MOODLE BASED E-LEARNING ENVIRONMENT. CASE STUDY REALIZED AT "LOWER DANUBE" UNIVERSITY GALATI, ROMANIA

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Abstract: *Today, learning experience is increased with technology enhanced learning environment. In Teaching Learning process learning by learner is the key issue. In what way contents get delivered to learner? How teacher interacts with students?*

Universities and training institutions became aware of the power and advantages of e-Learning and had recognized how it can support their business in offering new more effective services that improve the learning efficiency.

Although the adoption of e-Learning resolves many of the challenges facing traditional education including the need for large investments, yet, further reduction in needed investments is still required in order to encourage current and future educational organizations to adopt e-Learning, especially because of the increased demand on education and training.

Moreover, new purely virtual e-Learning-based educational organizations have emerged, which conduct all of their learning activities via the Web by using e-Learning services and technologies.

MOODLE provides tools to support the learning experience, such as assignment submission, wikis, forums and programmes for distance learners where the online learning spaces are the key resource for learning materials and activities.

Keywords:*e-learning; technology enabled Teaching Learning process;, e-learning organizations; collaborative learning; Learning Style;, MOODLE; e-Learning services;*

MOODLE – technologies

MOODLE (Modular Object- Oriented Dynamic Learning Environment) is a global project, a software used for carrying out classes over the Internet and which supports a social environment that actively participates to education and is offered for free.
MOODLER refers to a teacher or a student that uses the online teaching or online study.
Martin Dougiamas, licensed in computer science and education science created and launched the first version of MOODLE in August 2002 at Curtin University of Technology from Australia. The subsequent versions brought numerous quality improvements and extensions of functionality which considerably increased the number of users. Initially MOODLE was an experiment during his doctoral (PhD) research but the widespread adoption of MOODLE meant he couldn't be able to finish his research, according to https://en.wikipedia.org/wiki/Martin_Dougiamas.

With minimum server management knowledge, a computer may be installed and configured. This computer needs to have the following technical characteristics:

- 3 Ghz Processor;
- HDD- 10 Gb storage space;
- RAM 2 Gb memory;

- Network/ Internet connection

The easiest installation is under Windows with help from XAMPP v1.7.4 packet, which contains already configured PHP, MySql and Apache server. Moodle can be downloaded from: http://www.microsoft.com/web/gallery/moodle.aspx

1. Historic

During the time interval 2002-2004 a wide debate took place at "Lower Danube" University from Galati, concerning the procedure for evaluating the professional and scientific performance of the academic staff.

Starting from the academic year 2007-2008, the assessment of the teachers' activity by the students is carried out or made through an IT online application, which ensures the efficient analysis of the information, as well as the confidentiality/ privacy of the assessor. The processed results of the evaluation or assessment can be accessed by the management of the university and are used for the evaluation of the teaching staff at the level of the departments and faculties.

"Lower Danube" University from Galati was involved in the implementation of the MOODLE platform. The teaching/ academic staff of the "Automatics, Computers, Electric and Electronic Engineering Faculty" were the first implementers of this platform, then (DIDFR) - "Faculty of Letters".

https://www.idd.ugal.ro - the web address of the "Department for Long Distance, Low Frequency Study" (DLDLFS) - "Faculty of Letters" and it contains information about the educational and administrative activity for long distance, low frequency education.

https://edu.csed.ugal.ro/ - the web address for the "Automatics, Computers, Electric and Electronic Engineering Faculty"(ACEEEF) of "Lower Danube" University from Galati.

The implementation and use of modern technologies in education and research requires the mobilization and support of various initiatives, programs and projects of public institutions, professional organizations or individual specialists from the field of e-Learning, researchers, professors from secondary schools and universities, inspectors, councillors, teachers, psychologists, pupils and students [1].

2. Research context

In the present paper it is analysed the platform of the "Department for Long Distance, Low Frequency Study"(DLDLFS) - "Faculty of Letters"

Long Distance, Low Frequency Study (LLFS) is characterized by:

- replacement of teaching classes(courses) by individual study;
- the communication of educational information through multiple support media, specific and distance learning environments;
- periodic meetings with students for carrying out practical mandatory activities specified by the curricula (seminars, laboratories, practical works, projects, specialty training).

The platform contains a series of data from the "Department for Long Distance, Low Frequency Study":

- data related to the legal framework through which it was set up/ created
- the statute and regulation of DLDLFS
- financial aspects addressed to the students
- the presentation of the faculties within DLDLFS

Important sections of the platform:

- the section of the Admission Methodology contains informative data regarding the

conduct of the entrance exam or admission contest.

- the section of Teaching Activity contains information related to the structure of the academic year, student's guide, the timetables/schedules of the teaching activities, session of exams as well as the student's regulations/ statute.
- the section of Educational Resources contains direct links to the MOODLE platform for long distance study
- the section of Electronic Bulletin Board contains the Requests/Notifications/ News/Announcements categories.

„Distance learning" is defined as "any educational and professional training activity based on techniques and procedures which partially or totally compensate the spatial-temporal reunion between the trainer and trainee"[2]. Essentially, the distance learning is a "learning process which is based on multimedia resources and allows one or more persons to train starting from their own computer"[3].

The platform has three types of users:

- **The administrator** determines the website design and has access to all the courses.

The administrator posts general interest messages on the login page module. He also creates the user 's authentication.

- **The teacher** has full or complete control over his/her courses but cannot create user accounts for the trainees.
- **The Trainees** can use the e-Learning platform only to learn or study.

Once a course has been created or modified, it is useful to make a backup copy of the respective course and download it into the personal computer. This operation prevents the loss of data in case the server breaks down, allowing restoring the data on a new server. Also, the backup copy may be useful in order to reset a course to its initial form.

The maximum size of a file that can be uploaded is 8 MB.

Table no.1 - *Types of courses on the platform*

Faculty of Economic and Juridical Sciences Specialization: Juridical Sciences		**Courses**
Year 1		
	Semester 1	5
Year 2		
	Semester 1	7
Year 3		
	Semester 1	5
Year 4		0
	Semester 1	8
Faculty of Letters -Specialization: ROMANIAN LANGUAGE-ENGLISH LANGUAGE		**Courses**
Year 1		
	Semester 1	11
	Semester 2	7
Year 2		
	Semester 1	9
	Semester 2	9
Year 3		
	Semester 1	9
	Semester 2	9
Course support 2016-2017 (BACKUP)		81
Course support 2015-2016 (BACKUP)		71
Course support 2014-1015 (BACKUP)		79

Students are automatically signed up for the courses from the teaching instruction series which they belong to, due to the data uploaded onto the university website.

The teachers, the course tenures/holders decide whom to allow access and other users (access for guests). Also, it may be noticed the development of a course over the academic years of study. The first version of the course remains in the database, the student even if he promoted in the next year and the course has modified, he may only access the last course that he attended.

Table no. 2 - Number of trainees - Faculty of Economic and Juridical Sciences

	Names cohort		Members
Juridical Sciences -1	DR.1	Learners DR 1- 2017	60
Juridical Sciences -2	DR.2	Learners DR 2 -2017	45
Juridical Sciences -3	DR.3	Learners DR 3 -2017	32
Juridical Sciences -4	DR.4	Learners DR 4- 2017	35

Table no. 3 - Number of trainees - Faculty of Letters

	Names cohort		Members
Letters - Year 1	LRE. 1	Learners LRE1 - 2017	41
Letters - Year 2	RE. 2	Learners LRE.2 - 2017	51
Letters - Year 3	LRE. 3	Learners LRE 3 - 2017	37

The total number of members on this MOODLE platform is **752**.

Every week the teacher may choose to give a test. Accessing the test is made from the activities category section that the teacher posts every week. Once the test is released, details regarding the scoring method are registered, the allocated time etc. The information includes the date when the test started, the date at which finished, the grade, percentage from the final grade, etc.

Since the test starts/is launched, there is a time limit to finish it.

Table no. 4 - Electronic resources/ activity for 1st semester 2016-2017

Faculty of Letters - ROMANIAN LANGUAGE - ENGLISH LANGUAGE- Distance				
Nr.	**Name Courses**	**Courses**	**Resources**	**Homework**
	Year 1			
1	**LEME**	1	18	3
2	**CPLEGC**	1	12	3
3	**LENM**	2	0	0
4	**EFAC**	1	0	0
5	**LRAS**	1	0	0
6	**LRCA**	2	0	0
7	**LGOC**	1	0	0
8	**ICE**	1	30	6
9	**TLCA**	1	0	0
	Year 2			
1	**CPLES**	1	0	0
2	**CLEIM**	1	2	2

3	**COLE**	1	0	0
4	**LEMI**	1	2	0
5	**LEPF**	1	0	2
6	**COLEB**	1	0	0
7	**LRAS**	1	0	1
8	**COLR**	1	0	0
9	**LRCO**	1	0	1
	Year 3			
1	**COLED**	1	0	0
2	**COLEPM**	1	0	2
3	**LEPM**	1	0	3
4	**CPLEP**	1	0	0
5	**LEDG**	1	0	0
6	**COLR**	1	0	0
7	**LRCS**	1	0	0
8	**COLRDM**	1	0	0
9	**COLR**	1	0	0

The forums allow both the teachers and students to communicate on different themes, each participant having the possibility to open their own topic of discussion, in parallel to the one opened by the teacher, as it may be noticed from table no. 4.

The forums can be adapted to course-specific requirements. The teacher who has created a forum must manage it afterwards and inform the students as often (daily, weekly) when he accesses the forum. MOODLE also allows the upload of resources into the course, the creation of links to a file or an external web page, inserting a label which contains additional instructions and information (resources) referring to a section of the course.

3. Conclusions

Obviously, the possibilities which MOODLE offers are unlimited, currently only a small part of these possibilities has succeeded. There are still many exploitable opportunities which this platform has to offer.

The placement of the courses is not the end of the online study implementation. It is obvious the fact that the continuous improvement of the courses will lead to the increase of their quality, is going to enhance the usefulness of the platform, thus the appreciation from the students will also change for the better.

Even if we only have an analysis of the first semester of the academic year, we may notice in this case an improvement of the course material over the previous years.It must be mentioned that reports can be obtained which allow the assessment of the frequency of course attendance. The reports may be very large because any activity is registered. It's useful to select in the report either a trainee, one date or one activity.

Due to MOODLE a part of the course teaching is outsourced, thus becoming an open one.The disadvantage is in the situation when some of the students are not completely prepared to use digital materials and would prefer to study the course in another format (on paper).The good practices for implementing e-learning shall remain the property of each and every university.

The final conclusion is that the MOODLE platform is useful in the process of teaching and the students are satisfied with the implementation of this new instrument.It is necessary additional research regarding different organizational aspects of the online teaching process,

in particular in the field of internal insurance of the quality of online courses, methodology and criteria of external evaluation and accreditation the of e-learning systems.

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