Learning Management System - Moodle: Impact on Teacher Educators

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Abstract

Learning Management Systems (LMS) have been extensively accepted by higher education institutions universally for over a decade. Educational organisations now spend a significant proportion of their resources on installing and maintaining these systems. This expenditure continues to increase, raising questions as to whether LMS in educational organisations are fulfilling their potential. Learning Management Systems are now installed in the majority of higher education institutions. These web-based LMS are proposed to support teaching and learning activities. They consist of various features that enable teacher educators to share learning materials as well as providing interaction with their students both synchronously and asynchronously (Vovides et al. 2007). The most widely adopted LMS are Blackboard, Sakai, KEWL, and Moodle (Unwin et al. 2010). The research paper focuses on the LMS Moodle. Institutions use the LMS to supplement traditional face-to-face delivery where teacher educators develop and share digital learning materials via the Internet. In this case, the LMS are used as an electronic repositories of learning materials (Vovides et al. 2007). Institutions especially those offering distance education, have been combining LMS with traditional face-to-face delivery in order to reach more learners across various geographical boundaries (Andersson & Grönlund 2009). In light of these benefits, the adoption of LMS by higher education institutions has continued to increase in recent years. With the continued increase of LMS in recent years, this paper researches by suggesting strategies that can help teacher educators make more effective use of LMS.

KEYWORDS: Learning Management Systems, Moodle, teacher educators, impact on teacher educators, e-learning

Introduction

LMS such as Moodle can be effective at fulfilling complex learning activities with ease of use (Barr et al., 2007). LMSs can support educators with the administration and distribution of course material (White & Larusson, 2010). LMSs should also include collaboration, interaction, and participation (Barr et al., 2007). An effective LMS should reduce difficulties such as deficiency of system dependability, absence of connectivity, insufficient hardware and software, and lack of technical support by providing a manageable and accessible format. This structure permits educators and learners to work with minimal assistance. Faculty that utilize Moodle effectively can minimize these problems because the LMS was created for ease of use and faculty independence (Barr et al., 2007).

A majority of teacher educators in higher education lack to develop quality materials for their students (Unwin et al. 2010). As a result, it is common to find numerous LMS that do not have enough quality learning materials uploaded in it. It should be noted that learners bank on learning materials as their major source of

information during the learning process (Keats 2003). Consequently, they place great value on content that is well-organized, effectively presented, interactive, clearly written, in the right length, useful, flexible, and provide appropriate degree of breath (Shee & Wang 2008). There is also a positive relationship between quality of learning materials and overall learners' satisfaction with the LMS (Ozkan & Koseler 2009; Tarigan 2011). Therefore, learners tend to be dissatisfied with the LMS when they find out that uploaded materials are of poor quality and do not provide intended educational objectives (Naveh et al. 2012). At the moment, it seems that learners do not find reasons to access the LMS with poorly designed learning materials. For instance, Bhalalusesa et al. (2013) described one of the main reasons behind low usage of Moodle LMS was lack of quality learning materials in the LMS. There is a need for educational organisations to develop and upload quality learning materials into the LMS in order to maximize LMS usage. This can be done through equipping teacher educators with necessary skills to be able to develop quality learning material.

The need of the research study

The rapid developments in the field of Information and Communication Technology (ICT) and utilization of e-learning tools including learning management system (LMS) have become fundamentals to educational processes. Many higher educational institutions have accepted LMS to increase the quality of learning, equip learners with technological skills, inspire learners to be more interactive, and eliminating the limitations of time and space in instructional processes (Al-Zaidiyeen, et al., 2008; Chang, 2008). From the review done researches are done on the advantages / benefits of LMS in the teaching process. But researches are not done on the impact / influences of LMS on teacher educators.

Learning Management System (LMS)

Learning Management Systems (LMSs) are also known as Virtual Learning Environments (VLEs) or Course Management Systems (CMSs) and are one of the solutions useful for both students and instructors in e-learning environments (Altun, Gulbahar, & Madran, 2008; Chang, 2008; Falvo & Johnson, 2007). Learning Management System is defined as a web-based technology which assists in the planning, distribution, and evaluation of a specific learning process (Alias & Zainuddin, 2005). Sallum (2008) describes LMS as a high solution package that allows for the delivery and administration of content and resources to all students and employees.

This system contains software application and features which make learning content easily accessible and managed. In addition, it helps teacher educators to provide their students with learning materials and manages student attendance. This study is limited to the use of Moodle LMS, one of the e-learning management tools used in higher education. This theoretical framework can be adapted to suit the requirements of other similar studies related to planning and implementation of various technology programs in higher education.

Objectives of the research study

The objective is to study the impact of Learning Management System Moodle on Teacher Educators with the following

- attitude toward LMS

- ● ease of LMS use
- ● usefulness of LMS in teaching

Research Hypotheses

H1: ease of LMS use is related to attitude toward LMS

H2: ease of LMS use is related to usefulness of LMS in teaching

H3: usefulness of LMS is related to attitude toward LMS

Research Methodology

The Respondents in this study consists of 30 teacher educators of an educational college affiliated to an UGC recognised university. These students are taught the usage of LMS Moodle as a part of their curriculum. As the LMS Moodle is a part of the curriculum, the teacher educators have make use of technology in their teaching. Therefore this study is conducted to follow up the use of LMS by teacher educators in the first semester of 2017 academic year. All respondents signed consent forms, and they were assured that all data would be confidential.

Instrumentation

The instrument of this study is a questionnaire comprising two main sections.

The first section contained personal data concerning age, gender, teaching domain, educational level.

Section Two consisted of question statements that measured attitude toward LMS, ease of LMS use.

The questionnaire item responses were constructed on a five-point Likert scale from strongly agree (=5) to strongly disagree (=1) for attitude toward LMS, ease of LMS use.

The third section of the questionnaire asked the respondents to respond to two open-ended questions. 'Usefulness of LMS in teaching' was provided two response of "yes" and "no."

1. What are the difficulties faced by the teacher educators using LMS Moodle in teaching?
2. What are the main reasons why the teacher educators did not use LMS Moodle in their course and which technology they chose instead of LMS Moodle?

The findings were that the participants did face difficulties at the beginning while using LMS Moodle. The participants also realised the advantages of using LMS Moodle and will enhance their teaching process. This might be due to the fact that most of the courses were promoted to use technology tools to facilitate the teaching – learning process.
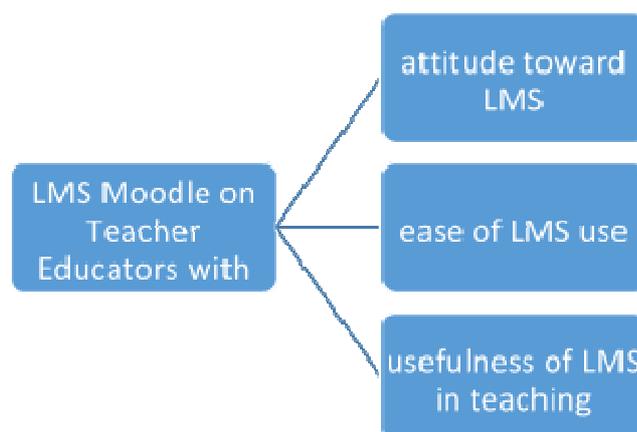
Data Analysis

Fig 1. LMS Moodle on Teacher Educators

Data were statistically recorded and analysed in MS Excel software. Personal information of the participants was calculated for frequency and percentage. Mean and standard deviation are used to find out the teacher educators attitude toward LMS, perceived ease of use and perceived usefulness of LMS in teaching learning process.

Findings

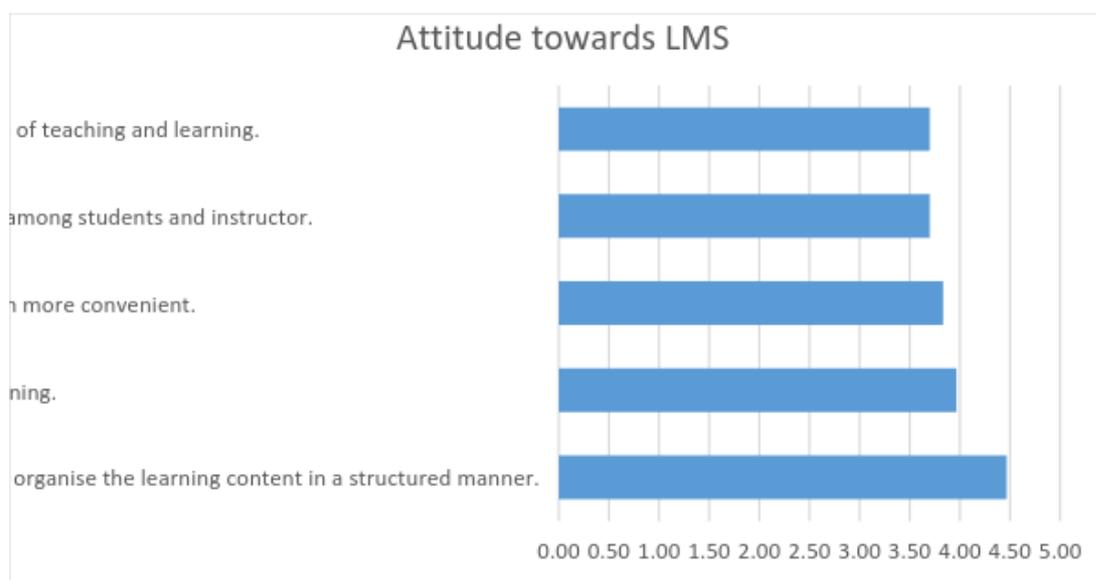Responses from the Questionnaire are as follows:

Fig 2: Attitude toward LMS

Fig. 1 shows that overall mean score of attitude toward LMS was at high level. The first highest mean score is on the last statement (The use of LMS enables the trainer to organise the learning content in a structured manner.) followed by the statement 'The use of LMS aids independent learning', the statements 'The use of LMS makes communication more convenient' and 'The use of LMS increases interaction among students and instructor'.

Mean and Standard Deviation of teacher educator's Ease of LMS Use is analysed as follows:

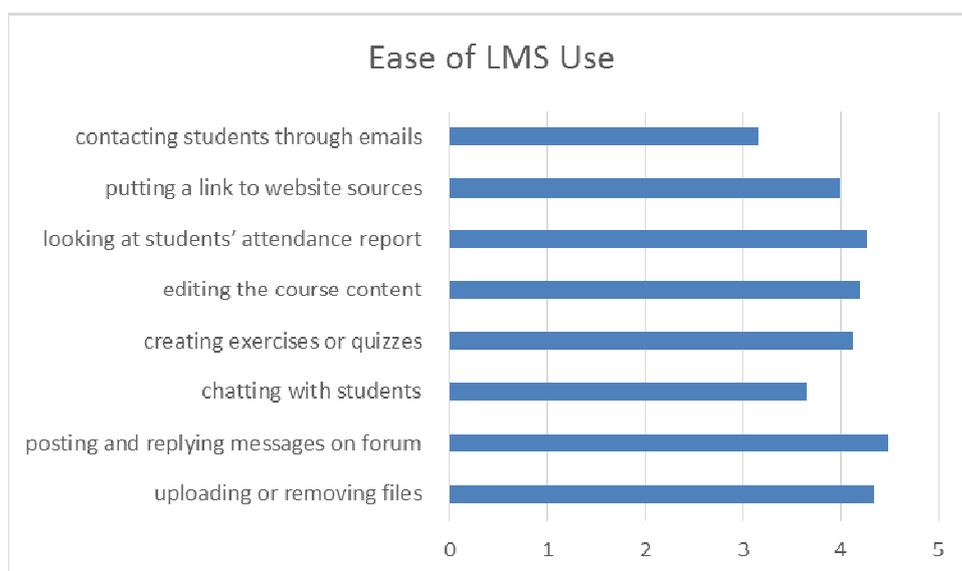| Ease of LMS Use	Mean
uploading or removing files	4.34
posting and replying messages on forum	4.48
chatting with students	3.66
creating exercises or quizzes	4.13
editing the course content	4.19
looking at students' attendance report	4.27
putting a link to website sources	4
contacting students through emails	3.15

Table 2: Ease of LMS Use

Fig 3: Ease of LMS Use

From the above figure and graph on Perceived Ease of LMS Use, it is concluded that posting and replying messages on forum scored the highest mean, which was followed by the statement 'putting a link to website sources' and 'posting and replying messages on forum'.

Discussions

The first discussions on analysis done of attitude towards LMS was at a high level. LMS: Moodle can be effectively used for uploading materials in digital form, which can be modified easily when required. LMS: Moodle can also be used effectively for communicating among the facilitators and students studying at Masters Level of Education. The replies supported that the use of LMS: Moodle enabled the trainers to organise the learning content in a structured manner. Apart from this the

replies also supported to statements like 'The use of LMS aids independent learning', 'The use of LMS makes communication more convenient' and 'the use of LMS increases interaction among students and instructor'. These replies can also be taken into consideration for implementing the traditional courses with the Moodle advantage.

The next statement which was analysed was on ease of LMS use. The findings conclude that comfort with LMS usage enables facilitators to approach it very easily. The use of LMS also helps the facilitators to communicate with the students with lesser time span. Testing the learners and checking the learner's participation is also done speedily. The studies also concluded that LMS is not a difficult tool to use. It is rather user-friendly. It allows users to put learning materials, chat or send messages whenever and wherever they are, so it can be applied to create interesting classroom activities. These advantage of using Moodle could also be used while implementing the traditional course.

Another remarkable finding showed that perceived ease of LMS use and usefulness had a significant positive correlation with student's attitude. This is probably because LMS are user-friendly technology. Only basic knowledge of technology is required for the usage of LMS: Moodle.

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The findings were that the participants did face difficulties at the beginning while using LMS Moodle. The participants also realised the advantages of using LMS Moodle and will enhance their teaching process. This might be due to the fact that most of the courses were promoted to use technology tools to facilitate the teaching – learning process. The result was in accordance with the open-ended responses showing that facilitators preferred technology in the teaching – learning process.

It was also found that the main reason that the teacher educators did not use LMS Moodle in their teaching was the lack of training given to them for usage of LMS Moodle. If training given they could use the LMS Moodle with all its advantages to enhance the teaching learning process. A remarkable finding was that the teacher educators did not choose any other technology before the usage of LMS Moodle.

Conclusions

The rapid developments in the field of Information and Communication Technology (ICT) and utilization of e-learning tools including learning management system (LMS) have become essential to educational processes. Many higher educational institutions have adopted LMS to increase the quality of learning, equip learners with technological skills, encourage learners to be more interactive, and removing the limitations of time and space in instructional processes (Al-Zaidiyeen, et al., 2008; Chang, 2008). However, providing the required technological infrastructure does not promise the best implementation of LMS by teacher educator of the educational institution. In consequence, every higher educational institution seeks to increase the utilization level of LMS of its faculty members to ensure the successful

incorporation of technology in teaching and learning processes. There are several aspects that can be taken into attention when using LMS for teaching and learning purposes. Hence it could be concluded that the usage of LMS Moodle would certainly bring laurels in the teaching – learning process. The higher educational institutes should give a speedily call on the usage of LMS Moodle and should get the advantages of it into practice. This would certainly bring in quality in the teaching – learning process.

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