

# THE “E”-FACTOR OF THE EDUCATIONAL SYSTEM: THE ELECTRONIC PLATFORM

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**Abstract:** *As part of a modern approach towards any (distance) learning system, the electronic platform has started being acknowledged as a useful and valid teaching instrument. The present paper focused on gathering and interpreting data relevant for this assertion, as well as on establishing which factors can influence the possible ascension of an e-platform to the position of a central didactic tool in any future core curricula design. A survey was conducted by the authors on participants in a European project on professional reconversion and the findings both confirm and challenge the assumptions and expectations of the two researchers.*

**Key words:** *e-learning platform, English, Mathematics, didactic tool, questionnaire, professional reconversion, distance learning*

## 1. Introduction

“Challenging knowledge” [2] even by means of using an e-learning platform for the teaching-learning-assessment process has become a modern didactic means nowadays. But has it also become a “must”? Or is it just a new trend according to which a professor can score high when evaluated on the basis of using or not modern teaching aids or instruments? To what extent has the e-learning platform implemented itself as a necessity at a university level [4] and how much of its perception depends on different factors, such as: age of students/professors, minimal skills in using electronic communication on both sides, willingness to adapt to new techniques and instruments of efficient communication between professors and their students and vice versa, etc.?

## 2. Purpose and methodology

This study aims at answering these research questions, gathering data from a survey conducted by the authors of the paper on a number of students participating in the “Professional training of teachers in the pre-university education system for new opportunities in career development”, contract number POSDRU/57/1.3/S/32629 project, a European project of professional reconversion, which was designed as a distance learning process, consequently which used specific instruments for this, one of which was an e-learning platform. The relevance of the findings which came as a result of the quantitative and qualitative analysis of the answers provided by the subjects interrogated is high as the students belong, as well as the authors of paper, to two very different teaching backgrounds: one of them teaches

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English and the other one, Mathematics. This can only cast objectivity over the core-subject of the research, thus of the paper, as it enabled the authors to focus exclusively on the instrument upon which they wanted to undertake research irrespective of their, and logical enough their subjects', professional backgrounds.

### 3. On e-learning platforms

There are, in any distance learning processes, three main types of participants:

1. The authors of the didactic materials – the ones who actually produce the manuals, workbooks, textbooks, students' books, and so on, created according to the specific distance learning template. They can be either a group of content experts or a single professor, but the most fortunate situation is that in which the authors of the materials are also the tutors within the distance learning programme for which they designed the books, so that they can implement the materials themselves and thus benefit from firsthand feedback for any immediate necessary corrections, adjustments or improvements to the materials [7].

2. The administrators of the e-learning platform – the persons in charge with the maintenance of the educational platform and its smooth functioning (management of the platform and of its users, supervision of the IT infrastructure, re/configuration of the hardware and software systems, etc) [8]. These ones, as a result of our personal experience, shouldn't be the same with the persons already mentioned in the first category, out of several obvious pragmatic reasons: lack of time, lack of specialised training, impossibility to cover so many diverse activities which do not make their interest or do not belong to their main expertise, anyway. Last, but not least, another reason would be lack of availability, in case of emergency, of the person in charge with the e-learning platform management just because

that persons happen to be professionally involved in another project, in perfect accordance with this person's main profile, i.e. didactic or research.

In Romanian universities, when the process of implementing e-learning platforms, as distance learning (and not only) instruments, took place, the situation was two-folded: some overlapped the roles, creating difficult contexts, maximum stress and extreme exhaustion for the persons named to administer the platforms, persons who were, basically, professors and not IT support officers; other universities understood from the very beginning the importance of this instrument, consequently the logical necessity to have specialists, i.e. other persons than the teaching staff, manage the platform. An example for the former situation could be our university, UTBv, at least in the first stage of implementing the Moodle platform, while an example for the latter would be, UAIC from Iaşi, where roles were assigned separately from the very beginning.

3. The beneficiaries of the e-learning support – meaning both the students and the tutors [5] (and not only the students, as some may believe).

The utility of an e-learning platform consists of ensuring visibility and transparency in communication, on the one hand, and maximum administrative management, on the other hand. Starting with the educational documents that need to be made available to all the participants, continuing with the applications specially designed to ensure communication between students and professors, professors and students, as well as between students themselves, and ending with tests that can be generated by some platforms under the form of grid tests in a very modern and efficient way, as an application embodied within the platform, everything is posted online, updated each and every time someone brings a correction, posts something or changes

anything and reaches the beneficiaries in no time, as signals can be set to warn the end users about the novelties.

A very modern means of interaction consists of integrating, within the e-learning platforms, “life” transmissions from the amphitheatre/classroom where the professor, physically present in front of a real auditorium, is equally a professor/tutor for the students who are connected “remote” and who, practically, double, or even triple, from a distance, the number of students present in the audience, in the physical setting of the classroom; the “students online”, connected via the internet by means of the e-learning platform, in real time, have the possibility to participate in the class anytime they want, with questions and answers, commentaries and suggestions, as if they were among their fellow students in the classroom [9].

Another way of ensuring the bidirectional/multidirectional character of communication between the tutor and the students, on the one hand, and between students, on the other hand, is by creating the so-called “Web discussion boards”, still within the e-learning platforms; these “Web discussion boards” serve a common range of interests, are organised on “topics” and gather all those enrolled in a certain class, falling into the category of a certain domain of interest [6].

#### **4. Quantitative analysis of the data**

The questionnaires we used as the main instrument to gather our data consisted of 16 question/items, of different types: open-ended questions, multiple choice questions, table completion and were applied on a total of 47 subjects, out of whom 22 belonged to the English programme, while the other 25 to the Mathematics programme. The questionnaires included three dimensions: the first one gathered

information related to the background profile of the interviewees, as described below, and even came as a separate section at the beginning of the questionnaire, before the content-related questions; the second one (Q1-Q9 and Q15) addressed the aspect focused on the didactics of the two subjects studied in the programmes; the third one (Q10 – Q14) represents the main interest for the present paper, as the questions included here refer to the very idea of studying under the form of “distance learning” and emphasise the instrument under interrogation, i.e. the e-learning platform.

The professional background of the subjects interrogated, according to which we could establish the profile of the average interviewee-prototype, is made up of the following pieces of information: age, gender, residential area (rural or urban), main subject taught and experience in teaching. Thus, the profile of the average interviewee – subject of our analysis and object of our interrogation – without completely removing from the equation the inferior and superior limits of the data collected, as the responses of either the too young, or those of the too old may make a difference in certain situations, is a female character (there were only 7 male subjects out of 47), between 30 and 50 years old, having between 11 and 27 years of experience in the teaching field, living and teaching in an urban environment and having a very mixed type of background in point of subjects taught, as follows: the ones who attended the Mathematics reconversion programme were, as expected, graduates of a scientific profile, while the ones who attended the English reconversion programme were, again, as expected, more into humanities.

In what the main interest of the present paper is concerned, we decided to use as raw material, from all the items of the questionnaire, questions number 10, 11,

12, 13 and 14, meaning the ones directly focused on the e-learning aspect of the programmes, while the other items have already been selected to make the object of analysis for another research-paper aimed at interpreting the entire experience of the same subjects and of the same project, but on a different topic: *Gaining competence in teaching Mathematics and English Language in Professional Reconversion Programmes. A comparative study* (Purcaru M., Nechifor A.).

Starting with the students enrolled in the Mathematics reconversion programme, and considering the profile of our subjects, as well as the project-context under which they ended up using the e-learning platform, the majority of the respondents were of the opinion that the fact that the programme they had attended within the reconversion project was offered as a distance learning one represented an advantage, out of several, different reasons: the distance between their home/work places and the location where the tutorials took place – 44%; the very characteristics of the distance learning

programme as a distance learning programme (attendance required only for the tutorials, flexible schedule for structuring the learning process, etc.) – 32%; the modern interaction via the e-learning platform – 24%. Noticeable is the fact that no disadvantage was registered, for either of the 10.4 (0%), 10.5 (0%) and 10.6 (0%) variants offered as possible answers to the same question (Fig. 1).

In what the students enrolled with the English reconversion programme were concerned, the advantages predominated over the disadvantages, but the last ones existed with these students, even if in a very small percentage (5%). Still, in what the advantages were concerned, the item related to the distance between their home/work places and the location where the tutorials took place (45%) was overtaken by the other two reason-items, meaning the characteristics of the distance learning programme as a distance learning programme – 68% and the modern interaction via the e-learning platform – 64% (Fig. 2).

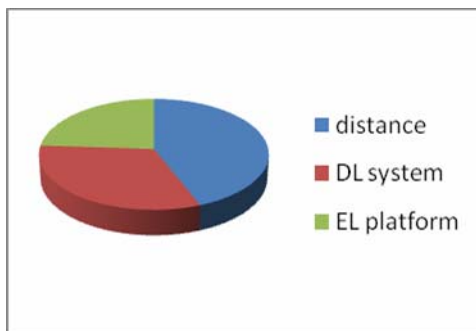


Fig. 1. *Q. 10 for students in Mathematics*

The next question, which took great interest in finding the answer to aspects strictly related to the benefits the e-learning platform could offer to its users [3] gathered the majority of the

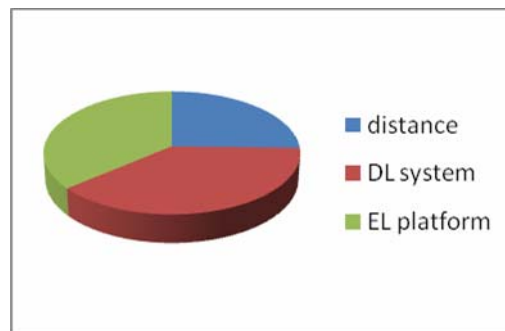


Fig. 2. *Q. 10 for students in English*

percentages in the last two columns of the table, i.e. the ones grading the benefits as “good” and “very good”, with both reconversion programmes (Table 1):

*Q. 11 for students in Mathematics (M) and English (E)*

Table 1

No.	Activity	Very bad		Bad		Neither/nor		Good		Very good	
		M	E	M	E	M	E	M	E	M	E
1	access to the administrative information necessary for the good implementation of the didactic process	4%	5%				5%	28%	41%	64%	55%
2	communication with the tutors	4%	5%	4%				64%	36%	32%	55%
3	communication with the other students enrolled in the same programme	4%	9%	4%	9%		18%	60%	27%	32%	36%
4	access to the information strictly related to the content of the subjects studied	8%	5%					40%	27%	52%	68%
5	upload of the homework/portfolios in order to be sent to the tutors to be graded/evaluated	4%	5%					16%	14%	80%	77%
6	obtain feedback to different questions, homework materials and exams	4%	5%					28%	27%	68%	64%

Mention should be made that, even if with the Mathematics programme, the sum is under 100%, while with the English programme, the sum is over 100%, this is not a result of any miscalculation. This context was generated by the following two situations: either some students decided not to choose any of the variants provided as multiple choice entries (and this would mainly be the case with Mathematics), or some others decided to circle more variants, instead of just one (as it mainly happened with English).

In what the 13<sup>th</sup> question was concerned, the one related to the last step of the teaching-learning-assessment, i.e. the assessment tools, 68% of the interviewees from the Mathematics programme and

73% from the English programme wished for a distance type of examination, as well, via the e-learning platform, as proved by the high percentage of the positive answers to this questions (only 32% of them didn't consider this possibility, with the former programme and only 27% with the latter), but then the traditional heritage of the subjects became more visible when they chose the type of distance examination (even if provided by/via the e-learning platform): 60% of them, from the Mathematics programme, and 59%, from the English programme, in very close percentages, would have liked a grid test, while only 8%, with the former profile, and 14%, with the latter one, opted for video sessions with multiple connections

and answers in real time; there were even two persons, with the English programme, who considered the more classical version,

even if via a modern medium: the uploading of portfolios on the e-platform.

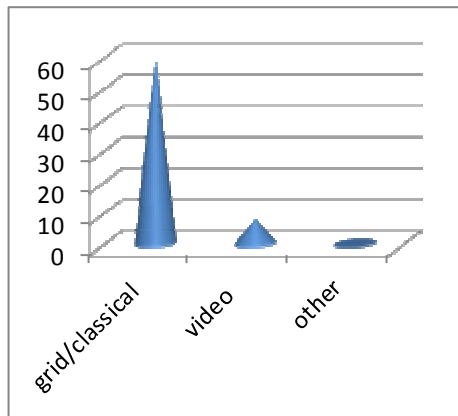


Fig. 3. *Q. 13 for students in Mathematics*

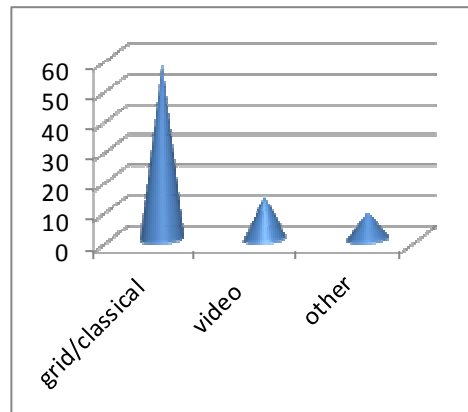


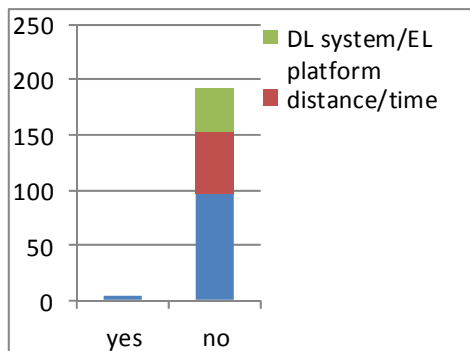
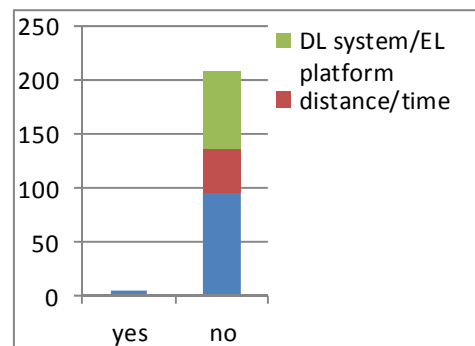
Fig. 4. *Q. 13 for students in English*

Last, but not least, question 14 was aimed at finding whether the students would have wanted this project developed under a classical way or if the idea of the “distance learning” approach appealed to them more and why. The variants offered as possible answers to this questions were: “yes, because the idea of studying a whole new subject involves more face-to-face meetings with the teacher”, “no, because in this way I couldn’t have participated in the classes, out of time and distance constraints”, “I consider that the idea of blending tutorials with individual study, supported by the existence of the e-learning platform which opened the dialogue with the tutor and with my colleagues represented a good enough approach”, in this order.

With the students enrolled in the Mathematics programme, placed the idea of the distance learning programme and its features, consequently its main instrument – the e-learning platform, prone to overtaking the traditional type of classroom teaching, considering that 40%

of the answers favoured it, as opposed to only 4% who supported the “classical” approach towards the teaching-learning-assessment process. Still, 56% of the subjects, even if they chose distance learning over classical classroom learning, selected another explanation for their choice, without necessarily embracing the facilities offered by an e-learning platform, the distance and the time variables being more important to them (Fig. 5).

Surprisingly enough, the answers of the students enrolled with the English programme were a little different, as they drew more on the positive effect the existence of the platform had had on the subjects and their working with it, taking into consideration that 73% chose to praise the blended tutorial-e-platform system, while 40% of them simply recognized the advantage of the DL system in itself, without necessarily emphasising the importance of the e-platform. A minimum of 5% of the respondents still favoured the classical approach over the DL one (Fig. 6).

Fig. 5. *Q. 14 for students in Mathematics*Fig. 6. *Q. 14 for students in English*

### 5. Qualitative interpretation of the data, discussions and conclusions

Starting, on the one hand, from the profile/prototype of the average interviewee – former student in the programme – as drawn in the first part of the paper, and, on the other hand, from certain assumptions that one of the authors of this paper relied on, as part of her experience as an e-platform administrator and trainer, the findings of the data collected as a result of the quantitative analysis dealt with above can be described as surprising, as well as, confusing.

Firstly, as participants in and graduates of courses of training focused on distance learning and its characteristic features, as tutors with distance learning programmes and as authors of manuals for this process, as well as, as already stated in the previous paragraph, trainer and administrator of an e-learning platform, in other words, as participants in this type of teaching system from all three positions, in perfect accordance with the theoretical background provided for this paper at the beginning: authors/tutors, administrators and beneficiaries, the authors of this paper were pleasantly surprised to learn how the middle-aged and old generation of teachers managed to embrace the idea of

new and adapt to its implementation, under the form of technological development in educational communication. If we go back and try to interpret the answers, almost no disadvantage was registered with respect to the idea of distance learning and the usage of the e-learning platform, with a high percentage of the subjects praising its existence, and with qualifications of “good” and “very good” when it came to its benefits. For further research, the authors of this study intend to use the data related to the number of persons enrolled in the two programmes having accessed the platform, to divide them according to age, gender and subject studied and to compare them both against each other, as well as against the very answers the same students provided as interviewees to this questionnaire.

Secondly, as enthusiasts of the optimism clustered in the previous paragraph, the fact that the e-learning platform is still a partially discovered instrument by the users interrogated determined us to use “confusing” as the other adjective to describe our findings. Some of the answers to the last two questions brought about this inconsistency in the opinions expressed which was proven starting with the fact that no other means of assessment were suggested by

the subjects in the blank spaces offered by the questionnaire, thus generating one of the conclusions our study reached (see below) and continuing with the inability to acknowledge why the e-learning platform is good, after the subjects voted it as “good” and “very good”, but then chose other explanations for why they liked it, without being aware of its performance as a distance learning instrument in itself, by choosing other variables, i.e. time and distance, as arguments for using it.

In conclusion, the necessity to offer training sessions to the end users at the beginning of the process of working with a platform, even if they think they are familiar to it, as it may very well happen for them to know how to make use of only the basic buttons/commands of the board and be “innocent” with respect to the more interesting and complicated ones, has become a “must” for the authors of this paper, in light of the findings of their research. Even though this would be time consuming and very difficult to be put into practice, the beneficiaries need to belong to a community of skilled end-users in order to benefit from all the facilities such a modern educational instrument can offer.

Moreover, the creation of a real “culture” with respect to e-learning platforming should arise, as only by means of being “trendy” and “in fashion” can sometimes provide results with implementing serious approaches towards changing mentalities, even in education, with all its administrative laboratories of educational tools and instruments for the teaching process: e-learning platforms can be used not only for distance learning programmes and not only in universities, as openness to the idea exists, and factors such as gender, age or professional qualification in point of scientific or

philological background do not stand in the way of such an endeavour, as optimistically proven by the study under discussion.

There should be only willingness, both on behalf of the implementation/decisional bodies and on that of the beneficiaries [1]. And the project that this paper based its research and documentation on was a case in point.

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