THE PERFORMANCE GROWTH OF EDUCATIONAL ORGANIZATIONS THROUGH THE USE OF THE E-LEARNING PLATFORMS

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Abstract:Like any emerging industry, e-learning brings new trends and changes that lead to further improvements in this area. "E" of the term e-learning is not necessarily "electronic" but must be associated with concepts such as evolution, expansion, development. The universities, even the non-technical ones, are increasingly using e-learning platforms. There are many advantages of e-learning platforms, but also disadvantages. This paper presents a study based on a questionnaire completed by 200 respondents. The target group were the non-technical universities in Romania, the research theme was about different aspects of e-learning platforms used in non-technical universities from Romania. The data obtained from research were analysed, also the paper proposes some directions for the development of the actual e-learning system in order to grow the performance of the educational act. The article ends with some final issues, based on the study results.

Keywords: e-learning, non-technical universities, research, Romania

1. Introduction and theoretical context

One possible definition for e-learning is: *learning on Internet time, the convergence of learning and networks* [1]. According to [3], e-learning or web-based learning consists of research technical components and techniques to develop and support electronic-based education and training. This includes R&D on the creation, delivery, and tracking of web-based learning content in a consistent and interoperable way; best practices for e-learning policy and processes; and various components for supporting web-based learning, such as content and learning management systems, content registries, and Massive Open Online Courses. There are a lot of characteristics of modern e-learning systems, some of them are presented below (based on [2]):

- **Active Learning** is conducted online, through games or activities, to apply their knowledge in a real time. It provides an attractive way to benefit from a practical experience in a real situation;
- **Social learning** refers to learning in an interactive way, with college, on different online channels, groups, blogs, etc. It is a frequent method of learning;
- **Informal learning** is spontaneous and unstructured. Usually, it takes place in a context of learning on-demand. It usually needs the Internet as an important source of information;
- **Mobile learning** is accomplished with the help of smartphones and tablets, offering both challenges and opportunities. Mobile platforms offer access to a large volume of tools and e-learning content. According to [3], *mobile learning and mobile performance support* consist

of research focused on the use of commercially-available handheld computing devices to provide access to learning content and information resources by leveraging ubiquitous mobile technology for the adoption or augmentation of knowledge, behaviors, or skills through education, training, or performance support.

- **Hybrid or Blended e-learning –** consists of different ways of delivering the content, online or in classical learning, in classroom. Using the e-learning methods described above, more complex hybrid solutions that combine classroom classes with video content, educational games, social networks and online content can be created.

Starting from common concerns for the use of statistical methods in the study of e-learning in higher education we have carried out a research on how to use e-learning in non-technical universities. By applying appropriate statistical methods, an attempt was made to identify possible differences in outcomes by some criterions. Also, the analysis highlights relevant educational options that can be considered specific to students of universities in Romania.

2. Research in the Romania non-technical university system

A. Research methodology

The virtual space is becoming more and more present and constantly developing in the field of teaching and actual learning, especially in higher education.

Research findings are useful:

- As a state of the art in the field of non-technical university system from Romania;
- To outline some conclusions and to indicate some directions of development regarding the actual e-learning system from non-technical universities;
- To improve the quality and efficiency of the computer-assisted education, providing theoretical support.

Variables Measurement

There are two types of variables: nominal scaled and variable related to the use of e-learning platforms. The table 1 explains the structure of these variables.

Table 1. The map of research variables

Research variables		Conceptual description
Nominally Scaled Variables	Demographic Variables	University
		Age
		Professional background
		Gender
Variables relating to the use of e-learning platforms in the non-technical universities		Analysis of existing platforms in non technical universities
		The frequency of students access
		Courses on the platforms
		Evaluation of the characteristics of the platform

The questionnaire included qualitative close questions which were measured using a scale in two points (yes/no), but also more complex questions, with a greater number of variants (daily, weekly, monthly, the platform is not used) – adaptation after [4]. Using the scale interval, we allowed the ordering according to the importance of defining characteristics of the platform (very good, good, poor). There were also open questions like regarding the respondent's university etc. The questions were formulated in order to be precise and concise as possible.

B. Data analysis and research findings

The questionnaire begins with filter questions, to retain only the respondents who can provide the necessary information and to direct respondents to a specific question. Toward the middle of the questionnaire is set more difficult questions, that require a greater effort from the respondent. The questionnaire was completed by 200 respondents. We presented the daily many answersin Figure 1.
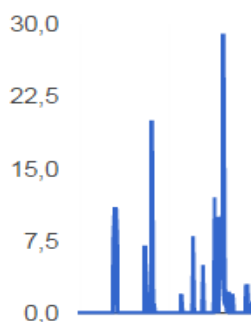

Figure 1: The number of daily responses

The main respondents are students at license, occupying 76%, being followed by masters and Ph.D. students, 22% with just 1.5% (Figure 2). We can say that in our study was imbalanced structure, 140 of them being women, such distribution by gender, being a little cluttered.
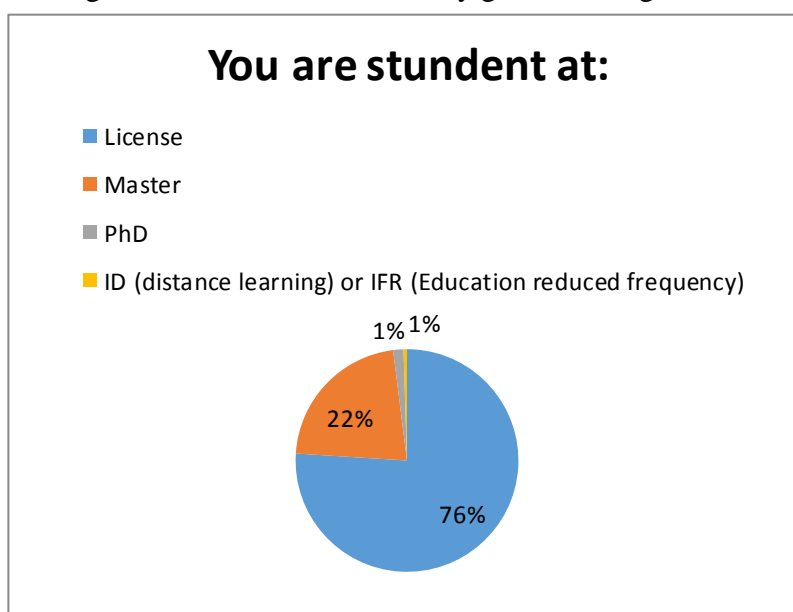

Figure 2. The repartition of the respondents by study

In the next diagram it is presented respondent's age distribution.It can be seen that over 150 of the respondents have between 19-25 years, given the fact that in most universities the education plan is 3 years. This question represents the interval scale, as we can see in Figure 3.
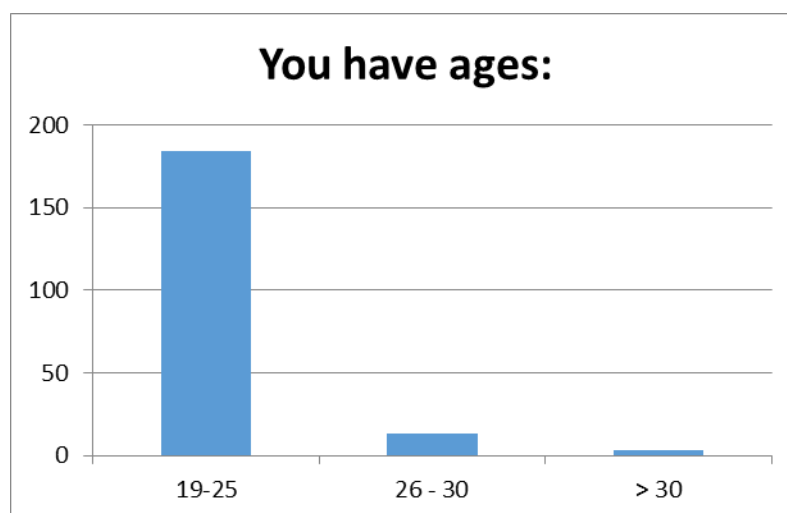
Figure 3. Age of respondents

Regarding the e-learning platforms used, the data shows as follows (examples):
- The Babes-Bolyai University uses Moodle
- The National School of Political and Administrative Studies (SNSPA) uses BlackBoard
- The Academy of Economical Studies uses Blended
- The University of Bucharest uses BlackBoard.

The most relevant question regarding is on e-learning platform used in the university, where we found that the most important is Blackboard, who takes first place, with 71 answers, meaning 36%. Moodle ranked 2rd place, with 39 of the respondent, with a rate of 19%. Other platforms are used in universities with a rate of 33% (Figure 4).

In terms of assessing the characteristics of e-learning platforms, respondents have a good opinion in most cases. We can see the complete results in the Figure 5.

Although time is becoming more and more limited, and the amount of information is very large, from Figure 6 we learn that the e-learning platform is used at less than half of the disciplines. On the other hand, we should draw attention, in the desire to strengthen the process of learning and to complete the educational activity.
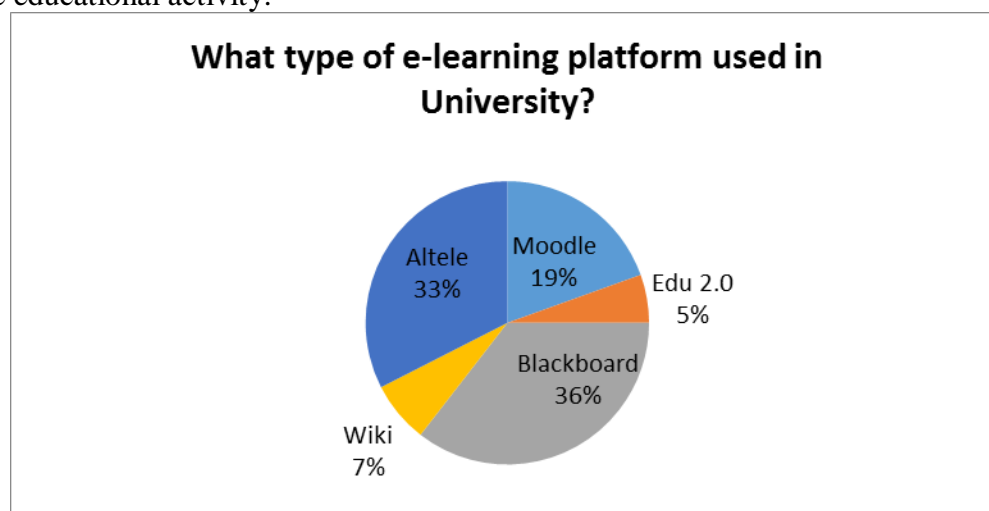

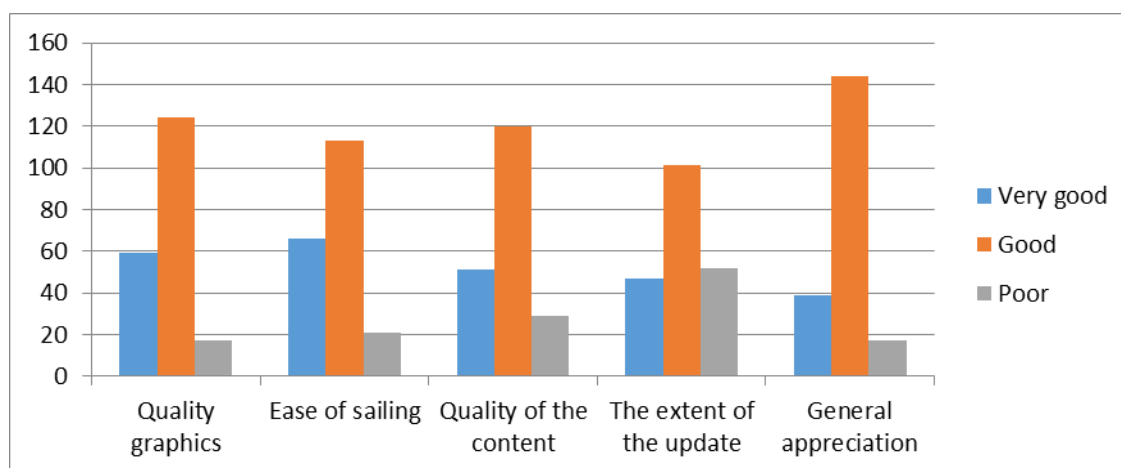Fig. 5. Types of existing platforms in universities

Fig. 5. Evaluation of the characteristics of the e-learning platforms

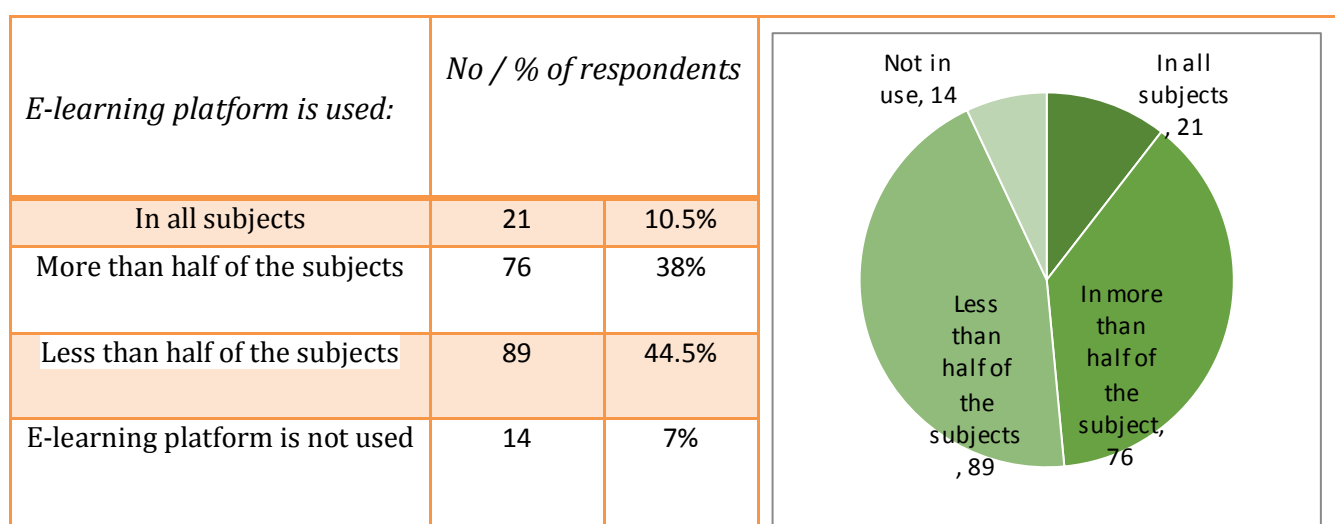| E-learning platform is used:	No / % of respondents	
In all subjects	21	10.5%
More than half of the subjects	76	38%
Less than half of the subjects	89	44.5%
E-learning platform is not used	14	7%

Fig. 6. Statistics on the use of e-learning platform

It can be seen in Figure 7 as no more than 95 people have answered this survey about the fact that utilizes platform on a monthly basis. As with all training, interactive e-Learning includes several categories of activities such as training courses, informal, indirect instruction, community integration, knowledge management, but responsiveness towards new technological means does not manifest itself equally to all categories of age.

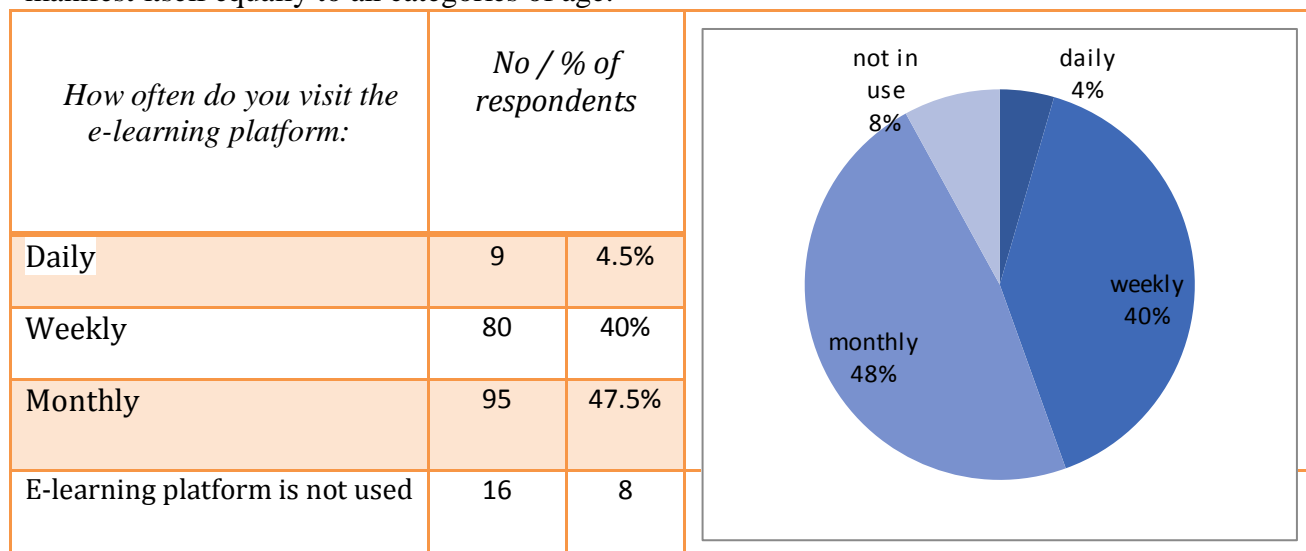| How often do you visit the e-learning platform:	No / % of respondents	
Daily	9	4.5%
Weekly	80	40%
Monthly	95	47.5%
E-learning platform is not used	16	8

Figure 7. Statistics concerning the frequency of accessing e-learning platform

Following the results in Figure 8, we can see that the platform is the most widely used for uploading courses, saving time, can be accessed by all students.

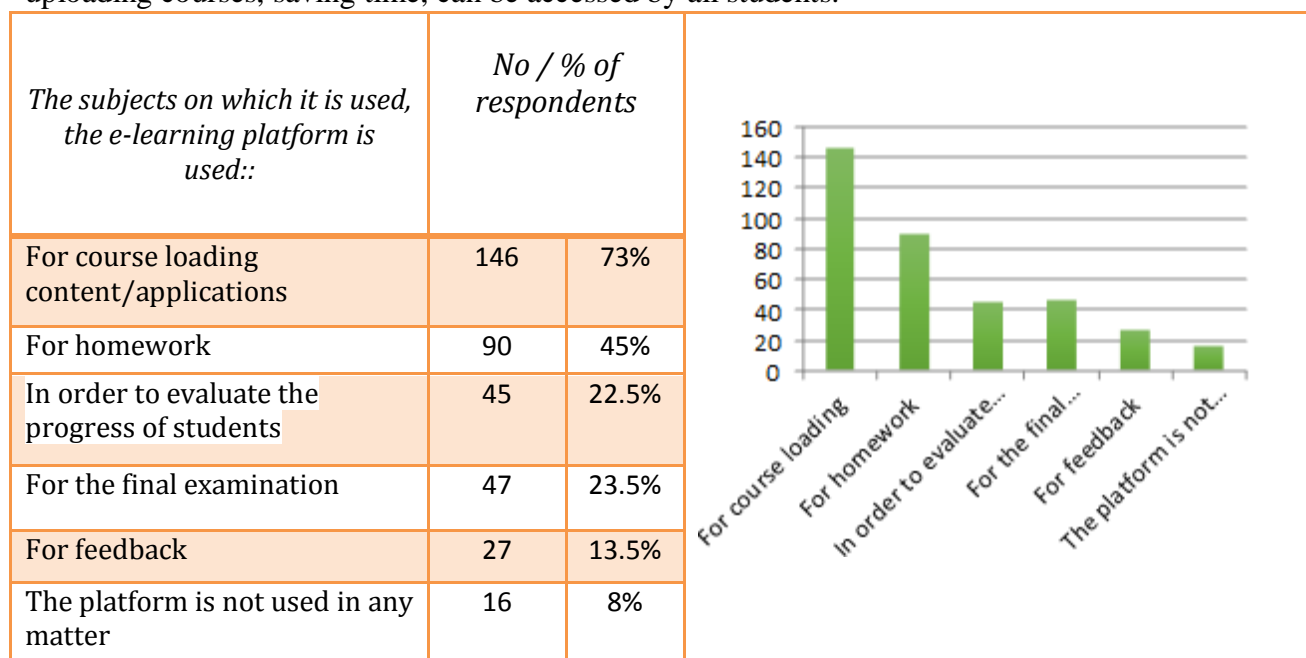| *The subjects on which it is used, the e-learning platform is used::*	*No / % of respondents*		
For course loading content/applications	146	73%	
For homework	90	45%	
In order to evaluate the progress of students	45	22.5%	
For the final examination	47	23.5%	
For feedback	27	13.5%	
The platform is not used in any matter	16	8%	

Figure 8. Statistics concerning the scope of using the e-learning platform

According to the statistics below, 94 of respondent say that there are interactions through the platform, but the slight difference of just one person, saying is no interaction. The answers are pretty close, what makes us think of the real interplay between teacher and student.
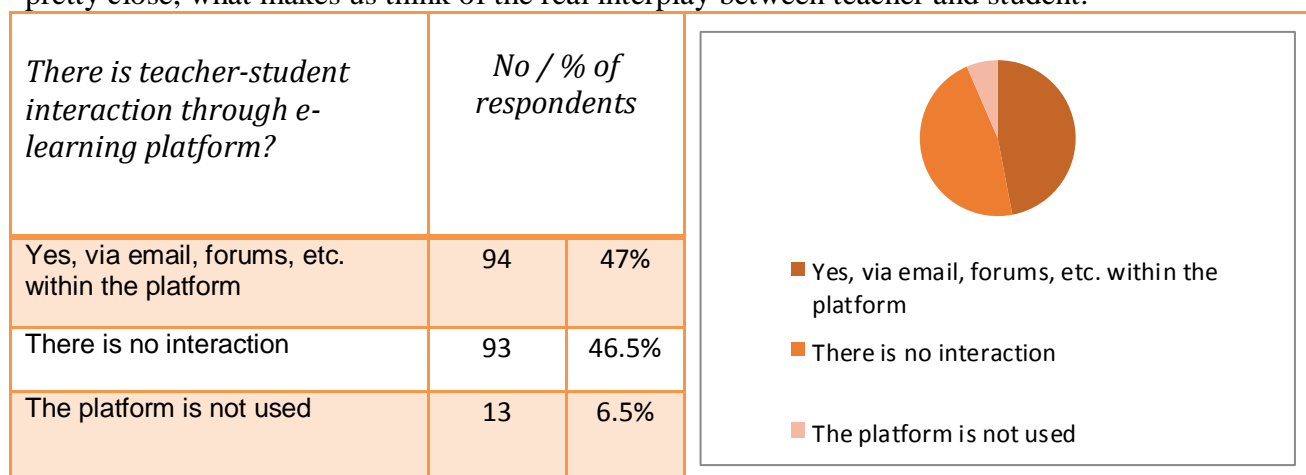
There is teacher-student interaction through e-learning platform?	*No / % of respondents*		
Yes, via email, forums, etc. within the platform	94	47%	
There is no interaction	93	46.5%	
The platform is not used	13	6.5%	

Figure 9. Statistics professor-student interaction through the e-learning platform

3. Final aspects

The paper presents some findings regarding the use of e-learning platforms in non-technical universities from Romania. The performance in the educational organizations like universities is linked to the use of e-learning platforms, which have advantages but also disadvantages. E-learning brings with it a set of extremely important advantages that make it an alternative to classical training: many costs can be saved, the needs of the organization (including an university) and the learners are put on the first place and the methods used provide an effective and pleasant learning [5].

The study is also useful as a state of the art in the field of the use of the e-learning platforms in the non-technical university system from Romania. Also the paper proposes some directions of development of the actual e-learning system in order to grow the performance of the educational act:

1. A better interaction between the student and professor through the e-learning platforms used in non-technical universities;
2. An e-learning platform should be used more and more for evaluation and for feedback from and to professor;
3. The characteristics of e-learning platforms should be improved with the facilities for live courses, etc;
4. An e-learning platform should be used at all disciplines from the educational plan.

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