


Chapter 12

Choosing a LMS: What We Know, What We Do Not Know, and What We Want to Know

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ABSTRACT

2020 has become a milestone year in the education sector. The prevailing pandemic forced all the stakeholders to avoid physical contact and go virtual. LMS (learning management system) platforms came to the rescue. This study focuses on the various features of an LMS already in use and suggests a few essential elements an LMS should have to be chosen by the stakeholders. To do the same, a systematic literature review (SLR) approach is undertaken. A total of 102 studies are considered for preliminary scrutiny. Finally, 51 literary works are included after screening out other research works. As per the SLR, the study is divided into five major themes: functionality, compatibility, portability, satisfaction, and digital transformation. After exploring the gaps based on a detailed discussion, this study concludes with a prescription of essential features to be included in a futuristic LMS. This study is original in nature and provides a vast compilation of relevant literature that might help the stakeholders of the education sector across the globe.

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INTRODUCTION

Learning Management System (LMS) has become an integral part of the education system across the globe. With the prevailing pandemic and large-scale lockdowns, it has become clear that blended and online learning will be a new normal soon. Although the platforms offering online classes are plentifully available, institutions and other stakeholders are always looking for an integrated and holistic learning platform like LMS. E-learning needs a robust LMS to succeed. There are many LMS platforms available today, e.g., BB Learn, Canvas, Moodle, Sakai and Google Classroom, etc., to name a few. Similarly, the LMS is assessed based on the following features: functionality, compatibility, portability, satisfaction, and digital transformation. In this study, we have tried to evaluate the available LMS platforms with these criteria.

Talking about functionality-related features, we assessed the platforms based on the following criteria: Classroom, Discussion forum (chat), Assessment, Collaborative tools, Document sharing, Assignment, Learner management, Attendance, Result publication, Customization, etc., to name a few. Further, talking about compatibility-related features, we assessed SCORM, QTI, AICC, XML, xAPI, and cmi5 features. Primarily, we test the compatibility issues when the LMS is switched from one to another. Various plugins and import-export features shall be assessed for all these LMS. We have focused on the following elements regarding portability-related matters: mobile terminals adaptability, widespread browser compatibility, and modern training tools and devices adaptability. Based on these comparative assessments, a suitable LMS can be customized to use all the stakeholders.

In 2020 about 70% of the world's total student population was affected by school and university closures due to the covid-19 pandemic. The worldwide Electronic Learning marketplace was witnessing immense development. An electronic learning platform takes place outside a traditional learning environment and supports the teaching and learning process using Information and Communications Technology (ICT) infrastructure. E-learning creates an opportunity to take professional-level courses to surge their education, diplomas, and skills to improve their professional opportunity in their job. Various other online platforms such as distance learning and virtual universities allow professionals and students to grab master's, bachelor's, and diploma degrees. One of the new tools of distance learning to democratizing higher education. This technique has highly automated, and students have to complete computer-graded exams and assignments. Many of the existing universities offer online education. Universities offer dozens of courses to students worldwide through information communication technology online.

Learning Management System is described as an essential description is a software application that automates the administration, tracking, and reporting of training events. A learning management system that can enrich instruction and acceptance of this learning technology by users is crucial to its successful higher education application. Teachers play an essential role in carrying out any classroom innovation (Alharbi & Drew, 2014). Also, learning management systems offer a variety of integrated tools for delivering and managing online instruction. Whether open-source (e.g., Moodle, Sakai) or commercial (e.g., Blackboard, Brightspace D2L), most LMSs are flexible, easy to use, accessible, and user-friendly (Kasim & Khalid, 2016). Learning management systems are usually considered the basis of any web-based learning course. Components that contribute to students' readiness for the use of learning management system include, but are not limited to, self-efficacy (Abbad, 2011), computer experience, technical support (Abbad, 2011; and Al-Busaidi & Al-Shihi, 2010), and prior knowledge (Alharbi & Drew, 2014). E-learning can be applied in two significant ways: presenting educational content and facilitating education processes. E-learning tools can operate effectively within carefully selected and

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