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LIFELONG LEARNING: THE EUROPEAN DIMENTION OF TRAINING TEACHERS OF FOREIGN LANGUAGES IN ICTs AND CONCLUSIONS DRAWN FROM THE PROJECT EP.E.N.D.Y.SH.

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ABSTRACT
Information and Communication Technologies (ICTs) need to be equally distributed in all public schools, in order for learners to be given equal opportunities in the Information Society. To this end, all schools should be equipped with the standard infrastructure – computer labs, hardware, peripherals, software – and with well trained human resources. Teachers are the mediators between learners and the New Technologies and have the responsibility to initiate learners in a new, constructivist way of thinking, behaving, and problem solving. To this end, we need to train teachers in order for them to acquire the skills necessary to integrate ICTs into their courses and help their students attain knowledge in a constructivist way. After a reference to European teacher training initiatives, we will investigate how successful such initiatives are from the teachers' point of view and particularly from teachers of disciplines that, though not affiliated with computer science, are highly promoted and enhanced by ICTs, such as foreign languages. Finally, conclusions will be drawn regarding the optimisation and effectiveness of training programmes for teachers of foreign languages, based on research taken at the University of Macedonia during the teacher training project EP.E.N.D.Y.SH.

KEYWORDS: Teacher training, foreign languages, cognitive learning theories, ICTs.

INTRODUCTION

Information and Communication Technologies (ICTs) need to be equally distributed in all public schools, in order for learners to be given equal opportunities in the Information Society. To this end, educational curricula are being restructured and schools are equipped with the standard infrastructure – computer labs, hardware, peripherals, software – and with well trained human resources. Teachers are the mediators between learners and the New Technologies and have the responsibility to initiate learners in a new, constructivist and collaborative way of thinking, behaving, and problem solving. To this end, we need to train teachers in order for them to acquire the skills necessary to integrate ICTs into their courses and help their students attain knowledge in a constructivist way. It is evident that Europe reinforces an interdisciplinary approach to education, which associates knowledge with authentic everyday life. Teachers experience a 'renewed teachership'[7], their new role as student counselors and planners of authentic educational environments. After a short reference to European teacher training initiatives, we will investigate how successful such initiatives are from the teachers' point of view and particularly from teachers of disciplines that, though not affiliated with computer science, are highly promoted and enhanced by ICTs, such as foreign languages. Finally, conclusions will be drawn regarding the optimisation and effectiveness of training programmes for teachers of foreign languages.

THE STATE OF THE ART IN EUROPEAN INITIATIVES

Teacher training initiatives belong to the vocational training and adult learning sector. Their target group is in-service adult teachers who are expected to get in-depth training that will be directly applicable in their profession. Accordingly, the training period consists of both theoretical and practical sessions that help teachers not only attain theoretical knowledge of the new learning methods and teaching approaches but also experiment and test the attained knowledge in practice.

To achieve communication, collaboration and professionalisation for teachers and trainers, we need flexible, cost-effective, usable and asynchronous environments and meeting places that can be materialized via the exploitation of ICTs. The need towards the setting of European Standards in TT, such as Transnational TT syllabi and curricula, is therefore obvious. We can also move one step ahead, by setting a European teachers' network for every discipline, providing teachers' exchange, in-service training, events, presentations, cooperation between interested groups, partnerships, on-line meetings, projects/meetings announcements, transnational activities, common strategy, pilot studies and research results.

Current European initiatives [1,3,5,11] invest billions in teacher training (TT) and have common grounds and objectives. The organisation, the content, and the outcomes of a TT course are of major importance and different trends seem to exist. Especially in the field of course content, there is rivalry between those persisting in the instruction of educational packages and those following a more 'open' training strategy [4].

The eLearning initiative, at a trans-European level, aims to train teachers in ICTs and network the European schools in order to meet the demands of the Information Society [7]. In the premises of the eLearning initiative, a number of projects with notable results and deliverables are currently running. Netd@ys Europe is an initiative of the European Commission to promote the educational use of new media in the areas of youth and culture, providing an open platform for those willing to showcase their experiences of educational and cultural networking. European Schoolnet [8] is an international partnership of more than 20 European Ministries of Education catering for the use of ICTs in European schools. Lingu@net Europa [13] is a web site with LL resources on education and training in most European languages as well as an online meeting center for teachers of foreign languages. Finally, TTnet is an initiative of CEDEFOP, hosted on the Electronic Training Village [6] is a site that issues online documents regarding annual reports on teacher training initiatives from all European countries.

On a national level, the great project ODYSSEIA has four components: school equipment, school networking, educational software development and teacher training. Greek teachers of secondary education can get informed and communicate at the Greek School Network [10], a personalized, resourceful and frequently updated portal. The EDUnet initiative aims to network all public schools with the appropriate technical infrastructure. Innovative educational software with e-slate technology has been developed by CTI. Finally, the project EP.E.N.D.Y.SH (Training of Trainers in the Modern Network and Information Systems) focuses on the fourth direction and provides one-year postgraduate training courses for in-service secondary education teachers, who are trained to provide in-school training for their colleagues.

METHOD

The Trainees (Ts)

The project EP.E.N.D.Y.SH run for two years at the University of Macedonia. The Ts of this study were twelve FL teachers who were selected on the basis of their 'personal qualities [and] intellectual abilities' [14] regarding their personal data, formal qualifications and teaching/training experience that were viewed in their 'expression of interest' application form and during a personalized interview. Their age spanned between 25 and 40, while their affiliation with new technologies before the programme ranged between very good and average. Therefore, we assume that they were motivated to participate in this programme, due to the fact that they were responsible of expressing interest and they were computer literate, at least at an initial stage.

The Questionnaires (Q1 & Q2)

We constructed two comparative questionnaires; the first handed in trainees at the beginning of their training and the second at the end. The second period Ts' training at the University of Macedonia officially started in September, 2001, when the first questionnaire (Q1) was distributed and ended with a graduation ceremony in mid December 2001, the date when the second questionnaire (Q2) was handed in. The Qs were structured on the basis of Q construction standards in the field of educational research [18]. The objective was to ensure comparable and valid results and prove the trainees' professionalisation and their attitude towards the ICTs. Q1 had four sections: Personal Data, Affiliation with ICTs, Affiliation with Educational Technology and Teacher Training. Most questions were close-ended, "Yes or No" and multiple choice with many options for teachers to choose, in order to get more accurate results. With Q1, we wanted to measure the degree of teachers' affiliation with the ICTs and Educational Technology before their training. Q2 had five sections, Lectures, Learning Material, Achievement of Programme's Objective Percentage, Training and Personal Evaluation of the Skills Acquired, comprised of 24 closed-ended five-scale or three-scale questions and two to three open-ended questions at the end of each section. The over-use of closed-ended questions was due to the fact that they produce more accurate and measurable results, and they do not require long time to be completed by the Ts avoiding the Ts' loss of patience or frustration and the resultant improvised completion of Q2. The questions were short, direct, carefully structured and focused on one topic, in order to avoid ambiguity and to ensure that Ts fully perceived the author's queries.

Results from Q1

According to Q1, the Ts' main expectations from the programme were to learn how to integrate the ICTs in their lesson, to get professionally updated, and to broaden their academic and technical knowledge for personal satisfaction and use. Regarding computer literacy, most Ts claimed second-class knowledge. However, the majority Ts had a PC and Internet access, using them almost everyday for personal updating, for example reading newspapers, and not for educational or administrative reasons, for 5-8 hours per week. Also, the majority of Ts had an e-mail account, using it everyday or thrice per week, in order to communicate with friends and colleagues. Regarding the standard computer applications (Office), all trainers seemed to know Word, half of them knew how to use Excel and PowerPoint, and nobody new Access. As far as educational technology is concerned, the majority believed in its substantial role in foreign language learning, while a minority regarded it as an additional course delivery mechanism and instructional medium. In the question if they have ever studied about Computer Assisted Language Learning (CALL), half of the Ts said that they had been passively engaged with it, by attending seminars and conferences or by getting informed by the mass media. The majority had never been actively involved with CALL and had never used any educational, web-based or not, software. Finally, the Ts were asked to evaluate various delivery mechanisms for their training programme. They all agreed that the best way for programme delivery was via lecture and practical training on the computers. Simple lectures with notes and bibliography were considered as the least useful instruction method. Computer conferencing was considered average, while collaborative learning ranged from average to very good. To sum up, the majority of Ts had an average computer literacy, with passive or no experience in educational technology but with a positive attitude towards the integration of ICTs in education.

Results from Q2

The first section of Q2 asked Ts to evaluate the knowledge they gained from the 'vertical' (discipline oriented) lectures regarding the pedagogical use of the ICTs in FL teaching. The overall impression was good. The Ts declared that they received good theoretical training regarding the educational value of computers in Foreign Language Learning. However, they claimed that they received average practical training regarding design, authoring and programming of educational materials. In addition, the unit concerning teaching techniques with ICTs was also marked as average. The first section also asked Ts to evaluate the knowledge gained about the specific pieces of educational software and the authoring tool (*FrontPage*) taught. All Ts agreed that they received very good training on *WIDA* and *Hot Potatoes*, good training on *English Discoveries* educational software, but average training on *FrontPage*. Ts also stressed the need of more hours of practical training on a wider range of educational software.

The second section dealt with the quality and quantity of the learning materials presented and offered to the Ts. Three types of materials were presented and evaluated: printed materials, software and web-based software. Ts were trained in how to use, integrate and evaluate such learning materials. As regards the materials' quality, Ts' opinions were divergent. According to the them, the quality of printed materials ranged from very good to average and the quality of software from average to poor. The web-based software together with the overall estimation regarding materials' quality was evaluated as average. Concerning the quantity of learning materials, the Ts agreed that they received a satisfying amount of printed materials, but their opinion on software and web-based software quantity ranged from good to below average. In the open-ended question, asking Ts to identify the best piece of software that would be serviceable in the Greek secondary education sector, they all named *Hot Potatoes* and *Xenios*, an e-slate learning environment and authoring tool, developed by the Computer Technology Institute [2] in order to be taught to in-service FL teachers and to be distributed to all Greek secondary schools. This unanimity in an open-ended question is indicative of the fact that Ts did not receive training on a large number of foreign language teaching packages and they only focused on the very limited number of the packages that were going to be distributed to public schools.

The third section of Q2 measured the degree of attaining the objectives of the programme and specifically the skills acquired on the general use and integration of ICTs in a FL environment. The Ts considered as average the skills they acquired in computer hardware, multimedia applications, pedagogical applications of the ICTs and strategic pedagogical planning. In the open-ended question, they stressed the necessity for more hours of training in the above areas. Regarding ICTs integration in the FL environment, the Ts had divergent opinions. Answers ranged from good to below average regarding the skills acquired in the production and development of ICTs-supported language activities, in the design and support of interactive LL activities and in the selection and evaluation of the appropriate CALL materials. On the whole, we assume that the Ts admitted receiving good training, but they tended to be skeptical when it came to specific subject areas, due to the lack of time dedicated to vertical training.

The last section of Q2 dealt with the level of the Ts' ability to transmit the expertise they gained to their colleagues. This section had unanimity, and all Ts answered that had acquired the skills needed to inform, motivate and familiarize their colleagues in the use of ICTs in education, as well as to train their colleagues in ICTs integration of electronic or web-based learning materials. However, they stated that they were not ready to train others on how to design and author educational materials. Thus, if we exclude some degree of dissatisfaction regarding certain areas of the training, we can assume that the TT project managed to develop competent teacher trainers, that are conscious of the knowledge they gained and feel competent to deliver it to their colleagues.

On the three final open ended questions, we asked Ts to outline their general views on the course. Ts praised the university's infrastructure, equipment, and educators. However, they all acknowledged the limited time dedicated to each discipline separately, due to which they were not able to fully absorb and practice the gained knowledge. Finally, they all suggested that prospective TT programs should dedicate more hours in discipline oriented use of educational technology and less hours in Information Technology solely.

DISCUSSION ON THE RESULTS

Based on the aforementioned results, we can draw up some conclusions for future FL TT initiatives. The relatively high degree of divergence is mainly due to the fact that all Ts received the same training, regardless of their level of computer literacy at the beginning of the course. Therefore, the Ts perceived the training course differently, according to their prior experiences and computer competence. This problem has been also noted in other similar programmes [15]. One solution could be to split Ts in groups on the basis of their computer competence. Yet, the small number of Ts per subject matter prohibits such initiatives. For this reason, it is preferable to offer extra hours of optional training as well as to provide all trainees with personal computers for autonomous training. Finally, TT courses need to administer constructivist group-work projects that will give Ts the opportunity to exchange ideas and share their own understandings with their colleagues, in order to have gains from each other's knowledge.

Additionally, in order to avoid the Ts' frustration and insecurity, their training should include model teaching scenarios that integrate ICTs in the educational process. Ts will thus feel more competent to train their colleagues. On the other hand, Ts should also be exposed to numerous educational software packages in order to be able to think critically, make their own judgments and learn how to evaluate, compare and contrast existing and future electronic learning materials. To accomplish this, TT programmes should also invest on learning materials and equip TT labs with relevant resources. They also need to create a library sector with print learning materials, stand-alone software, networked software, journals, case studies, and worldwide research project deliverables, in order to keep the Ts and the staff up-to-dated with new developments.

Moreover, TT initiatives should dedicate equal number of training hours for both technological and pedagogical aspects. It is important for Ts to develop a deep understanding of the actual effects of ICTs in the learning process. In order to familiarize Ts with the use of ICTs in education, TT programmes could also integrate ICTs for course delivery. Telematics and computer-conferencing systems can help to this end, as they can guarantee synchronous and asynchronous learning as well as autonomous and group work. Ts will then be able to evaluate these systems from the learner perspective.

Finally, we believe that every new TT initiative should be tailored to its target group's needs. Collecting and implementing ideas and findings from similar projects is also legitimate but it needs careful selection and monitoring, based on the current situation. Though TT courses have some parallel attributes, there are also culture-, country-, infrastructure-, subject-, and trainee- specific variables that explicitly affect and determine the outcomes of such initiatives. We strongly advocate trainee needs analysis and careful budget management.

FURTHER CONSIDERATIONS FOR FOREIGN LANGUAGE TEACHER TRAINING

Apart from equipping schools with the appropriate infrastructure, it is mutually important to affiliate the staff with the suitability and usability of ICTs in education. Teachers need to believe in the supportive use of technology, in order to fully exploit the capabilities of ICTs and motivate their students to actively participate in the learning process. Similarly, teachers need to acquire the computer skills necessary in order to be able to operate ICTs. Finally, they need to develop an autonomous approach to life-long learning and construct their own understanding from the stimuli and experiences they gather from their immediate environment.

We assume that the teachers' objective should not be the mastering of one or more computer programs but the development of critical thinking skills and global perspectives on educational technology. The teacher should not be a passive recipient of new knowledge but he/she needs to be actively enrolled in the learning process. Therefore, as long as the training takes place, the trainee should assume the role of the learner in order to develop the thinking skills required to act in a constructivist way. A TT program as such should include courses from the disciplines of Education, Educational Psychology, Informatics, Learning Theories, Computer Networks and e-Learning, and should prompt the trainees to critically interrelate and construct the knowledge acquired by each discipline in conjunction with their prior experience and their students' needs. Thus, teachers will be able to consciously identify their target group's needs, in order to adapt new technologies to their schools/institutions. Similarly, the optimal assessment tool for teachers should be project-based in the form of authentic case studies or problem-solving activities that trainees need to explore, process and evaluate in order to propose possible solutions.

Specifically, regarding the training of foreign language (FL) teachers, we propose the following strategic points. The theoretical academic background of FL teachers necessitates initiatives that increase teacher motivation and teacher attitude, and promote technical expertise. It is generally accepted that the teacher's attitude is a central element and it is highly influenced by the lack of technical knowledge [9,17]. This fact is partly due to a certain degree of technophobia among those teachers who share a positive view towards new developments but lack the technical knowledge and infrastructure to practice computer skills. What is therefore highly suggested, is substantial, high-level TT as well as the providence of a PC to each trainee for home practice. TT programmes need to focus on both directions and promote teachers' attitude as well as ICTs actual use. However, TT in ICTs should always preserve its pedagogical orientation, as the ultimate goal is not to build computer experts but 'IT Pedagogy specialists' [12,16].

Finally, TT initiatives need to focus on their own target group needs, considering variables such as trainees' nationality, cultural background, age, computer literacy, and target areas of interest (higher, secondary, or primary education). Trainees' attitudes regarding the training program's success can be officially measured by means of interviews or questionnaires. Though numerous similar TT programs are currently running worldwide, the methodology used and the needs that ought to be covered are literally depending on the aforementioned variables and may be divergent.

To sum up, we propose that TT initiatives should focus on a specific target group, such as 'FL teachers from the Greek secondary education sector'. In this case, the structure of the program proceeds as follows. In the first phase, trainees focus on basic computer and Internet skills, while at the same time they rehearse some major educational subject areas (e.g. methodology, learning theories, curriculum design). In the second phase, they proceed with the e-learning philosophy and principles, focusing on Computer Assisted Language Learning (CALL). Parallel to this, they learn authoring skills, and the use of authoring tools. Finally, they should be given adequate time for practical training, in order to become active participants instead of passive recipients. Overall, teachers need to develop a new philosophical perspective and a flexible pedagogical approach, rather than confine their training in the operation of ready-made packages.

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