

An Argument for Clarity:

What are Learning Management Systems, What are They Not, and What Should They Become?

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“A veritable alphabet soup of terms and acronyms related to computers have found their way into the literature.”

The application of computers to education has a history dating back to the 1950s, well before the pervasive spread of personal computers (Reiser, 1987). With a mature history and varying approaches to utilizing computers for education, a veritable alphabet

soup of terms and acronyms related to computers in education have found their way into the literature, most of them non-standardized. Learning Management System (LMS) is one approach to the application of computers to education which holds great potential and important concepts yet is often misunderstood and the term misused. This article will clarify the use of the term LMS by presenting a history and definition of LMS, differentiating

it from similar terms with which it is often confused, and discussing the role it can play in education. It will then describe current application and available features of LMSs, and conclude by identifying trends and recommending future research.

History and definition of LMS: What are LMSs?

The history of the application of computers to education is filled with generic terms such as computer-based instruction (CBI), computer-assisted instruction (CAI), and computer-assisted learning (CAL), generally describing drill-and-practice programs, more sophisticated tutorials and more individualized instruction,

respectively (Parr & Fung, 2001). LMS has its history in another term, integrated learning system (ILS) which offers functionality beyond instructional content such as management and tracking, personalized instruction and integration across the system (Bailey, 1993; Becker, 1993; Brush, Armstrong, Barrow, & Ulintz, 1999; Szabo & Flesher, 2002).

The term ILS was coined by Jostens Learning, and LMS was originally used to describe the management system component of the PLATO K-12 learning system, content-free and separate from the courseware (R. Foshay, personal communication, October 24, 2006). The term LMS is currently used to describe a number of different educational computer applications, and we would argue that it is often used incorrectly. Later sections of this article will differentiate LMS from other terms with which it is often confused, but prior to describing what LMS is not; we will focus on describing what an LMS is.

The key to understanding the difference between LMS and other computer education terms is to understand the systemic nature of LMS. LMS is the framework that handles all aspects of the learning process. 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 (Szabo & Flesher, 2002). An LMS delivers content but also handles course registration and administration, skills gap analysis, tracking and reporting (Gilhooly, 2001).

Bailey (1993) presents the following general characteristics of an LMS in education: