

## Chapter 22

# Major Trends, Issues, and Challenges with Learning Management Systems

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### ABSTRACT

*A Learning Management System (LMS) offers a set of tools for e-learning delivery and management. For institutions offering online or blended courses, an LMS has a profound impact on teaching and learning because it is the main technology used in higher education e-learning courses. This chapter discusses major trends, issues, and challenges with the LMS in the context of online instruction for higher education. The chapter ends with a discussion of new trends with LMSs.*

### INTRODUCTION

A Learning Management System (LMS) is used to deliver and manage e-learning as well as support and enhance face-to-face instruction. As more and more higher education institutions embrace e-learning, it is critical to identify how an LMS can be used to meet today's learners'

needs and how it can facilitate learning and teaching. In theory, an LMS can enable highly interactive and personalized learner-centric online learning experiences, but as with any other technology, the positive or negative impact of the LMS depends on many factors grounded in online instruction.

Historically LMS was derived from the term Integrated Learning System (ILS), which is a technology solution for delivering content

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with highly interactive learning experiences. ILS offered “functionality beyond instructional content such as management and tracking, personalized instruction and integration across the system” (Watson & Watson, 2007, p.28). An LMS, on the other hand, derived from the PLATO system in the 1970s and over time became a set of solutions for online instruction. Szabo & Flesher (2002) state that “an LMS is the infrastructure that delivers and manages instructional content, identifies and assesses individual and organizational learning or training goals, tracks the progress towards meeting those goals, and collects and presents data for supervising the learning process of an organization as a whole (as cited in Watson & Watson, 2007, p. 28).

An LMS provides many advantages for e-learning. As an integrated tool which stores course materials, interactions and assessment in an organized manner, an LMS enables learners to focus on their own understanding process. Instructors disseminate content easily while managing and tracking learner progress and guiding them for further engagement with the course materials. “It is also believed that e-learning environments can have potential added learning benefits and can improve students’ and educators’ self-regulation skills, in particular their metacognitive skills” (Vovides, Mitropoupou & Nickmans, 2007, p. 64). Despite these advantages, White and Larusson (2010) point out that “in the development of LMS technologies, it remains less clear, however, just what the comprehensive benefits of an LMS might be, how these benefits can be measured, and what a completely successful implementation of an LMS would look like” (p. 2).

This chapter analyzes both the pros and cons of LMSs. It then discusses current trends, issues and challenges to better understand new possibilities using emerging technologies in lieu of an LMS.

## **BACKGROUND**

### **The Pros and Cons of Learning Management Systems in Higher Education**

The application of technology in higher education is nothing new. In the early 1990s, educators who wanted to create blended and online learning environments used chat rooms, emails, and various web and HTML editors. It was after the launch of integrated learning systems (ILS) that educators wanted to create a gateway to all the various tools used for online education. ILSs included many of the early LMS features such as content storage, student tracking and monitoring. Today LMSs offer several features from student registration to user profiles, the course schedule to curriculum standards and a wide range of assessment tools including electronic portfolios. The idea of LMSs is attractive to many educators as it reduces “the effort and technical skill necessary to build and run web-based courses” (Papastergiou, 2006, p. 596). In higher education LMSs have easily found their place. White & Larusson (2010) allege that, in point of fact, LMSs were born in higher education.

There are other terms that are used in place of LMS such as Virtual Learning Environment (VLE), Course Management System (CMS), Learning Content Management System (LCMS), Managed Learning Environment (MLE), or Learning Support System (LSS). Among these concepts two of the most confusing are LMS and CMS. Watson and Watson (2007) define CMS as the set of tools that offer online course creation capability along with the student learning management functions. Blackboard, Angel, Moodle and Canvas are examples of CMSs. On the other hand, “a LMS is the framework that handles all aspects of the learning process” (Watson & Watson, 2007, p. 30). Carliner (2005) points out that LMSs are originally designed for workplace learning and while they look very similar to CMSs, they have a wider range of functions. “For an e-

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