# Chapter 16

# Learning Management Systems: Popular LMSs and Their Comparison

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# **ABSTRACT**

One of the technologies used in education is the learning management system (LMS). Selecting the correct LMS is important for all education institutions so that they can avoid a number of difficulties and problems in future. To be able to select the correct LMS, it is necessary to examine the features of current LMSs in the market comparatively, to determine their capability of meeting the needs of the education institution and to follow the trends in LMS use. This chapter presents information about LMS types, features of commonly used LMSs, the trends in LMS use, and about the results of related studies in literature. Today, Blackboard, Moodle, Edmodo, and Canvas are among the most commonly used LMSs. Though these LMSs have many features in common, they also differ from one another in certain aspects. Therefore, it is seen that different education institutions tend to prefer different LMSs in line with their needs. In this respect, the selected LMS should be appropriate to the needs of the institution and to its current resources.

#### INTRODUCTION

The changes in information and management technologies have also occurred in many areas including especially education institutions and brought about many innovations and facilities. Adaption to online education, ne of such innovations, can be regarded as a natural process for 21<sup>st</sup> century institutions. Thanks to online education, education institutions support non-traditional learners and life-long learning, whose importance is gradually increasing today. In addition, with the help of online education, education institutions can provide a lot more learners with good-quality education at less cost. In this respect, Massive Open Online Courses (MOOCs) have been established with the cooperation of several universities. Thanks to MOOCs, anyone willing to take online education can take free-of-charge courses.

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MOOCs can be said to be quite successful enterprises that support life-long learning and non-traditional learner. Therefore, it is fairly important for 21<sup>st</sup> century education institutions to adapt themselves to this transformation, to become a part of MOOC enterprises and to provide their own students with the opportunity to take online education.

One of the online education tools providing facilities in the field of education is the LMS, which basically allows teachers to plan, execute and evaluate the teaching process online. In its basic meaning, Learning Management System (LMS), a software program that allows management of learning activities, is one of currently popular web 2.0 tools. When viewed from students' perspective, LMS provides them with the opportunity to see traditional learning activities in web environment, to follow the whole learning process, and to get involved in the process. In terms of administrators of institutions, LMSs are environments which include planned instructional activities and which allow storing and monitoring these activities. Today, an increasing number of students willing to take education have also led to an increase in the demand and need for distance education as well as in the importance of LMSs (Dobre, 2015).

LMSs are widely used especially by higher education institutions (Buffalo, 2016). Today, it is seen that almost all universities use one or more kinds of LMS. Despite such common use and successful integration of LMSs in higher education, it is reported that in a period of three years, %15 of higher education institutions plan to change the LMSs they use (Brown, Dehoney, & Millichap, 2015). In order to use another LMS, it is necessary to prepare the physical infrastructure first. It is also important to transfer the data in the previous LMS to the new system without any loss of data. The reason is that faculty members will be willing to see the contents they have prepared before. Lastly, it is necessary to provide all users with an orientation training on the new LMS. Considering all these, it is a difficult process for higher education institutions to change the LMSs they use. For this reason, selecting the correct LMS is of great importance for education institutions. In order to select the correct LMs, it is necessary to examine the features of current LMSs in the market comparatively, to determine their capability of meeting the institution's needs and to follow the trends in LMS use.

This part will present information about the commonly-used LMSs in the world to help institutions select an LMS for use in their institutions. In line with this purpose, information will be given about LMS types, features of commonly-used LMSs, rates of uses of LMSs, trends in LMS use and about the results of studies conducted on LMSs in related literature.

### STUDIES ON LMSs IN LITERATURE

When the related literature is examined, it is seen that there are a number of studies conducted to examine the influence of LMS use in education on such variables as academic achievement and attitudes and to reveal overall views about LMSs. Review of the related literature demonstrated that there are several studies on LMSs with inconsistent results. It is seen that there are studies revealing the positive effects of LMS use in the learning environment and that there are still others reporting opposite results.

In literature, many related studies demonstrated that LMSs contributed positively to such variables as students' success and their attitudes. One of these studies investigated the variables predicting the end-of-term exam scores of 41 students who used LMS in South Korea. In the study, it was found that the number of logins, regular LMS use, homeworks assigned via LMS and the evaluations had positive influence on predicting the end-of-term exam scores and that such variables as the time spent on LMS, the content, in-class interaction and interaction with teachers did not have any influence on the predic-

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