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Integrating LMS in Teaching and Learning Process in State University of Tetovo: Issues and Challenges

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Abstract: *Technology use can be seen as an innovative challenge to restructure the teaching-learning process and integrate LMS in independent, collaborative and interactive work. Teaching and Learning are no longer restricted to traditional classrooms, while e-learning has become one of the most powerful supporting tools which have diversified the traditional context of learning in higher education. This paper presents a very important problem oriented in adoption of LMS and investigation of the impacts in teaching and learning process in the State University of Tetovo. The aim of this paper is to propose one LMS platform in the teaching and learning process at State University of Tetovo to provide flexibility, efficient and autonomous application from tasks and services provided by LMS environment and to define its impact and challenges facing the implementation of such system, because at SUT there is not jet such a system.Based on our analysis we noted that in SUT is required improvement and development of the educational process supported by the use of technology, thus implementing an e-learning system in order to assist and facilitate the students in their studies and reflect to enhance the quality of teaching.*

Keywords*: Learning Management System (LMS), higher education, integration, issues, challenges, flexibility.*

1. INTRODUCTION

Over the past decade there has been a great revolution in learning and educational computer applications and the use of computers in education is still in its infancy that grows day by day, but began to take various forms, from computers in education, internet use in education, and finally the concept of e-Learning in order to provide educational content to students in a better and effective way.

The rapid development of information technologies provides tools to expand and support e-learning applications in higher education institutes. There are various formats of eLearning, according to Sloan Consortium (2005), three formats were classified based on delivery modes and proportion of content delivered online including: complete online course, blended course, and web-facilitated courses. In all such formats, Learning Management System (LMS) are an integral tool in such courses to facilitate exciting, meaningful, and active learning experiences. LMS promote innovation in higher education and in educational delivery by facilitating new, innovative behavior in teaching and learning process. The LMS can facilitate major changes in the educational delivery because of the new possibilities of increased flexibilities. It is a tool that can facilitate communication and distribution of information between students and teachers, making the information flow easier and more efficient. It can facilitate collaboration between students, making them less time and place dependent [2]. It can also make it possible to reach out to new markets of distance learners by using a more flexible distribution of courses.

There are many pedagogic and socio-economic factors that have led to higher education institutions to adopt an LMS system. These include a greater access to information; greater communication through electronic systems; synchronous learning, increased cooperation and coordination, cost efficiency and improving teaching through simulations, virtual experiences and graphic representations. Both sides lecturers and students can choose the most appropriate applications that are flexible in time, place, personalized, reusable, tailored to specific areas and cost-effective [3]. On the other hand, the university in developing countries faced with a number of challenges that obstacle the implementation of e-learning systems, one of them is our University (SUT).

Higher education in Macedonia is still in transition period of using methodology in teaching and learning process, so, in many universities still is used traditional methodology, face-to-face of teaching and learning. Although there have university in Macedonia that have begun implementation of a management system for e-learning, but on the other hand SUT has not yet implemented any learning management system in teaching and learning process.

From the interviews with the university staff, we have seen that the distribution of the learning materials and the communication with students is mainly done using Google site, as a free LMS platform.

Issues around implementation of LMS in higher institutions are mainly pedagogical aspects, through which individuals learn, acquire and retain skills and information to facilitate knowledge development, availability of technology and knowledge that students and instructors have while using technology. Transforming learning style from those conventional to the new one in use, presents several challenges including changes in cultural expectations and ongoing development of technological capabilities of staff and students. These aspects should be managed and implemented effectively to achieve the overall enrichment of the learning experiences of students and teachers.

The purpose of this paper is precisely the creation and implementation of a system for managing e-learning in the educational process at the State University of Tetovo. Through this study will also try to point out the impact that the LMS will have on teaching and learning and challenges for academic staff and students while using it, in order to increase the efficiency of the learning process in the SUT.

The challenge of using LMS in higher education is how to encourage faculty to utilize LMS to develop online, blended, or web-enhanced courses. One of the concerns is that the staff is not familiar with this new form, due to which they show no interest in developing .teaching the online courses.

The paper is composed in two parts. The first part will examine the implementation and integration of a proposed model of LMS platform in the learning process at the SUT, while the second part will examine the impact and challenges of implementation of such a system in order to increase the efficiency of learning and teaching.

2. LITERATURE REVIEW

The term Learning Management System (LMS) is one of many collective terms for web based course-management systems created for educational purposes. Learning management systems are information systems that administer instructor-led and e-learning courses [4]. Through LMS student progress including training, evaluating, and tracking of results can easily be established. Examples of LMS include applications like Blackboard, Moodle, WebCT and Desire2Learn. These LMS applications can be quite robust by offering the ability to include self-contained surveys or assessments, to track

individual learner use of the course site and all of the components thereof, and to provide forums for asynchronous and synchronous learner to-learner and learner-to-instructor communication [5].

The LMS is the e-learning platform which is considered as the important part of e-learning solution from a university's viewpoint [6] see Figure1.
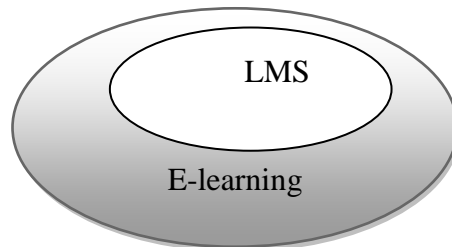

Fig.1. LMS scheme

LMS have become a necessary technology for higher education providers, as they are able to provide an online space for learning materials and activities to be located with reasonable convenience and accessibility. In addition to this, LMS also support a range of administrative tasks associated with managing student progress and achievement. The modern LMS is also able to go some way in supporting third-party plugin features such as virtual classrooms, blogs, wikis etc [7].

Institutions use LMS software to plan, implement, facilitate, assess, and monitor student learning. The software centralizes course preparation; educational content and resources; the delivery and tracking of student activities, such as discussion and collaboration; the administration of assessment activities; and the accumulation and presentation of marks and grades. The LMS helps institutions maintain the integrity of their educational programs and enables faculty to effectively and efficiently develop courses, deliver instruction, facilitate communication, foster collaboration, and assess students. An LMS can be used to support traditional face-to-face instruction, as well as blended and online educational environments.[8]

2.1. Types of LMS

There are dozens of different types of LMS each with diverse feature, used by organizations to manage e-learning and deliver course materials.

Each LMS is different. Some give users the opportunity to implement a variety of approaches, such as content-centric, activity-centric, network-centric, linear, and branching. Some systems are more effective for delivering asynchronous instruction, while others are better at providing synchronous instruction. Some LMSs can deliver content and allow students to access their grades via mobile devices, while others cannot [8]. Thus, instructors play a central role in the effectiveness and success for successful implementation of LMS and must identify the approaches used and those that could be used to promote learning at their institutions. Then, they must closely examine the LMS tools and features and how they might be used. This takes time and commitment. In general, to select the right LMS depends on many factors, including ICT experience of the students and teachers, user friendly of the software features, advantages that support the LMS for institution where will be implemented.

There are different types of LMS, like proprietary (commercial), free open source (OSS) and cloud-based LMS. Each of these systems has their advantages and disad-

vantages. Regardless on choice appropriate LMS must list the features that are important to institution where be implemented. In addition, also need to determine what impact the selection may have on current operation. For example, will the LMS solution [8]:

- Provide the reliability/stability, flexibility, scalability, and security the institution needs?
- Easily integrate with existing systems — both software and hardware?
- Require IT staff to receive additional training? If training is required, can it be provided online and how much will it cost?
- Necessitate the hiring of additional staff with skill sets that differ from those possessed by existing staff? How many staff will be needed to support the LMS solution?
- Require extensive maintenance and support over time? Do vendors offer tiered support plans that can be covered by existing budgets?

2.2. Contemporary LMS

The survey that we did from the research works we saw a lot of discussion about the development of e-learning systems, and we can conclude that a giant leap forward in terms of functionality and flexibility of the systems has been made. One of these flexibilities is that the system provides management of all capabilities and capacities, that it develops LMS for specific target groups (professions, companies, institutions), integrates it with repositories, and creates a learning object database. It also increases the virtual interaction on social global level, develops advanced searching of LMS database, and increases the balance between control and freedom of LMS users in order to achieve better learning and support [9]. E-Learning has revolutionized the educational sector, and has changed the way we look at knowledge and skill acquisition altogether. Thanks to modern educational technology, e-Learning tools and techniques just keep getting bigger and better. According to some data, there are about 90 LMS products on the market. Some of them are free, developed within the Open Source community, others are commercial.

From the middle of this decade when different distributions of LMS have been developed, their number has increased by 15-20 each year.

Most LSM used in higher education are Moodle, Instructure and Sakai as free Open Source software, Blackboard, ANGEL and Desire2Learn as commercial software.

In the higher education market as of fall 2013, Blackboard is the leading provider with 41% market share, with Moodle (23%), Desire2Learn (11%) and Instructure being the next three largest providers [10].

3. PROPOSED METHODOLOGY

The rapid evolution of ICT are increasingly bringing various tools to facilitate teaching and learning. Although, ICT has provided a potential for change, allowing the development of new approaches regarding teaching and learning there is still insufficient knowledge as to best practices in Higher Education, mainly concerning the use of online learning environments (e.g., LMS) and communication tools. Moreover, the development of Web 2.0 makes it a useful tool for teaching and learning. Technologies seems to allow students to learn more in less time (anytime and anywhere) and to permit the

universities to centre on global learning environments when used appropriately. An LMS consists of software packages that support some or all aspects of course preparation, delivery and interaction, and allow access via a network [11]. These systems offer tools for computer-mediated communication; tools for navigation within course content and around the various features and tools available for learning support; tools for course management; and tools for assessment of learning. All these tools are typically made available via a uniform web-based user interface. We will propose a new model that is tailored to specific areas, cost-effective, flexible, user friendly and autonomous applications from tasks and services provided by LMS environment.

The idea is the creation and integration of an LMS that will be simple to use by faculty staff and students, provide flexibility and interoperability between tasks and services, reliability to the users and data security and cost-effectiveness. Fulfilling the needs of SUT and enhancing efficiency in the teaching and learning process and also by analyzing the challenges and difficulties facing the SUT.

Will be used variety of sources, which are connected ranging from those with a role in this discipline, as well as those related to the field of study, such as materials derived from books, published articles, papers, journals, and conferences of which will be useful.

The research is conducted on the basis of the approach in fig.2. Firstly, three main users are Administrators, Professors and Students, each of them need registration, personalize information and authenticate their information. Administrators will be persons that will manage with the software, than Professors manage with courses, upload course contents, control students, compose exercise and quizzes, and make notification for students. Students will have to registration their courses; download their course materials, exercises; answer quizzes; read announcements and see results.
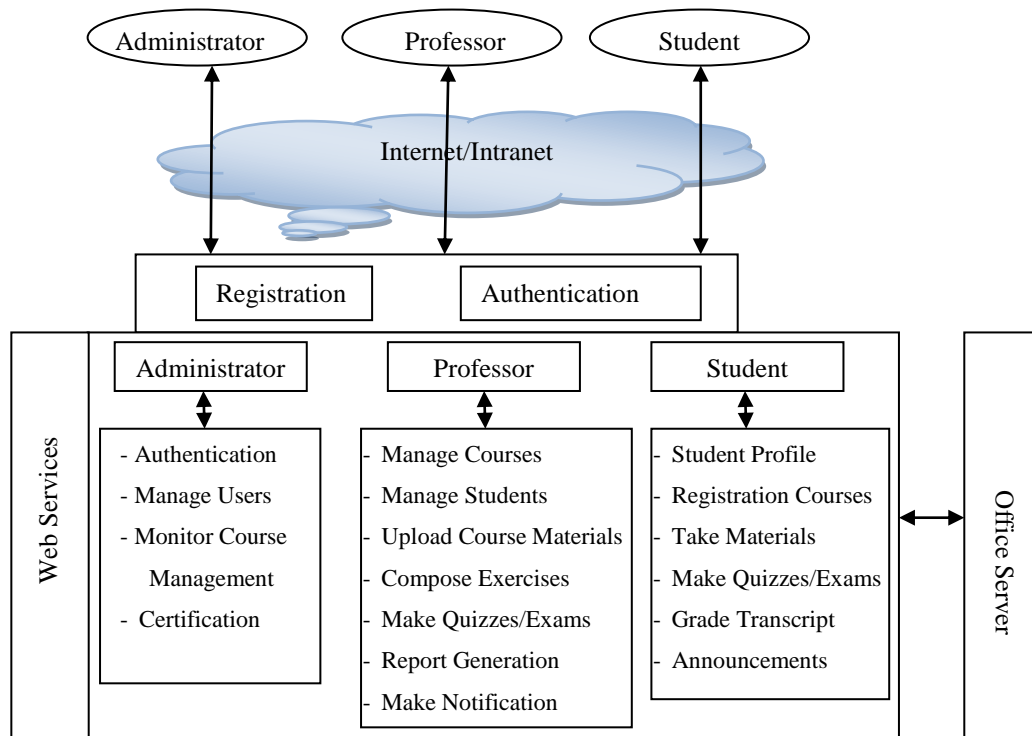

Fig.2: Research Approach

4. CONCLUSION

The LMS as technology for teaching and learning suggests great opportunities for the promotion of innovative and interactive quality e-learning environments in learning process.

The importance of the study has to do with the idea that the application of a system in teaching and learning in higher education, especially at the SUT will increase the level of knowledge and also revealed the impact by increasing the efficiency in the learning and teaching process. We also mentioned advantages and disadvantages of using LMS in the learning process. We are sure that the application of such system would be acceptable and easy to use by teachers and students of different faculties.

Using LMS in higher education institutions will promote huge benefits such as improving the communication channels between the teachers and the students, and among the teachers, improving pedagogical methods and will help teachers to become more innovative, make the educational delivery more cost-efficient and make the higher education institution more competitive in the world.

Many universities utilize LMS in their learning and teaching process. Implementation and using of such system depends heavily on institutionalization and also by users of such system as professors and students, which need to have a positive attitude towards the use of technology in Education. Also, an LMS can imply the use of new innovative pedagogical methods.

The main goal of suggested model of LMS is efficient management of the educational process in the SUT, increase of the efficiency of learning, easier communication between professors and students and also encourages professors and students towards use of technology in teaching and learning.

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