SOME ASPECTS REGARDING CONTINUED TEACHER TRAINING FROM BIHOR COUNTY, ROMANIA, USING E-LEARNING

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Abstract

According to the European Commission, e-learning can be defined as the use of new multimedia technologies and the Internet to improve the quality of the learning process, access to resources and services, as well as remote exchanges and collaboration. Therefore, e-learning can be understood as an innovative, interactive and student-centred approach to the educational process. Although the advantages of e-learning are obvious, in Romania the e-learning system is only in its initial stage, and the process of teachers' continued training is almost nonexistent. This research is an important activity within the project entitled "Inter-regional network of e-learning training for teachers in pre-academic education", which aims to provide teachers with the opportunity to browse on-line courses for life-long /continued education. The objective of this study was to explore teachers' opinions on the usefulness of information technologies, as well as on the difficulties and the opportunities that arise from using these new technologies for continued training. The sample consisted of 200 teachers who teach in preschools and in primary schools in Bihor County, Romania. As research method a 14 item questionnaire was used, out of which only 4 were analysed within this research. The results of the study show that most teachers use computers for accessing and processing information, their main difficulties being related to the absence of direct and immediate feedback, while the main advantages are given by the special opportunities for personal and professional development. In such circumstances, regardless of chronological age, training teachers using e-learning is a huge challenge, since 79% of the respondents answered that they wanted to participate in such educational programs.
Key words: *continued training, e-learning, teachers' attitude.*

Introduction

In order to keep pace with the European trends in the field of education, the Romanian educational system has seen a significant development in recent years. Thus, the traditional educational process, based on the direct relationship between teacher and student in a real environment, has been broadened with the e-learning training process, in which the relationship between the two educational players takes place in a virtual world (Blândul, 2005, p. 48). According to the European Commission, e-learning can be defined as the use of new multimedia technologies and the Internet to improve the quality of the learning process, access to resources and services, as well as remote exchanges and collaboration. E-learning should be understood as an innovative and interactive approach that focuses on the student, manages a huge quantity of up-to-date information, offers the student the opportunity to work individually, intensely, in order to solve some specific tasks, while respecting their personal study pace so that each student has individual autonomy over their educational tasks and the time needed to carry them out (Marinescu, 2009, pp. 80-81).

Problem of Research

Based on these statements, it is easy to understand the major impact on-line learning has upon the young generation. E-learning platforms are more and more often used at different educational levels as ways to support the accomplishment of the educational process (Cucoş, 2006). Thus, an aspect that should not be neglect is that the e-learning system aims to familiarise users with the computer, which is regarded as a study tool and not only as a way of socialisation or entertainment. In such circumstances it is not surprising that students who use virtual learning platforms are usually not only better involved in the training-educational process, but also have better academic results (Salguero et. al, 2007, p. 415).

A great number of experts in education and in informatics have worked on creating on-line learning platforms to help improve students' school performances. The first such educational steps were taken in the teaching of technical subjects. As an example, it is worth mentioning the project of Toyoda et. al (2007, pp. 1222-1229) during which a group of 18 engineering students were taught bridge building techniques. The e-learning training tool consisted of a Web Based Training (WBT), which included the most relevant information needed in the construction of civil buildings. The results showed that those students who used WBT not only improved their civil engineering theoretical knowledge significantly, but also their abilities to apply this knowledge in practice.

Research Focus

E-learning platforms have proved their efficiency not only in technical fields, but also in teachers' continued training. In Romania, the project called *"Inter-regional network of e-learning training for teachers in pre-academic education"*, co-financed from the European Social Fund through the Sectoral Operational Programme for Human Resources Development 2007-2013, has as general objective developing the competences of teachers working in pre-academic education by involving them in an e-learning based continued training program included in the educational offers of the Teacher Training Departments of various universities. The target group consists of 1400 teachers in preschool and primary education from various areas of the country, that is, north-east (Iaşi, Suceava and Neamţ counties), south-east (Galaţi county), as well as north-west (Bihor county). These teachers will preferably come from rural areas and they will receive financial support to purchase information technology equipment and Internet services. The project started in 2010 and will come to an end in 2013. Its results will be an e-learning based accredited training program provided at national level, an inter-regional e-learning training Centre, 32 courses in electronic format adapted to the needs of training, 1400 teachers who have taken part in continued training sessions and so on. One of the prime activities of this project was to assess the training needs of teachers in preschool and primary education. The study was conducted in all five counties included in the project, with 1000 respondents altogether, and its results will be used to prepare the e-learning based training courses that will be given to the beneficiaries of the project. For the present article, however, only those aspects of study will be detailed that refer to Bihor County.

Methodology of Research

Research Objectives

For the current study the following objectives were set: *(1)* exploring teachers' opinions regarding the usefulness of new information technologies, as well as on the difficulties arising from using them in continued training; *(2)* highlighting the relation between willingness to take part in training and the participating teachers' chronological age. In order to meet these objectives, the subjects of the research were grouped into two age categories – those up to the age of 50 and those over the age of 50 –, as the starting hypothesis was that teachers below the age of 50 would show more willingness to participate in e-learning based professional training than those over that age.

The Sample of Research

In Bihor county, the sample consisted of 200 teachers (N=200), who were chosen based on their qualification (at least the Didactic Competence Certificate), basic knowledge / competence in information technology and communication, their willingness to take part in an e-learning based continued training program, as well as no previous participation in similar other programs in which they had reached 90 ECTS credits. Statistically, out of the 200 teachers in Bihor county included in the sample 171 (85.5%) were females and 29 (14.5%) males; 161 (80.5%) were below the age of 50 and 39 (19.5) above 50, the group's average age being 37.97 years; 20 subjects (10%) were beginner teachers, 23 (11.5%) obtained qualified teacher status, 51 (25.5%) – 2ⁿᵈ teaching level, and 96 (48%) – 1ˢᵗ teaching level; 54 people (27%) were preschool teachers, 112 (56%) primary school teachers, 23 (11.5%) – primary school teachers with college degree, and the other 11 subjects (5.5%) – highly qualified teachers in primary school teaching.

Instrument and Procedures

As research method a questionnaire based survey was used, and the corresponding tool included 14 items grouped in the following categories: participation of Bihor county rural area teachers in other continued training programs, their willingness to take part in e-learning based training, the motivation behind the option for e-learning training, self-assessment of competence in using information technology equipment, opinions about the importance of knowing and using NTIC, access of teachers to new multimedia technologies, Bihor county preschool / primary school teachers' need for training in psychopedagogy, For this study only those items were taken into consideration which asked the subjects' opinions on the usefulness of computers / Internet in school life, the difficulties of e-learning based training, as well as those asking them to identify their personal training needs in psychopedagogy. The study was conducted in March and April 2011. Quantitative interpretation of the results was done by calculating the averages of the scores provided by the respondents, the answers being then arranged in a hierarchy and processed statistically with the help of specialised programs and presented in tables. Qualitative interpretation was done by calculating the Bravais-Pearson correlation coefficient (r) between the respondents' willingness to take part in e-learning based training and their chronological age, the results obtained in this way being then   matched against the significance threshold in order to confirm the hypothesis of the study.

Results of Research

The results obtained from the quantitative interpretation of the data provided by the respondents were the following.

Table 1. Average based ranking of opinions on usefulness of information technologies.

Opinions	Minimum value	Maximum value	Average	Rank
The computer is a means of accessing information	1.00	6.00	5.9150	I
The computer is a means of processing information	1.00	6.00	5.7200	II
The computer is a means of personal development	1.00	6.00	5.6700	III
The Internet is a means of accessing information	1.00	6.00	5.3800	IV
The Internet is a means of updating information	1.00	6.00	5.2450	V
The Internet is a means of personal development	1.00	6.00	5.2100	VI
The Internet is a means of learning and training in the virtual space	1.00	6.00	5.0550	VII

The results in the table above show us that the opinions of Bihor county teachers included in the sample are grouped around the following indicators: the computer / the Internet seen as means of accessing / processing information, the computer / the Internet seen as means of personal development, the computer / the Internet seen as tools needed in the teaching activity. These statements also show the succession of purposes followed by teachers when they use a computer connected to the Internet: to access / to process / to update information, either for personal development or to be used in the teaching process.

Table 2. Ranking of opinions regarding the difficulties of information technology based training.

Opinions	Minimum value	Maximum value	Average	Rank
Face to face interaction is limited	1.00	6.00	4.0150	I
Insufficient direct feedback	1.00	6.00	3.8400	II
Poor Internet connection	1.00	6.00	3.7350	III
Reluctance to use new technologies	1.00	6.00	3.6350	IV

Bihor county teachers claim that the main problems in connection with using IT for continued training are the limited direct interaction between the people involved in the training, as well as the insufficient feedback during communication, their personal reluctance to use NTIC, and the difficulties they face when they have to do that, or poor Internet connection. The teachers' competence in using computers and the Internet could be discussed here, as it is probably not good enough for such an activity, which, in their opinion, is by far more demanding. Otherwise, on top are the problems connected with the lack of face to face communication, which are already known from the professional literature.

Table 3. Average based ranking of the need for psychopedagogical training.

Need to develop some psychopedagogical competences	Minimum value	Maximum value	Average	Rank
Using active teaching / learning methods	1.00	6.00	5.1100	I
Designing extracurricular activities	1.00	6.00	5.0603	II
Planning and designing teaching activities based on the new methodologies	1.00	6.00	5.0150	III
Efficient management of problems relating to school discipline	1.00	6.00	4.9750	IV
Using strategies that motivate children	1.00	6.00	4.9350	V
Conceiving children's evaluation tests	1.00	6.00	4.6400	VI
Management of educational projects	1.00	6.00	4.5050	VII

The results in the table above show us that the training needs of those Bihor county teachers who were included in the study are connected above all with meeting the requirements of the traditional teaching process. Thus, on the first places the need for training teachers in using modern teaching strategies can be found, as well as in successfully designing curricular and extra curricular activities. On the next place there is another problem that is extremely important for a successful classroom teaching activity: the management of pupils' behaviour. The last place is taken by the teachers' need for training in the management of educational projects, which might be explained with teachers regarding that as not strictly connected to the teaching work and more as something that is the responsibility of school managers. Thus, it can be retained that the teachers' primary needs for training are in the fields that are strictly connected to the teaching activity performed in the classroom with pupils.

Table 4. Relationship between the willingness to take part in e-learning based training (item 14) and age (two age categories: below 50 years, and above 50 years).

		Age categories		N	Pearson Correlation
Bihor County		Up the age of 50 including it	Over the age of 50 including it	200	
Willingness	No	30 (76.9%)	9 (23.1%)	39	r -239, p=0.001
	Yes	128 (79.5%)	33 (20.5%)	161	

The results in the above table show the significantly higher willingness of Bihor county preschool / primary school teachers below the age of 50 to take part in e-learning based training than that of their colleagues who have exceeded this chronological age. The teachers' computer skills could be discussed again, with more opportunities for the younger ones, as well as the openness towards new multimedia technologies.

Discussion

The qualitative interpretation of the results presented generates extremely interesting discussions. A first aspect that deserves discussion is the usefulness teachers give to information technology in school life. The professional literature (Marinescu, 2009) insists on the idea that

in school the computer has a role primarily in the teaching process. Thus, by using e-learning platforms, teachers can monitor the effect of teaching activities on pupils, being also able to assess the acquired school behaviours. On the other hand, pupils can learn in their own pace, they can self-assess the knowledge / skills acquired, and they can give their teachers real time feedback (Li & Cui, 2011, pp. 283-284). In Romania things are a bit different. Here, also in schools, the computer / the Internet is used to access information on various websites, as well as for the user's personal development, its use for teaching / learning / evaluation taking only the last place (M = 5.05, see Table 1). What might be the motivation behind this option? Kopp et. al. (2008, pp. 83-92) conducted a study in which she asked a sample of 117 American students to identify the reasons that might make them use e-learning platforms. The results showed that students interest in e-learning increased significantly when in the process of conceiving the learning design the fundamental principles of education were used. These principles are: active and conscious participation, unity of sensorial and intuitive, continuity and logical structure of information, accessibility, connecting theory and practice, as well as sustainability of acquired knowledge (Nicola, 2000, pp. 346-356). With the way it structures information, the Internet seems to be more like a source of storing information than one that encourages teaching / learning / evaluation. The presence of professionals with a background in psychopedagogy, who have been trained in organizing the virtual teaching process in a scientific and educational way, is vital for on-line learning. Unfortunately, in rural Romania there are few such professionals, which might explain the use of the computer / the Internet first of all for infotainment / entertainment.

Another aspect that is worth discussing is the psychosocial dimension of learning in the virtual space. Kurbei et. al. (2009, p. 207) identifies as the main advantage of e-learning systems the individualisation of learning to students' personal study paces, as well as the quick feedback from the teacher. However, the subjects in our research complained about these very problems: limitation of "face to face interaction" and insufficient feedback. As far as this aspect is concerned, Olofsson and Lindberg (2006, pp. 7-20) have conducted a study in which they tried to understand the depth of psychosocial interactions among trainees using a virtual learning environment. The sample included 19 Norwegian beginner teachers and the research method consisted of a semi-structured interview. The results of the study underlined the importance of social contacts in an on-line learning environment too, and for this reason any e-learning based continued training should also include some direct physical meetings between trainees and teachers. Based on these findings, we will insist on the „facilitator" role any teacher-coordinator should play in an e-learning based program, a role that involves encouraging trainees to communicate with each other, to share the problems they face and the solutions they find, as well as organising a number of direct meetings during which all these needs should be discussed and sorted out.

A third aspect discussed here is Bihor county preschool and primary school teachers' need for psychopedagogical training. The quantitative data show these teachers' concern for acquiring competences needed for a successful teaching process. The discussion that is worth holding here is about the way on-line information should be organised so that it can be assimilated correctly by the trainees. In a study conducted by Schmid et. al. (2009, pp. 235-247), the authors found that on-line information was presented in three ways: as static images, as animation and simulation, and as animation and simulation with active involvement of trainees. It is obvious that the best results were obtained in the third case, which reinforces the need for the trainee's active and conscious participation in the process of their own training. As Bihor county teachers seem to understand this reality, they want to acquire new, modern interactive teaching / learning / evaluation strategies, which they can later apply in the traditional classroom teaching activity too.

Eventually, the last aspect discussed in this paper is the relationship between the subjects' age and their willingness to take part in e-learning based training. The hypothesis that teachers' willingness to take part in such training would depend on their chronological age was confirmed by the results, people below the age of 50 being more interested to participate in such programs than those who were older. Similar results were obtained by Kabugo (2011, pp. 156-165) in a study conducted with a sample of 244 teachers from 6 departments of Makerere University. The author demonstrated that teachers' willingness to use e-learning platforms was strongly linked to age and computer literacy, the younger ones being better prepared and more open to use on-line learning for professional advancement. There might be a similar situation with our sample of teachers. The young generation have grown up and developed together with the computer and the Internet, their digital competences being just as well built as those of reading / writing. As a result, it is not at all surprising that young people are receptive to new things and willing to develop using e-learning. On the other hand, the teachers over the age of 50 were educated in another environment, with a different mentality, and most of them prefer the traditional way of training. In addition, despite living in the country, the majority of teachers have access to computers and the Internet, both at school and at home, a fact that might be a first encouraging step towards preferring professional training based on e-learning.

Conclusions

In summary, it can be concluded that the majority of the Bihor county teachers included in this study want to take part in e-learning based continued training programs, although so far for most of them the computer / the Internet have not been more than sources of infotainment / entertainment. The main problems faced are connected with the insufficient direct contact / feedback, things they have been used to during traditional courses and which they miss now. The need for continued training is linked to a need to deepen the knowledge of modern strategies that are useful in the daily classroom activity, as well as of those connected to the management of crisis situations that arise during the educational process. It is good news that the majority of teachers – the younger ones in particular – want to take part in e-learning based training and develop in this way both their professional and digital competences.

Based on the previous comments, a series of recommendations offer themselves:

1. When designing an e-learning platform for professional training, the content to be taught, the requirements of the educational principles, as well as the psycho-individual characteristics of the potential trainees, will be taken into consideration;
2. The management of an e-learning based training program will also take into account both the psychosocial dimension of the relationship between trainees and between them and their teachers, encouraging regular "face to face" meetings;
3. E-learning platforms will be designed so that they encourage trainees' direct involvement in their own training and encourage them to transfer the experiences gained in this way in the everyday classroom activity by using modern teaching / learning / evaluation strategies;
4. All teachers, regardless of their age, should develop their digital competences and develop mentalities opened towards new ideas, these two conditions being vital for the acceptance of e-learning based professional training.

It can be said at the end that teachers' e-learning based training is an absolutely natural way of continued training in the knowledge based world we live in. However, even if the process takes place in the virtual world, all principles of traditional education, those that belong to the "face to face" interaction, should be strictly observed. Such a system of continued training is a challenge both for the trainees and the trainers, which will lead inevitably to an improvement in the quality of the educational process in Romania.

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