Essay summary of k-12 and higher education learning environments

Education, Learning

Learning Management Systems Applications Today. Emerging technologies, including distributed learning management systems, portals that connect a variety of resources (admissions, library access, advising, and technical support) under one user-friendly gateway, and electronic databases that store and merge information resources, are capable of providing the infrastructure for the redesign and integration necessary (Granger & Bowman, 2003).

While only slightly more than 14 percent of thetechnologyadministrators who responded to the annual Campus Computing Survey report using course management software, more than half (58 percent) have already established standards for these types of applications (Anderson & Moore, 2003).

Many of the educational initiatives in recent years have focused on improving the delivery of services by incorporating learning platforms that focus on the K-12 and highereducationlearning environments, such as WebCT or Blackboard. To determine how these learning platforms are being used today and for what learners, this paper will provide an overview of the features of learning management systems (LMS) that have assumed increasing importance for a wide range of corporate and government-sponsored learning environments. A comparison and evaluation of these platforms and their applicability to the different learning environments is followed by a summary of the research in the conclusion.

Background and Overview. In their book, Handbook of Distance Education Technology, Anderson and Moore (2003) suggest that it just makes good sense to use the technological innovations that have emerged in recent

years to improve the delivery of educational services at all levels, including grades K-12 and beyond. " Technology, as an enabler of distributed resources," they say, " furthers the practice of a systems approach requiring integration across the organization to maximize new capabilities" (p. 175). For instance, Granger and Bowman (2003) point out that learning management systems (LMS) successfully integrate the specific functions and services that students require in order to achieveacademicsuccess today; these functions and services include:

1. Access to courses, learning materials, and instructors;

2. Advising and tutorial assistance;

4. Interactions with other learners.

A wide range of enterprises have recognized the advantages inherent in Internet-based learning management systems, including the military and various industries in general and educational institutions in particular; for example, the Air Force Institute for Advanced Distributed Learning's entire recent focus has been on integrating an LMS approach to their distance learning initiatives (Westfall, 2003).

For example, according to the DOD Implementation Plan for ADL, " ADL is an evolution of distributed learning (distance learning) that emphasizes collaboration on standards-based versions of reusable objects, networks, and learning management systems, yet may include some legacy methods and media" (Westfall, 2003, p. 635).

To date, some educational institutions have elected to develop and deploy in-house versions of learning management systems while others have found that off-the-shelf versions satisfy their requirements; CourseInfo by Blackboard and SemesterBook, developed by Louisiana State University's division of computing services, both of which provide a navigational framework for content andcommunicationwith instructors (Lynch, 2002).

Other popular versions are WebCT (this is a delivery platform for both Internet-based and traditionally structured courses), Intralearn and WBT Systems' TopClass (Myers & White, 2001). CourseInfo by Blackboard, though, was shown to be the superior product when compared with other leading programs in a study with the former two across all measures examined, including ease of use by educators and study and total number of tasks accomplished (Jonassen, 2004).

A previous study by Halloran (2000) conducted for the U. S. Air Force Academy also found Blackboard's CourseInfo the superior application for adult learners. Likewise, Myers and White conducted a study of the efficacy of WebCT and found that although educators were for the most part receptive to the program, there were some serious constraints involved in terms of the time required for adequate planning, which was identified as the issue of highest concern for those delivering instruction using this product.

Faculty found that incorporating such technology required extensive time to learn the program, convert and upload course data, and provide student training to use the Website. Time was also necessary to monitor and update

existing information" (Myers & White, 2001, p. 95). The authors also point out that these educators found that additional time was al, so required at the beginning of each course to bring the students back up to speed concerning the process of entering and navigating the site (Myers & White, 2001).

According to Anderson and Moore (2003), many of the most popular LMS applications share many of the same useful features that make them particularly useful for course management; commercial course application software such as Blackboard CourseInfo, Learning Tree, Virtual-U, and WebCT were found to help support organized course content by providing multiple perspectives on issues; archiving data automatically; incorporating the instructional strategies of modeling and scaffolding, and encourage participation, dynamic engagement, and peer feedback when faculty members incorporate these features into instructional design and delivery.

These authors caution, though, that, " Unwary novices, however, may follow the somewhat linear structure of the course content features of these courseware tools" (p. 450). The research showed that recent innovations in learning management systems holds the promise of integrating structures that were previously disconnected as well as providing the ability to customize learning environments on a scope never before possible. These innovations will serve to provide all students with improved opportunities to achieve academic and professional success; they can also be reasonably expected to increase learning productivity (Lynch, 2002).

The research also showed that innovative learning management strategies can help achieve the goal of helping young and adult learners regardless of whether they are distance learners or participating in a campus-based curriculum; however, even the best learning management strategies, including those with the best possible content that is precisely matched to the right business or educational objectives, will likely fail if it is poorly implemented and administered. According to Carlivati (2002), this is particularly true of learning management systems that are targeted at more sophisticated and educated adult learners.

Corporate e-learning," he says, " introduces a whole new set of change-management variables that were never of concern before, as many early adopters have discovered. These new variables range from the obvious (e. g. , introducing technology to the learning process) to the subtle (e. g. , motivating students to begin and continue an independentlearning experience)" (p. 50). Young and adult learners alike were shown to be amenable to these emerging learning structures, and it is likely that additional and improved applications will be identified as these initiatives become more commonplace in the future.