INTRODUCTION

Course Management Systems (CMS) have become a significant part of e-learning. E-learning is defined to include blended learning; the use of Internet technologies alongside traditional methods of learning, teaching and assessment (Rosenberg, 2001; Alonso, Lopez, Manrique, & Vies, 2005), and as assessed by the American Society for Training and Development (ASTD). According to Nycz and Cohen (2007) CMS enhance a learner’s environment, thereby optimizing learning. As such, CMS play a significant role to facilitate teaching and learning. CMS provide access to course materials such as syllabi, assignments and quizzes, grades, links to related websites, tracking tools, feedback, and discussion forums that facilitate communication.

The range of CMS available in higher education include, but are not limited to, Blackboard (WebCT), Moodle, Desire2Learn, and Sakai. Betrus (2008) differentiates between CMS and Learning Management Systems (LMS) by pointing out that the latter is a corporate version of the former. This is relevant because the two systems are sometimes used synonymously.

ABSTRACT

The emergence of e-learning tools such as Course Management Systems (CMS) offer instructors a practical means to transition from face-to-face to blended delivery modalities that could better serve the needs of digital learners. However, instructors fail to take advantage of such existing modern classroom technologies to provide better learning experiences for their learners. Part of this is due to the lack of a system to determine the underuse of technological tools in a CMS. This project focused on examining the degree of Moodle technology integration into course instruction to support effective student teaching and learning by three instructors. This article stimulates reflections on pedagogical experiences with regard to course content material and instructor practices. The study illustrates that instructors and learners can believe technology is being used well in a CMS course site when the opposite is true.

Keywords: Course Management Systems (CMS), E-learning, Moodle, Preservice Teachers, Technology Integration

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The variety of tools and resources in CMS are meant to meet the needs of different types of learners. However, unlike other professions and disciplines that have used technology to improve desirable outcomes, education has not taken full advantage of the technological tools available to optimize instruction and learning (Buzzetto-More, 2007; Ertmer & Ottenbreit-Leftwich, 2010).

Technology has great potential to enhance student achievement if (and only if) it is used appropriately. An observation from Sweat-Guy (2007) sums up a significant problem with technology as an augment of traditional teaching and learning delivery methods: “The power of web-based instruction lay not in its ability to imitate what we do in traditional classrooms, it is in its ability to augment by focusing on what we cannot do in those classrooms” (p. 98).

LITERATURE REVIEW

Current research reflects that education is yet to use technology at an optimal level (Bauer & Kenton, 2005; Project Tomorrow, 2008, as cited in Ertmer & Ottenbreit-Leftwich, 2010). Molenda (2008) observed that in using technology appropriately, it is the choices made by either instructor or learner on available tools, which determines effective use. Therefore, the tools of choice and manner of use of CMS resources by an instructor determine the learning environment that is made available to students. Kemp and Livingstone (2006) noted that many educators fail to take advantage of merging learning tools from different categories to create an environment that enhances learning in a truly collaborative manner.

Effective CMS should contain well organized features for content and delivery in a way that is progressive and allows learners easy reference and interactivity for an engaging experience. Nycz and Cohen (2007) observe that the presence of different interactive tools enable the achievement of desirable learning goals. However, these technological tools come with limitations (Kemp & Livingstone, 2006). As such, instructors who use the same tools repeatedly may believe that their course objectives are being met, and their students may agree with them in spite of inherent limitations.

On the other hand, interaction with content can lead to learners’ frustration, as has been observed with online learning (Rhode, 2009). This observation is relevant to blended learning because it entails aspects of online learning. As such, successful learner interaction with materials should supercede the mastery of goals and objectives (Tessmer, 1998). It is the awareness of such uniqueness of blended learning characteristics that allows instructors to take advantage of e-learning tools such as Moodle, to provide experiences for learners that traditional delivery methods are unable to provide. Such awareness includes instructor preparation of appropriate learning materials and complementing them with resources from other sources (Kelly, McCain, & Jukes, 2009; Simon, 2009). For example, Moodle contains different (at least six) kinds of discussion forums. The “Open Discussion” forum allows for students to read other posts before submitting their own while the “Q & A” forum allows students to see existing posts only after they have submitted their own posts. In this scenario, instructors will better serve their students if they choose one post over another based on a theoretical or pedagogical framework such as an appropriate Bloom’s (1956) taxonomy level that aligns with the desired learning outcome. For example choosing the “Q & A” forum for graduate students is more likely to encourage them to contribute to the learning process as compared to the “Open Discussion” forum which allows them to see other posts before writing their own. The “Evaluation” and “Synthesis” elements, which are higher order levels of Bloom’s (1956) cognitive domain, are therefore preferred in this case because they are more appropriate. Another example is the choice by an instructor to implement a constructivist framework such as linking students to a wiki page for collaborative interaction.

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