

## MAINTENANCE INSTALLATION AND SUCCESSFUL USE OF A MOODLE VERSION IN e-LEARNING

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**Abstract:** Computers that have the role of a server in the network differ from other computers. The difference is in hardware and software. The hardware part of a server usually costs more than the standard PC. Even the software part differs because it has an operating system that supports the server's work. The work of a server differs because it needs to work without interruption and has installed applications through which it provides services in the computer network where it is located. To utilize the benefits of a platform that assists the learning process such as Moodle can fit a common computer as a server. Its performances are Processor: Intel (R) Core i3 540 @ 3.07 GHz, RAM: 5.00 GB, HDD: 500 GB. It has been set up by Moodle and has been providing services in the e-Learning process for 6 years. To create security conditions on this server, the Microsoft Security Essentials virus has been installed and the firewall is configured, leaving open only the necessary ports. For this period of time, there was no defect and e-Learning was working properly. There was a change of the microprocessor cooler and the configuration of the IP address due to the change of the router.

For a successful use there has been permanent care by the administrator who has all the rights. Moodle has had three user levels: administrator, professor, and student. Many privileges and rights are given to second-level Teacher users. Student User is the third level. Configuration is done so that the system to some extent is updated so that the user Teacher and Student itself joins e-Learning. The Administrator creates the Faculty / Academic / Course categories and shares the Teacher Status for respective courses and creates the keys for the courses that are given to the course students they want to attend. The teacher puts materials on courses, checks student assignments, communicates with the group of course students who is themselves created. A good opportunity is that the professor can use the Forum tool to add news, test results, announcements that are automatically sent to e-mails of each student of the course group. This is also used as evidence of student achievements. Thus the system can be said to be maintained to some extent on its own. At the respective course, the student takes lessons from the weeks of lectures and exercises, places assignments to control the professor, participates in the forum, etc. These are the most consumed activities on the Moodle platform. With these minimum expenses, Moodle is placed on this server and access is done via the address [www.usht.us](http://www.usht.us). For a period of 5 years, it has made a great contribution in the teaching and learning process at "Kadri Zeka" University in Gjilan and Tetovo University in Tetovo.

**Keywords:** server, e-learning, Moodle

### 1. INTRODUCTION

As a result of the application of information technologies, e-governance has become a reality both in the public and private sectors. Even in the Republic of Kosovo, efforts are made to develop some of the most important sectors such as e-schools, e-health, e-judiciary, e-administration, e-voting, e-security etc. which also function in digital form (Government of the Republic of Kosovo 2008). Throughout the world, the level of application of these technologies varies depending on the overall economic and educational development. The use of computer equipment in the teaching process is also a reality. The implementation of e-learning in schools at all levels is taking place in various forms such as the use of e-mail, the use of web pages with learning content, the use of electronic libraries, etc. A platform that has largely localized needs in the teaching and learning process is Moodle (Clark 2011). For many needs this has provided a solution. It is a platform that is used almost in all universities in the Balkan and beyond.

### 2. INSTALLATION

Moodle is a platform that can be downloaded free of charge from the Internet. To use this platform a more simple way is to place it on a Server. In the absence of high performance servers where their cost is high, a PC can fit as a server in order to provide services both as a server. The personal computer in which Moodle is installed with these performance: with Intel (R) Core (TM) i3 540 @ 3.07 GHz processor, with RAM of 5.00 GB, with 500 GB HDD. At first, the Windows Server R12 operating system was installed with IIS and then installed C ++, PHP, MySQL or Maria DB. Finally, install Moodle and make the appropriate configuration. Then all of this is placed in a subdomain of the institution's site.

### 3. MAINTENANCE

Once the computer is configured as a server to perform a server's job, it is expected that the maintenance process will be difficult. From the five-year work experience of this server it can be said that maintenance was not difficult. For this time only the cooler of the microprocessor has been burned and the same one has been changed. The server did not have an alternate power supply and there were cases of power outages from the public network. This has led to interrupting Moodle access but this has been a short time. The router that used to connect the Internet server has reconfigured the connection to the new router. The server has not been attacked by the virus because it has installed Windows Security Essentials.

### 4. USERS

A very good feature of the moodle e-learning platform is that it can be configured so that the actions in it are shared to all users such as: Administrator, Teacher, and Student. This way the administrator does not charge the system update but the actions are also allocated to the Professor and students. It can be said that the moodle platform "feeds" all these users. Thus, the cost of maintaining it is not high. The Administrator has all the rights. He can create categories and subcategories such as Faculties, Years at Each Faculty, and Courses. He can adjust the appearance of the base page and gives you the status of Teacher. Creates the enrolment key for each Course and sends it to the Teacher.

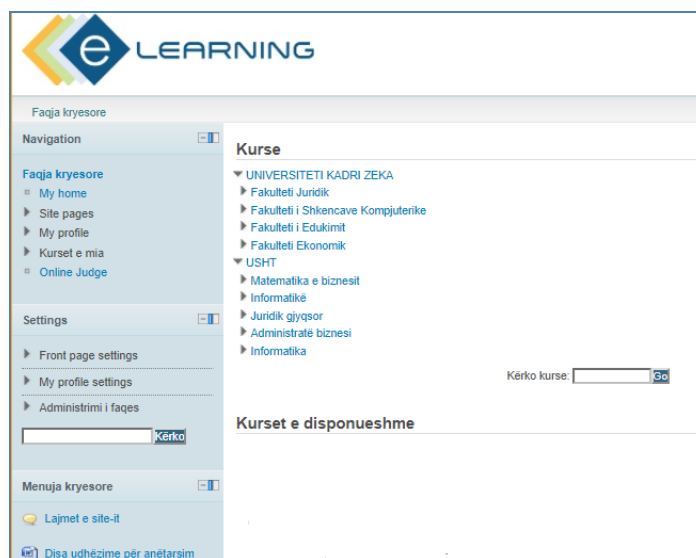


Figure 1. Administrator User

The Teacher User has less rights than Manager but more right than the student. He can put materials on each week of the course, can create a folder in which students will decide their homework, place announcement of results, communicate with students through the network of moodle, check assignments and evaluate, updates materials for lectures and exercises and decides when these can be publicly accessible to students etc.



Figure 2. Teacher User

The student user has less rights. He may open the relevant course if there is an Enrollment Key. It can subtract materials of different format from the course that the professor has set as a basic or additional material for the subject, to set up homework and to receive results from the professor, to communicate through the message with a professor or other course colleagues. After enrolling in the Moodle platform, the student must get Enrollment Key from the professor to attend the relevant course. With this he enters for the first time in that course he automatically becomes a member of the group who attends lectures and exercises. Thus the student register who attends lectures will be created automatically with the first student entrance. For the second time, the student does not need the key because now he has earned the right to visit this course with the first entry knowing the Enrollment Key.

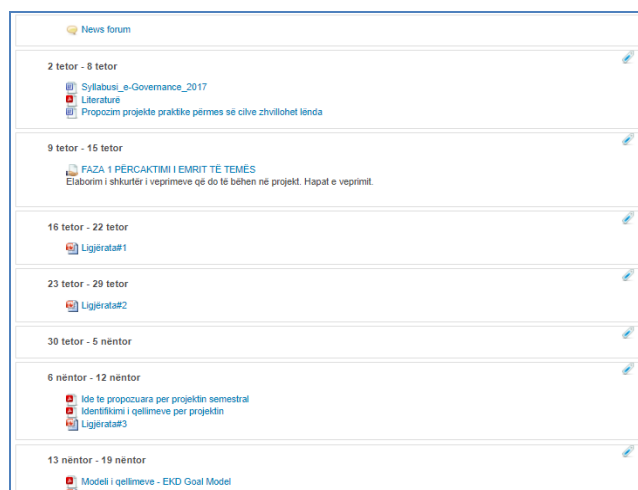


Figure 3. Student User on an Open Learning Course

## 5. CONCLUSION

The Moodle platform is a help in the teaching process. For its use in an institution it is not enough just the desire and explanation of the useful functions that Moodle enables, but for its application it needs institutional support. E-learning curriculum requires a proper planning, eg. developing the concept or an e-learning that would have addressed didactic, organizational, technological and economic aspects. Special attention should be paid to the lecturers' training. The most promising way to begin implementation is by organizing workshops with all relevant stakeholders (management, teaching staff, IT) (External Evaluation Report 2016). From the efforts that have been made to use Moodle and especially the last two years at the Kadri University zeka in Gjilan has resulted a very large increase of all users. This number reaches today until 1811, in which students and professors entered. In Fig. 4 shows a graph that describes the increase in the number of users on the Moodle platform.

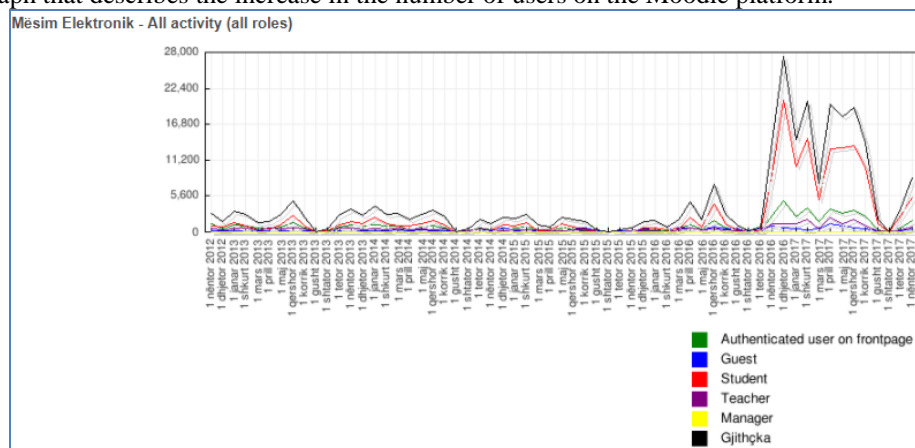


Figure 4. Increase of users for a period of 5 years

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