.

BACKGROUND RESEARCH

The World Wide Web (WWW) provides great opportunities for creating virtual classrooms (Mazza and Dimitrova, 2004) and for building integrated learning and teaching environments (Cheng and Yen, 1998) and it also helps in supporting traditional educational methods (Kalifa and Lam 2002). Teaching and learning are no longer limited by place or time (Kalifa and Lam 2002). The WWW and the internet are considered to be important new methods for delivering online courses (Jiang and Ting, 2000; Lee and Shih, 2001). The interest in web-based learning and technology to support learning is increasing in higher education and this can be seen in the large number of publications in higher education journals in this area (Hoskins and Hooff, 2005; Bower, 2001). Large numbers of educational institutions are offering web-based courses (Owston, 2000) or starting to use course management systems such as WebCT or Blackboard (Mazza and Dimitrova, 2004)

Interaction is central in teaching and learning; the learning process is based on student interaction with instructors, other students, and with the course content (Lei et al., 2003). At the same time, communication and collaboration between the students and instructors can be enhanced by the internet and WWW (Cheng and Yen, 1998).

Technical Definitions

A learning platform is defined in a publication from the British Educational Communications and Technology Agency (Becta) as "a generic term to describe a broad range of ICT systems which are used to deliver and support learning. A learning platform usually combines several functions, such as organising, mapping and delivering curriculum activities and the facility for learners and teachers to have a dialogue about the activity, all via ICT. So, the term learning platform can be applied to a virtual learning environment (VLE) or to the components of a managed learning environment (MLE)." (Becta, 2005). The same report defines virtual learning environment and managed learning environment as follows:

"A virtual learning environment (VLE) is a software tool which brings together resources for curriculum mapping, delivery, assessment, tutor support, communication and tracking."

"A managed learning environment (MLE) refers to the whole range of information systems and processes that support learning and the management of learning within an institution. It includes VLEs or other learning platforms, administrative and other support systems." (Becta, 2005) Web-enhanced courses are traditional face-to-face courses which include web-related materials. Web-enhanced courses usually adopt a course management system (e.g. WebCT) (Sivo et al, 2007).

Web-based learning is a main subcomponent of the broader term e-learning. There are two general types of e-learning which are technology-enhanced learning and technology-delivered learning. Technology-enhanced learning means that students have regular face-to-face meetings with the teacher. Here the traditional face-to-face class is the basic forum for learning, and the technology may make available learning materials online before they are delivered in the class. Technology-delivered learning means students and teachers are not at the same place also it is referred to as distance learning.

WebCT

WebCT (Web Course Tools) was developed by Murray Golderg, a faculty member at the University of British Columbia (Burgess, 2003; Volery and Lord, 2000). WebCT is an integrated set of educational and management tools and an important provider of e-learning programs. It is specifically used for the design and development of teaching and learning materials. WebCT is mainly used to create sophisticated World Wide Web-based educational environments either by creating entire online courses, or simply by publishing materials that supplement existing courses. Users of WebCT do not need a lot of technical expertise as all content is accessible via a standard Web browser (Volery and Lord, 2000).

Mazza and Dimitrova (2004) stated that course management systems create large log data which contain students' activities in a web-based course. These systems also contain built-in student monitoring features. The instructor can view statistical data about students' use of course pages such as a student's first and last login, the history of pages visited, the number of messages the student has read and posted in discussions, marks achieved in quizzes and assignments, etc. The instructor can use this information to observe students' progress and to discover potential problems.

Students' activities on Web-based course can be measured in the following ways:

- *WebCT* Hits: The number of times each student accessed each page such as homepage and content page.
- *Time:* how much time each students spent exploring a page (such as content page) or using tools (such as quiz or calendar)

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