

Evaluation of Learning Management System (LMS) Through Feature-Rubric Scoring Function (FRSF) For Selecting Best Fit for University Oriented Courses

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Dedication

This study is dedicated to everyone who is willing to contribute something for education and knowledge sharing and its availability for everyone especially for non-privileged knowledge seekers. This willingness of knowledge sharing is the most sacred cause as it mentioned by Holy Prophet Muhammad ﷺ that “Allah Almighty, His angels and all those in Heavens and on Earth, even ants in their hills and fish in the water, call down blessings on those who instruct others in beneficial knowledge.” – (Tirmidhi, Hadith 422)

Abstract

Learning Management System (LMS) is a major tool used in most universities and institutions for online/distance education purposes. Several LM systems are being used in different universities and institutions, and these LM systems are also updating their versions and patches to stay in competition. So the selection of an appropriate LMS is an important task as it is expected to manage and support online learning environment. There are few online comparison sheets available for different LMS which have scored on the basis of online feedbacks but those online comparisons are not only lacking a comprehensive features and functions' list but also a generalized LMS scoring function to evaluate different LMS. This study has proposed a framework to evaluate existing learning management systems (LMS) for their available features and functions. This evaluation is scored through a generalized scoring function which computes quantitative availability of LM systems. Lastly, future directions for advancement on the subject are proposed in last chapter of this study.

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Chapter 1 – Introduction

Modern Education offers more opportunities of interactions if properly addressed. With those opportunities come technological needs. Modern education covers conventional learning techniques with technological advantage of learning aid services.

These learning aid services are facilitating education in both on-campus and off-campus areas. Multimedia devices, smart boards, smart desks, etc. are few of the on-campus services that modern education system offers. Online education tools such as online students' portal, learning management to support education needs are off-campus tools that supports modern educational needs.

This paper focusses its study on Learning Management systems. According to the study by Gilhooly in 2001, *an LMS delivers content but also handles course registration and administration, skills gap analysis, tracking and reporting*⁽¹⁾.

Where Szabo & Flesher in 2002 summarized 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*⁽²⁾.

Marc Rosenberg writes in *E-Learning: Strategies for Delivering Knowledge in the Digital Age* that *as educational technology becomes more prevalent in higher education, teaching is no longer restricted to face-to-face (F2F) instruction. For university courses, the combination of e-learning and F2F teaching increases accessibility, flexibility, and choices for interactivity*⁽³⁾.

George Kroner states in his research article that *While LMSs have evolved over time, they generally have the same capabilities that they had back in the late 1990s. They're a good place to store content in such a way that only enrolled students have access. They offer convenient ways to deliver quizzes, facilitate assignments, and publish grades. Different ways to facilitate classroom communication are built in.*⁽⁴⁾

Moreover, Kroner states and defines four generations of LMS. The first generation LMS is the one born out of the basic need to facilitate the creation of class "web presences" and second generation is the one in which Web 2.0 was introduced. Third generation is elaborated as the one which leverage network effects, advanced analytics capabilities, and a seamless user experience across content and devices. Lastly, fourth generation LMS will open up more freedom to choose which "client" through which an instructor wishes to build a course or which app a student wishes to submit an assignment.⁽⁵⁾

Following Graph is the Higher Education LMS market share for institutional adaptation which *the data has been adjusted to include international usage and online programs in order to capture the rise of online programs, including MOOCs, as a driving force in the future market. Keep in mind that there is no consistent data set to capture the entire market, so treat the graphic as telling a story of the market rather than being a chart of precise data. Sources for this summary include a combination of Campus Computing reports, ITC surveys, company press releases, and extrapolations from Blackboard's and Pearson's quarterly earnings.*⁽⁶⁾