



Factors influencing utilization of learning management system among Saudi Academy of civil aviation students

First author¹

¹Mohammed A. Alshaikhi, Saudi Arabia
Alshikhi7@gmail.com, Saudi Academy of Civil Aviation

Second author²

Associated Prof. Dr. Rosnaini Mahmoud,

²University Putra Malaysia/Education Technology, Malaysia
rosnaini@upm.edu.my

Third author³

Associated Prof. Dr. Ahmad Fauzi Bin Mohd. Ayub

³University Putra Malaysia/Education Technology, Malaysia
Ahmad_fauzim@hotmail.com



Abstract

The study evaluates the concept of learning management system associated factors, which provides crucial impact over the utilization of the process and procedures among the Saudi Academy of civil aviation students. The main aim of the research study is to determine the factors that influences the utilization of LMS in the higher educational institution in Saudi Arabia. It also have the objective to establish the degree of utilization of LMS in the Saudi Academy of civil aviation and the variables critical for assessment of LMS. The findings of the study has shown that there are varius factors like that of internal variables such as attitude, pedagogical beliefs regarding LMS, level of competence in utilizing the LMS and the external variables like that of the external variables faced by the members of the faculty, demographic factors.

Keywords: ICT. E-learning, LMS, Saudi Academy of Civil Aviation, information technology (IT)

1. Introduction

The concept of Learning Management System should not be confused with terms and phrases like e learning, virtual learning or distance learning. Each one has their unique characteristics and represents modernized approach of adapting to reforms in learning processes through the common medium of ICT technology through ICT technology. LMS is a similar ICT based system of learning technology recently being adopted in the infrastructure of educational institutes around the world, which is characterized, with enhanced features of advanced information sharing and online interaction between instructors and students away from a classroom environment (Amir and Parvar, 2014). It is fundamentally a software application which runs through the utilization of internet connectivity to provide a platform to the instructors and the students to collaborate from anywhere in the world and avail learning materials and contents from the databases archived in these online platforms.



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Higher educational institutes, from an infrastructure of LMS in their existing infrastructure can avail various advantages and enhancements in the field of learning support. Research has shown that there is positive attitude of students to adapt to e learning approaches evidenced by increased student participation and interactions inside the classroom. In addition to this, e learning environment and not LMS in particular has shown to be cost effective and enhancing efficiency of users. In the context of educational institutes, this pertains to both the instructors and the students in the educational context. The Saudi Academy of Civil Aviation, modernized during the 1990s, is the primary focus of this study. The study adopts a qualitative analysis method to identify the factors in the utilization of Learning Management System among Saudi Academy of Civil Aviation.

2. Problem Statement

Saudi Arabian higher education institutes and universities are very recently established. As such, some of the ongoing issues in the contemporary situation are faced in the form of lack of adequately trained faculty, lack of adequate classroom spaces and the disadvantages in the form of not having internationally acclaimed standards of information technology (IT) and e learning infrastructure. With the growing number of students seeking admissions for various programs in the Saudi Academy of Civil Aviation, Jeddah each year, these problems needs to be addressed swiftly and the features and advantages of Learning Management System shows brilliant prospects of addressing these issues conveniently (Alanazy, 2013).

The main objectives of the research study are as follows:

- i) Analyse the degree of usage of the LMS among the students of Saudi Academy of civil aviation as a tool to support their learning needs



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- ii) Determining the elements that has to be taken into consideration for the assessment of an LMS
- iii) Identifying the specific factors that are influencing the usage of the LMS among the students of Saudi Academy of civil aviation and how it is benefitting them.

3. Literature Review

Saudi Arabia E learning requirements the progressive increase in the number of students in the Saudi Arabian higher educational institutes in the last decade has facilitated the increased adoption of e learning systems in Saudi Arabian higher study institutes. According to reports by the Ministry of Higher Education in Saudi Arabia, during the academic session 2008-2009, Saudi Arabian academy students totaled a 608,000 students belonging from 20 universities. Since then and until date, Saudi Arabian institutes are flooded with student every session leading to overcrowding. Various problems in meeting the learning requirement of so many students individually is virtually impossible feat to achieve with the limited number of educators (Al-Shagran, 2017). Therefore, the adoption of e learning infrastructure can be attributed to this aspect of the Saudi Arabian educational institutions and their increased need for efficiently delivering individual attention to students. E learning approach provides a genuine IT based solution in response to the increasing students in Saudi Arabian universities. This demands for the incorporation of IT based infrastructure into the existing infrastructure and framework of the facilities in the universities across Saudi Arabia and train educators in utilizing the system to deliver personalized learning support to the students of the academy.

Saudi Arabian universities being developed recently as a characterized phenomenon exhibited in developing countries, suffer from limitations and constrains in terms of sufficient faculty members particularly in the field of applied technology and medical specializations. (Mazi & Obuamh, 2002) E learning framework allows the students to shift their total dependency up on



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the support from the faculty and educators of the academy and allows them to take advantage of the IT based infrastructure of the e learning system and take advantage of enhanced knowledge resources in abundant in the form of educational and learning contents and the added connectivity with the educators at all time. This aids the students particularly in a Learning Management System (LMS) to avail the opportunity of connecting with the educators even when not physically present in the classroom or educating facilities of the universities through computer and smart device based applications and the internet (Sunet.al. 2008). The fundamental advantage being the management of the issue of staff shortage efficiently while at the same time providing multidirectional facilities of learning management system.

Learning Management System

A Learning Management system in an e learning environment provides support in three fundamental areas namely the flexibility to avail a large database of learning resources and education course materials anytime, the advantage to interact with the educators and the faculty staff from outside the premises of the academy classrooms and finally the fast processing power of the IT based LMS infrastructure that utilizes the processing power of Java. (Garrison & Anderson, 2003) Conversely, aspects of the e learning technology can be attributed to the conjoined impact of these three characteristic features of an e learning environment. Not only a Learning Management System (LMS) but technologies like WebCT, Blackboard, Moodle and Lotus Notes allows academy students from all around the world to interact with educators, retrieve information from the system and take advantage of the fast processing power of the system to support their learning needs (McGill and Klobas, 2009).

A Learning Management System is beneficial for both the educators and the learners in the academy as important learning need solution for the student and imparting learning activities by the educator. It allows both the party to remain connected through a common network and access server data base containing personalized learning material as suitable for the learning



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support to the student. They are also known as Virtual Learning environments (VLEs) and Course Management Systems (CMSs) across various contexts and platforms. It fundamentally aids in the processes of planning, distribution and evaluation of the fundamental learning processes in the academy and helps the students and the educators in multi directional ways to facilitate efficient learning. Some authors have described a LMS as a web based solution packages that facilitate the delivery and administrative control of learning material and content to the students as learners and the educators as instructors. It is characterized by software based applications available across diverse platforms through which the students and the instructors can easily access the learning material, resources and the delivery and planning credentials of the overall learning process in the academy (Park, 2009).

4. Methods

Since the main aim of the research study is to determine the factors which influences the use of the LMS among the students of Saudi Academy of civil aviation, for the development of a proper framework that can help the decision makers in the higher educational institutions of Saudi Arabia to get a better understanding of the various factors that can have an impact on the utilisation of learning management systems by the students. For this purpose an extensive review has been conducted on the relevant Publications which can allow the author to establish the important variables that are related with the factors that influence the utilisation of learning management system in the higher educational institutions. For the purpose of determining the degree of utilisation of learning management system among the higher educational institution a survey has been conducted among the students in the Saudi Academy of Civil Aviation. The findings of both the survey and the extensive review of the past literature can help in not just identifying the factors influencing the usage of learning management system but also the various element that should be taken into consideration for making an assessment of the learning



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management system. The server would be a quantitative survey and statistical analysis tools would be utilised to derive appropriate conclusions from the responses received from the participants.

5. Findings and Discussions

E learning in a LMS approach can provide critical advantage in the form of interactive learning material that can be directed to the student through the system online allowing them to effectively avail learning support even from the comfort of their homes.

A number of factors that favors the adoption and utilization of LMS in an e learning environment in the context of Saudi Arabian universities can be identified from the extensive review of the past literature and the quantitative survey, like that of internal variables such as attitude, pedagogical beliefs regarding LMS, level of competence in utilizing the LMS and the external variables like that of the external variables faced by the members of the faculty, Demographic factors.

The internal variables mainly comprises of a combination of various factors that are associated with the users. Variables created sentence between the potential users and the learning management system. One of them is attitude. Fishbein & Ajzen(1975), pointed out that “attitude can be described as predisposition to respond in a consistently or unfavorable manner with respect to given object”. The attitude code also be described as being short sentences with would be the positive or negative and can develop relations with objects or people (Zimbardo, Ebbesen, & Maslach, 1977). There are three components that are associated with the character of attitude; affection, combination and behavior (Schafer and Tait, 1986). The successful implementation of the learning management systems I will Saudi Arabia was strongly depend upon the attitude



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of both the faculty members and the students who are studying in those institutions. Post faculty members you have positive attitude towards P Technology are most comfortable in using and hence they are easily able to open company obstacles. From the existing survey it was determined that the overall attitude of the members of faculty indicated towards the Computer technology had a direct impact on their utilisation of computer. It is important that the faculty members and the students should have a positive attitude toward learning management which can help in motivating them to use the learning management system.

The second factor that was identified was the pedagogical belief towards e-learning. From the review of the past literature it has been established at the integrated utilisation of Technology was only possible when a proper examination is done regarding the opinions of the instructors and their beliefs regarding adoption of innovative technologies in teaching like that of e-learning (Ertmer, 2005). Beliefs of a person mainly indicates “the information he has about the object”(Fishbein and Ajzen, 1975). The pedagogical PDF towards easily many indicates towards the informations are the options which is held by the members of faculty in general with respect to utilising learning management system and it's ultimate goals. The positive behavioral beliefs of e-learning among the teacher also had a positive impact in predicting the usefulness and ease of use of learning management system (Kao & Tsai, 2009). From the survey it was established that faculty members in the Saudi higher educational institution believed that learning approach is very important and useful tool and they are more likely to utilise learning management system in their teaching and learning process.

The third internal factor that has been established through the research study is the competency level in using learning management system. According to Osika, Johnson, and Butearu (2009),



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there is a significant role that is played by the skill and competency level in the adoption of Technology with respect to the higher educational institutions. It is due to the lack of technological competence that the faculty members are not able to integrate new technology in their teaching process. The technology competence could be explained as “being able to handle a wide range of varying computer applications for various purposes” (Van Braak, 2004). From the existing literature it has been established that it is not just important for the faculty members to have the basic skills for dealing with the technology effectively but they also need to have a basic idea regarding the virtual environments like that of learning management systems. From the existing literature it has been established that the competency level of the faculty members have a direct impact on the utilisation of Technology for the purpose of teaching and learning (Izmirli & Kurt, 2009). Apart from that from the survey it was also established that most of the faculty members who thought they are competent in using web-based Technology but also the ones who mostly utilised it in their teaching process as compared to those who are not competent enough in utilising web based Technology (Shih, 2006).

In terms of the external variables it was established that external variables generally exist externally in the immediate environment of the system. The various external variables that have been established in the past literature are ; “ Organizational, technological, social barriers, gender, computer experience, and training”. One of the major external variables is the external barriers that are faced by the members of faculty (Zhao, et al. 2002). External barriers that are present in the external environment of the potential uses of learning management system what are the different values that are faced by the members of the package could be generally categorised into “organizational barriers, technological barriers, and social barriers” (Al-Alwani, 2005). Technology and human facilities have a direct influence in enhancing the level of attention of the faculty members towards utilising the learning management system technology.



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In any kind of e-Learning environment the Technology plays of a crucial role for the members of faculty in their decision to take part in the learning management system utilization. According to Lin and Poirot (2009), the support of the administration and technical support are one of the major obstacles that are faced by the faculty members in using the Computer technology. Technological organisational and social factors have created a major hindrance in the Introduction of Computer Based communication. Removing the existing barriers is very much critical for the successful implementation of learning management system in the higher educational institutions of Saudi Arabia.

The final external factor that has been established to the research study are the demographic factors like that of gender, computer experience and training which can establish PP termination of utilisation of Technology among the faculty members and the students in the higher education institutions. It has been established by Al-Balawi (2007), in the case of Saudi Arabian higher educational institutions almost 71.4 percent of male faculty members were ready to take part in the web based instructions that has only 28. 6% of female faculty members show their willingness to participate in it. Another finding of Vekiri and Chronaki (2008), showed that although the level of competence and positive believe towards the benefits of using computers in the educational institutions is almost similar male and female part learning management system and computer based Technology was more frequently utilised by men as compared to women. The survey conducted in the research study also indicated that the female respondents considered the utilisation of Technology in less important in there daily activities as compared to the male respondents.



6. Conclusion

LMS infrastructure comes with some fundamental benefits of supporting the learning needs of academy students in the context of an educational institute. The Saudi Academy of Civil Aviation, being the prime focus of understanding the factors affecting utilization of LMS in an environment of underdeveloped faculty and infrastructure, has been analyzed in this study. The qualitative framework allows for the opportunity to identify critical factors that affect LMS utilization in an educational institute particularly of the type in Saudi Arabia. Intrigued with disadvantages like lack of adequate staffing, the lack of adequate infrastructure to face the challenges posed by the increasing number of foreign and domestic students seeking admission in the institute each year, the utilization of LMS in the said institute is driven by multiple factors. However, the study also incorporates the critical requirements that are imminent for the LMS system to be implemented in the context of the Saudi Academy of Civil Aviation in Jeddah. Training the educators to adequately implement and utilize the system and guide the students is an important driving factor. This research provides some critical platform to build upon the understanding of the attitude and perspective of students and educators in the direction of adopting a LMS in the academy.



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