

## Chapter 35

# Using Learning Management Systems to Promote Online Instruction

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### ABSTRACT

*Learning management systems (LMS) reinforce the learning process through online classroom environments. A standard LMS supports an inclusive learning environment for academic progress with interceding structures that promote online collaborative-groupings, professional training, discussions, and communication among other LMS users. Instructors should balance active learning with the use of LMS technological resources and the use of guidelines from the qualified curriculum. As Murcia stated regarding online environments in 2016, instructors can use an LMS to facilitate and model discussions, plan online activities, set learning expectations, provide learners with options, and assist in problem-solving and decision making, supporting learner engagement through their presence in the LMS; facilitators allow students to retain their autonomy, enthusiasm, and motivation. It is vital that stakeholders of the educational community find scientific studies to support their contributions in LMS platforms to assist scholars in learning mathematics and other academic subjects*

### INTRODUCTION

In online classroom environments, Learning Management Systems (LMS) reinforce teachers and students in the learning process. A standard LMS supports an inclusive learning environment for academic progress with interceding structures that promote online collaborative-groupings, professional training, discussions, and communication among other LMS users (Dias & Dinis, 2014; Jung & Huh, 2019; Oakes, 2002). Nasser, Cherif, and Romanowski (2011) state that LMS usage provides online learners with consistent information regarding their performance. LMS usage allows online learners to become independent (Blau & Hameiri, 2010; Nasser et al., 2011; Strayhorn, 2010; Wood et al., 2011). Learner

DOI: 10.4018/978-1-6684-7540-9.ch035

engagement is sustainable as online users use an LMS to monitor their progress (Selwyn, Hadjithoma-Garstka S, & Clark, 2011).

Dating back to the 1950s, computer designers believed in the application of an LMS in education was conceivable and necessary (Watson & Watson, 2012). There were different strategies for using an LMS as an educational resource with multiple vocabulary words that relate to computer use (Kehrwald & Parker, 2019). Through time, the technology and tools which support online learning structures were progressing since the advent of online learning in the mid/late 1990s (Kehrwald & Parker, 2019). LMS compositions include a variety of media and communications tools and promote learner choice (Kehrwald & Parker, 2019)

## **HISTORY AND DEFINITION OF LMS**

Watson and Watson (2012) list computer-based instruction (CBI), computer-assisted instruction (CAI), and computer-assisted learning (CAL), as general terms describing computer adoption throughout history. These apply to computer application programs, teaching, and design preparation. Other purposes include monitoring, giving approval, and disseminating materials.

An LMS describes multiple online operations and behaves as a framework to capture numerous layers of progressive learning (Jung & Huh, 2019; Kuosa et al., 2016; Oakes, 2002; Watson & Watson, 2012). An LMS acts as a platform to distribute and oversee pedagogical material (Watson & Watson, 2012). LMS functions include promoting specially designed information for capturing learner progress in meeting expectations (Oakes, 2002; Watson & Watson, 2012). An LMS platform cultivates an environment for engagement and learner achievement, allowing learners to register for classes, track their grades, and check updates and course announcements (Oakes, 2002; Watson & Watson, 2012).

Watson and Watson (2012) recommend that as school districts integrate the use of an LMS, they should make LMSs a functional requirement. They discuss LMS administrative management techniques, including enabling profile features, guidelines for following the curriculum, guidelines for managing assignments, discussion boards, resources for writing, and updates from the instructor. LMS users gain access to material and information disseminated by the instructor in synchronous or asynchronous settings (Jung & Huh, 2019; Kuosa et al., 2016; Watson & Watson, 2012).

An LMS provides users with a productive learning environment to assimilate multiple components of systematic applications (Jung & Huh, 2019; Watson & Watson, 2012). In an educational setting, computer users have access to operations with non-traditional terms, and many computer users in education could have access to applications with non-traditional terms and confusing acronyms to understand (Kuosu et al. 2016; Watson & Watson, 2012). Thus, users may not understand which interpretations are suitable to use; it is fundamental to differentiate an LMS from similar technologies (Watson & Watson, 2012).

## **Course Management Systems**

A course management system (CMS) is an assembly of operation apparatuses that structure online interactions (Evolving Technologies Committee [ETC], 2003; Jung & Huh, 2019; Watson & Watson, 2012). It provides a process for governing information in a primary location (Jung & Huh, 2019; Watson & Watson, 2012). CMSs offer online and blended learning courses where users can access folders of course materials, along with tools and other materials that contain essential course information. Examples

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