

# The Effectiveness of Learning Management Systems (LMS) in Developing the Education and Upbringing Process

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## Abstract

This paper aims to identify the aspects of the effectiveness of learning management system which has been taking a role to develop the education and upbringing process, so that it has explained the concept of Learning Management Systems as well as its types.

The paper also covers the effective role of learning management system in the educational field and its effectiveness. It includes the developments that learning management system has been through in the Arab world in general and the kingdom of Saudi Arabia in particular. Furthermore, the paper has come to a set of important results as following:

- E-learning management system is considered as a strategic solution for planning and learning as well as managing all learning aspects in educational institutions.
- The importance of e-learning management system is shown by its role in developing the educational and upbringing process, so that it's considered as the most important new tool for e-learning.
- To guarantee the effectiveness of any system in the learning systems we should offer an easy usage when we are designing, applying or powering any learning system.
- Only 15% among the Arab's universities have e-learning management system, which means 75 universities out of 510 universities have systems of e-learning management system.
- The universities of the kingdom of Saud Arabia have activated E-learning management system in most private and governmental universities to keep up with the developments of learning systems

We should mention the most important recommendations regarding to learning systems. However, it is a must to benefit from e-learning management system and apply it in the educational institutions as well as developing its features to serve the educational environments in all educational environments to meet the actual needs of e-learning in the light of variable technology, which will help to develop the processing of education and upbringing. And to encourage the partnership and the cooperation between universities and educational institutions in the field of learning management system to participate in its development.

## 1. Introduction

The world is witnessing a great development of sciences and knowledge because of the spreading of internet and the usage of its applications in all political, economic and educational fields, therefore a lot of communities have changed their educational plans to fit the new technology which has made it easy for students to get the information very fast with no effort at all.

The development of technology has resulted to the presence of E-learning which enhances the educational process in the light of the educational demands and the continuing increase of students who need to be educated. In addition to the need of providing educational opportunities and motivate students to acquire knowledge as well as applying it by themselves, in an effort to make learners the center of the educational process, as well as reforming and expanding the knowledge and learning sources, to have a new form of learning such as e-learning teachers and learners, electronic book, and electronic exams (Helmy 2002, p751).

E-learning doesn't only provide courses in the website, but it also provides processes of learning and teaching management, therefore E-learning has relied on important systems to manage E-learning processes known as Learning management system (LMS) which are a group of programs designed to manage, provide and evaluate all the types of educational activates in the educational institutions.

Learning management is a system designed to manage, document, follow-up and report the progress of the educational processes such as courses, training programs, as well as providing cooperative learning and enhance participations, also it provides a communication system, for both teachers and learners to enhance managing the educational process electronically (Salloum 2011, p 771).

Learning management system is a group of programs and tools working together to provide a group of functions to facilitate the role of LMS, mostly to manage the education process, those functions are technical, which the system relied on, to work in a right way, and other administrative functions (Al-obeidi 2003, p 22-23).

Learning management system became a trustful tool for training and teaching in higher education as well as education in general, many universities around the world have used Learning Management System, also LMS is considered as a very important tool for developing and designing electronic courses, and it helps in managing students' learning and motivates them as well (Ozdamli, Fezile, 2007, P1), Teaching with LMS

provides effective development in teaching and it also develops students' learning throughout evaluation, that the system's role is to manage learning and teaching process starting from registration, scheduling, evaluating, and sending reports about the progress of students and teachers performance. It also connects students with their teachers and allow communication by providing chat-rooms, forum, e-mail, and sharing files, in addition to evaluations, questionnaires and exams.

## 2. Objectives of the paper

- To identify the concept of LMS
- To identify the role of LMS in developing upbringing and the education process
- To identify the aspects of learning management system and its effectiveness in improving the education and upbringing process and developing it as well.
- To identify the developments in the use of learning management systems in the educational process.

## 3. The importance of the paper

The importance of this paper is coming to the view by the needs of using learning management system, which is one of the modern scientific orientation in the educational process, also the importance is shown by the responsible role of LMS in managing the educational process, nevertheless it provides several features, which will be taken in details.

Firstly: the concept of Learning Management System.

E-learning management system is known as LMS which an abbreviation of learning management system that means the management system of E-learning. It's a system that designed to help managing evaluate and following continues learning and its activities institutions through the international network or the local one. It's known as supportive programs to help in the storage process of the electronic content of the course and managing the educational process (Hijab, 2012, p.618).

Learning management system supports the educational institutions to management, organize, use, advertize the educational courses and programs which was prepared and designed as in an electronic design method for schools, institutions, colleges and universities. (Mussa almubarak, 2005, p.247)

It is also known as a group of completed programs provide a system to manage the educational electronic process which allows the members of the educational organization to be connected anytime anywhere via the Global Information Network or the local network in an effort to develop the teaching and learning process. Therefore, it has been considered as a strategic solution for planning and learning as well as managing all aspects of learning in the educational institutions including online programs or virtual class rooms and directed materials by teachers, which will allow the isolated educational activities in the past to work together according to a connected system aims to develop the learning (Alkalifah, 2008, p.44)

Secondly: Types of learning management systems:

Learning management system is divided into two basic types as following:

- Learning management system opened source which is used freely, no sector has the right for selling it as well as it's subjected to developing and editing by interested people and some examples of systems are (model\_Dokeos\_A Tutor)
- Learning management system closed source or commercial which are the systems owned by profit company that develop it and does not allow using it without an authorization such as blackboard-webCT-TADAROS-Harf-Smatk) (Alsallloom, 2011, p.63)

## 4. The effective role of Learning Management Systems

Learning management system is considered as one of the most effective programs for E-learning, it's a completed system which is responsible for E-learning process through the Global Information Network (Internet) or local network including admission and registration as well as scheduling educational materials homework and evaluate the students as well as supervising synchronization of learning tools and exams, Also, it includes printing certificates. Learning management is a program and tools provide roles to manage E-learning process. (Alswaid, Alsa'afan, 2011, p.4)

A lot of studies has shown the importance E-learning management and its role which helps to improve the educational and upbringing process, it has been considered as the most important tools for the modern E-learning through the web. We will mention the most important roles of LMS:

Courses management

Registration and connecting users managements

Evaluate students; registration, activities, results, exams and exercises- sending various reports to the administration- tools of content authorship- activities resources editing management- tools for communication such as forums, chat-rooms, suggestions, ect. (Fa'ura alsharman, 2011) (Husain, 2011)

The study of Al-Furah and al-kandari investigated the effectiveness of applying a system to manage the learning process in the teaching of university, to find out that the easy usage of technology and getting benefits, reflected positively on technology in learning matter, in addition to students desire to use technology, which supports the effective role of technology in education.

The study recommended, to guarantee any system of LMS we should provide an easy usage of learning management system, weather in designing, applying or when we power any system of LMS. As well as the study of (Walker, Johnson 2008), which indicates that to guarantee the effectiveness, there must be two elements which are perceived benefit and perceived ease of use, which are the basics of intention and desire for using technology.

Learning management system has helped to overcome some issues and challenges faced by the educational process, such as the following:

- informing students of instructions and updates that might happen to the course: we overcome it by activating Bulletin Board
- submission of student's projects and assignments, we overcome it electronically and according to the limited time service by the tools of Learning management system.
- students' interact with each other and with their teachers, we overcome it by vary of forums in the system.
- efforts and time of exam's preparation as well as correcting the students' papers and results informing: we overcome that by Questionmark Perception program which has 22 patterns of questions as well as the appropriate technical output and the appropriate type for the user interface according to the principles and elements of the digital design.
- The difficulty of communication with students and answering their questions about courses in office hours, and face to face interactive: we overcome it by electronic communications through Elluminate Live virtual classrooms gaining a completed sires of scientific solutions for a better education. Students' Performance Enhancement which allows teachers and students to interact effectively in a time to add contents of E-learning or to mix educational activities via internet in the website to enhance students performance and support active learning in addition to cooperative learning and participatory learning globally.
- The difficulty of sending digitally recorded lectures because of large sizes of the files and the slow upload to the network or not having emails for students: we overcome it through Tegrity program, which is a completed program with the structure of LMS. ( Ibrahim 2010).

##### **5. The role of Learning management system in developing the educational and upbringing process**

- The role of Learning management system is highlighted in developing the educational and upbringing process in general and in higher education particularly through several dimensions, as following:
  - To Simplify the educational and upbringing process
  - Support and complete traditional education
  - Teaching completed subjects or giving supportive courses
  - Teaching in crowded classrooms in spite of increasing numbers of students
  - To make it easy for students and teachers to communicate anytime anywhere. ( Al-zahrani 2012 )
- Functions of LMS: LMS provides several functions which help in improving and developing the educational and upbringing process as following:
  - Providing learner interaction tools: those tools which learners interact with, during his/her study such as following:
    - Announcements: this tool allows learners to receive news and notifications from the faculty by one click on the announcements' keys to show up a board of dates or written announcements.
    - Calendar: this tool provides timing of events that connected to learning matters it also alarms students when online lectures' times and meetings as well as face to face meetings' times etc.. the learners can make events in the calendar as well.
    - Tasks: This tool notify students of their tasks and provides an organization of their tasks according to the topics or learners' wishes, also the learner can send to another certain learner any task.
    - Grades: This tool is providing results of exams, mid-terms or final
    - Users: This tool provides a list of registered students in a certain course to give a chance to learners to know each other.
    - Address book: This tool provides a personal notebook for students to add users' data

for system communication, that Users tool is for all registered students but this tool is for just added ones by the learner.

- content display

The basic function of providing educational materials is providing the content of the scientific materials to learners, that the option Course content is to display the content by one click in the following methods:

- Displays textual information with pictures, graphics and animation with other elements organized according to the requirements of the educational organization
- Documents and files related to the course
- Online books and references which are recommended by teachers

calling tools: the system allows three ways of communications for students with each other and students with their teachers

- E-mail messaging where a list of all users is shown to students which makes easy communication as we mentioned previously.
- Discussion board: It is also known as Bulletin Board, it allows students to participate and express his/her opinion to be read anytime (Asynchronously) Blackboard, 2015

- a- Virtual classroom: this means the meetings of the system, which allows learners and teachers to meet and discuss via ChatPanel system which has a text panel and learners read each other lines, it's for all registered students to support the learning and teaching process, also it has a painting panel almost like classrooms' white board to transfer the text and pictures or paintings to the learners or teachers. (Blackboard, 2015)

## 6. The role of the learning management system in participatory activities

The quality of e-learning management system depends on the user's needs in order to achieve the basic objectives for which it was designed, therefore, the system must clearly display its contents and covers all of the information needed by the user. In education there are many categories, such as sharing (open discussion) given topics for dissection in general or some specific discussion, in addition to follow-up, also how Knowledge Management technology allows the users to acquire knowledge through extracting it from various databases in the right way which leads to innovation through acquiring knowledge by the learners themselves. The use of e-learning and its various operations encourages the users to use systems and extract knowledge which results to a participatory community in addition to encouraging the other groups to work together to gain knowledge.

This objective can be achieved by the teacher, who can help learners by dividing them into groups, and plays a director role in addition to following up their behavior. It is very important for teachers to follow up their students through the system and make sure that they use the system to exchange information which related to the course, as well as gained knowledge. Many studies have concluded that E-learning is powerful system for communications and cooperation for learning groups members, also there are another factors that help e-learning, which are social communication and social norms. (Alfoara; Sharman .2011, p. 74)

## 7. The role of Learning Management System in motivating students

The learner has several motivations to use electronic systems and to work as teamwork, so that if there is a harmony in the teamwork, that leads to a motivated desire which supports continuity of work, as a result of that the continuity of the electronic use. But if the teamwork is different in too many social things that may lead to abstention from work and as a result of that decreasing of using the system.

The learner needs to communicate with other groups to acquire knowledge and experience, also he needs to acquire new skills to solve different kinds of problems. If we can improve communication by minimizing social gaps of the individuals, and minimizing different customs and traditions through involving them in e-learning system, then it would help the user or learner to be satisfied, and that can only be achieved if many things worked together such as (linking) to increase and improve communications, also the improvement of participations and sharing activates would help in E-learning. Therefore, E-learning plans must be taken carefully to fit the social style and its possible that the system developers would work on that to solve it by adding some features for E-learning. (Alfoara; Sharman .2011, p. 75)

## 8. The developments in using Learning Management Systems

several developing universities in the Arab world try to keep up with the international developments of internet and learning systems or training systems, either for those new established educational and training institutions or the governmental ones through developing E-learning systems and giving large amounts of money as developing budget, as well as developing teachers, trainers and faculty members. (Al Harbi 2007, p. 4)

At the level of Arab countries, we find increasing ordination to benefit from Learning Management System, were projects of E-learning and training have come into view through providing designed electronic courses and curriculums, as well as establishing electronic opened universities and recommendations on setting up a certain criteria for such kind of learning.

Two of best examples of such universities are virtual Syrian \_ Tunisian universities, and open universities experiences in Egypt, Saudi Arabia, Algeria, Sudan, Libya \_ the United Arab Emirates and Palestine, as well as the Arab Open University, which has succeeded in hiring the British Open University plan to benefit from e-learning management system. (Abdullah, 2012)

According to a study (alJarf, 2009) to get to know the reality of e-learning in the Arab universities, found that:

- There only (15%) among Arab universities have electronic learning management systems, which means that only 75 University out of 510 universities have e-learning management systems.
- some Arab countries do not use the electronic courses at universities all like Libya, Eritrea, Djibouti and Mauritania.
- There are 18 universities use Moodle system, Open Source, and 14 universities use Blackboard, and 10 universities use WebCT to manage courses, and 12 universities use other systems and 13 universities haven't determined what systems they used.

Regarding to Saudi Arabia, the Kingdom has taken important steps in order to activate the role of technology in higher education beginning of the issued guidance of the Custodian of the Two Holy Mosques King Abdullah bin Abdul Aziz in 1427, to develop the National Plan for Information Technology;

which recommended the adoption of e-learning and distance education and applied it in higher education, as well as the establishment of a national center to provide technical supports and tools to develop digital educational content and tools, \_ therefore it has established the National Center for e-learning and distance education, where the Center seeks to disseminate e-learning and education applications in higher education institutions. (Mazro 2001, p. 166)

Many of the Saudi universities have relied on a strategy for e-learning aims to provide this kind of education for all, not only to keep up with current developments in educational institutions, but also to benefit form the real and effective role of E-learning in improving education and its outcomes.

Saudi Arabia hasn't been blacked out from keeping up with E-learning and distance education development, Saudi Arabia was the first to establish a private deanships for e-learning and distance education centers in both government and private universities, which are 24 public universities and 8 private universities.

In order to achieve that, these universities have used many of learning management systems, for example, King Saud University is currently using Blackboard, bridges, Moodle in Arabic Language Institute as well as the King Khalid University uses Blackboard \_ bridges Tadars, and some are using other systems. (Salloum; Radwan 0.2011, p. 95)

The establishment of Saudi electronic university 2011 model in Riyadh supervised by the Council for Higher Education is considered as a governmental educational institution which provides higher education, and has several colleges such as College of Business Administration and Finance for accounting, and e-commerce specialization, College of Computing and Information for Information Technology specialization, \_ College of Health Sciences for Health Informatics specialization.

The university awards bachelor's degree (regular certificate for e-learning students, in one condition attending 25% of lectures), and regarding to post-graduate study, the university provides business management courses for students, and information security, in addition to Diploma in e-government program

This is in addition to offering courses in continuous learning and lifelong learning, based on the best education models and applications and techniques of e-learning for distance education, where the use of modern techniques in its academic programs, as the case in the best universities in the world to provide its graduates distinguished education and practical qualifications to keep up with the developments.

The Saudi Electronic University has announced that more than 31 thousand students have registered for bachelor and master in its different branches, in the academic year 2012-2013. (Sharhan, 2013, p. 11)

## 9. Conclusion

Overall, the importance of Learning Management system is coming to the view by the effective role it plays to develop and improve the educational and upbringing process by offering a group of functions and tools which were designed in a purpose to facilitate the educational process, moreover, it motivates students to use the system easily, as the working paper has explained in details previously, it concluded as following;

## Findings

- The Learning Management Systems are completed programs offering a system for managing the educational process electronically, to provide a communication system for the educational system parties.
- Learning Management System is considered as a strategic solution for planning, learning and managing all aspects of learning in the educational institutions.
- The most important functions and roles of LMS are : - managing courses – managing users' registration and connecting- follow-up students' participations, activates, results, exams and exercises – sending vary reports to the administrations – content authorship tools – tools for managing and adding the sources and activities
- Learning Management systems programs are the most important systems for E-learning, that it is a completed package of systems which are responsible of managing the educational process of e-learning through the internet.
- The importance of management systems of e-learning come to the view by the role it plays to develop the educational and upbringing process, which has been considered as the most impotent modern tools for distance learning.
- To guarantee the effectiveness of any system of learning systems, it is a must to provide an easy usage when designing, applying or powering any system of learning management systems
- Only 15% among Arab universities have LMS electronically, which means only 75 universities have LMS electronically out of 510 universities.
- The universities of the Kingdom of Saudi Arabia have activated electronic LMS in most of government and private universities to keep up with the development of learning systems.

## Recommendations and proposals

- Benefiting from Learning Management Systems and applying it in the educational institutions and trying to develop it to serve the environment of education in institutions, to meet the actual needs of learning in the light of the development of technology, which helps improving the education and upbringing process.
- building a long-term strategic partnership between general educational institutions and the private sector to keep up with the developments and updates in the field of learning management systems in order to activate and enhance the education.
- Designing a learning management system is needed for various educational and training institutions.
- Encouraging partnership and cooperation between universities, institutions and higher training centers in the field of developing learning management in a purpose to develop the educational and upbringing process.
- Paying attention to providing an easy usage of any system of electronic learning management system to guarantee its activation and using.

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