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New School: Teacher Training of the practical Use of New Technologies in basic and Intercultural Education

Abstract

The latest education reform took place in Greece, in May 2010. Under the name "New School-Student First", it started from primary schools. Responding to current educational needs and challenges of the 21st century, it focuses on students. The "New School" introduces education which is creative, innovative, open to developments of global knowledge. Its objectives can be achieved through the use of New Technologies (NT) and the creation of the "Digital School", aiming at the incorporation of the NT in the teaching process and school life. One field of implementing the purposes of the "New School" is the change of the curriculum and its pilot application to primary schools with the Unified Reformed Education Programme in basic and intercultural education. A cornerstone for the success of the reform is the gradual training of teachers. The project "Teacher training on the utilisation and application of the NT in the teaching process" started in the school year 2009-2010. It is a six-month course with two three-hour sessions a week, after working hours. It takes place in organized computer labs and includes theory and its application in the classroom. The aim of a research following this project was to study the results of the training as well as the attitude of the teachers who participated in it. Sample of the research were 25 trainees of the 2010-2011 period who took the certification exam so as to complete their training. The body of evaluation was a questionnaire with a Likert-type scale and the questions concerned the actual training and its application in the classroom. In conclusion, attendance of the training course developed the skills of the teachers as regards NT and the use of educational software, however, it is obvious that the creation and application of educational teaching scenarios in the teaching process encounters problems and requires further practice.

Key words: New School, Digital School, educational software, primary education.

Introduction

School is a living cell of society and therefore the rapid technological developments in the field of Information and Communication Technologies (ICT) which alter the structure of the modern world, penetrate and shape the educational structure. The configuration of the teaching and learning process in the modern school, the knowledge, the skills and attitudes that the students are expected to acquire must meet the requirements of society as these are formed from time to time. Therefore it is necessary to modernize and improve the provided education in compliance with the use of ICT.[1] In the school year 2010-2011 there was an educational reform with the application of the

[1] Level B teacher training for the use and implementation of ICT in the teaching process, "The project", available October 27, 2011, http://b-epipedo2.cti.gr/project-m/about-project-bepipedo-m.html.

program for the "New School - Student First" which meets the new educational needs and challenges of the 21st century. This is a school open to society, ideas, knowledge and to the future. It is digital, innovative, green, all-day. The protagonist is the student without social, economic, educational, religious or cultural discriminations[2].

The key component of the New School is the Digital School. The New Technologies are incorporated in the teaching process and the school life in general, leading to the change of the curriculum and the conquest of knowledge. The relationships between teaching and learning, student and teacher and parents and the school are now viewed from a different perspective[3]. The Digital School was applied for the first time in the school year 2011-2012 to 188 schools (21 kindergartens, 99 primary schools and 68 secondary schools).

However, the most important factor for the success of the program and the objectives set by the "New School" and the "Digital School" is the teacher. The first to support the reform are the teachers themselves who must have the necessary skills to use the new data and the new technologies in order to meet the learning and the pedagogical objectives[4]. In order to achieve this target, teachers were asked to participate in training seminars on the utilization of the New Technologies in the classroom. "Teacher training on the use and application of ICT in the classroom" also known as "Level B Training" is the sequence of "Level A Training" of teachers on basic ICT skills[5].

Teachers of all education levels are involved in this 96-hour training program which takes place after school hours.[6] The objective of Level B Training is to acquaint teachers with educational software and general use tools as well as with planning educational activities and integrating them in the teaching process. They also learn how to use their classroom's interactive whiteboard effectively and get acquainted with the basic principles of organization and ICT use in the classroom. It is important that they develop communication and collaboration skills with their students and colleagues using technologies web 2.0. The training is not only theoretical, but also includes intervention in the classroom, designing and implementing educational teaching scenarios.

It is important at this point to outline the term "Intercultural Education (IE) ", because teachers who participated in the research are serving in schools operated Reception Class (RC). According to Gkovaris Intercultural Education is the current version of the reflection coding and management challenges associated with treating the multiculturalism of modern societies developed in critical comparison with the assimilationist model of education of children from minority groups.The origin of the example of IE is the "case of dispute", approaching, ie, foreign students as carriers of a

[2] Anna Diamantopoulou, Minister of Education, "New School. A school without walls!", available October 17, 2011, http://www.diamantopoulou.gr/beta/index.

[3] Ministry of Education, Lifelong Learning and Religious Affairs, "Lessons without borders with digital educational contents:
The Digital School", available March 27, 2012, http://digitalschool.minedu.gov.gr/manuals/sxoleio.php.

[4] "Level B Teacher training".

[5] Teacher training on the utilisation of ICT in education, available
December 18, 2011, http://epimorfosi.cti.gr/certification.

[6] The project "Teacher training on the utilisation and application of Information and Communication Technologies (ICT) in the teaching process" of the Operational Programme "Education and Lifelong Learning", ESPA (2007-2013), which is funded by the European Union and the National Public Funds Office focuses on the training of Primary and Secondary Education teachers on the utilisation of Information and Communication Technologies in the classroom.

"different" and not a "deficient" cultural capital[7]. IE includes all students living in a multicultural society and aims with good intentions at showcase, support and understanding of "different cultures"[8]. The term Intercultural Education reflects the cultural diversity of a part or a whole society that realizes the fact of multi-ethnicity and multiculturalism as real, considering it as positive and accepting it as a new form of social organization[9].

In recent decades, as a result of the return of Greek expatriates and the admission of migrants initially from Albania and then from other countries of Eastern Europe and Asia, the population of Greek society has lost its homogeneity and the education system is the main body responsible for managing the new situation effectively.In this respect intercultural education applies either by the operation of school units providing education to young people with educational, social or cultural diversity, where the programs of the relevant public schools are applied adapted to the special educational, social or cultural needs of their students[10], or the creation of Reception Classes and Coaching classes[11], which operate within the public schools as programs for the active integration of Greek expatriates[12], Foreigners and Roma into our educational system[13].

Because the ultimate purpose of Reception Classes is smooth and equal integration of these students in the Greek educational system, avoiding tensions, which usually lead to rejection of all new and stubborn resistance to any development.Thus, in the context of intercultural education with actual respect for the linguistic and cultural backgrounds of students, New Technologies and the creation of educational material with the use of educational software on the one hand alleviate differences, as commonplace of modern society, familiar to young people, and on the other hand contributes to the achievement of higher goals, the improvement of the learning capacity through better understanding of the Greek language as a learning tool. Besides digital applications facilitate the classroom activities enhancing the learning of these students, the promotion of their cultural and linguistic differences as means of enrichment, and provide them with the opportunity of using creatively elements of that culture they bring to school in the form of experiences.

The purpose of the research following the Level B Training is to study the attitudes of teachers towards it, with regard to the use and application of New Technologies in the classroom, the Internet, the web 2.0 services, the educational software and the creation of educational teaching scenarios.

Methodology

Sample

Sample of the research were 25 primary school teachers who attended the Level B Training in the school year 2010-2011. They took part in the certification examinations

[7] Gkovaris C., Intercultural education and foreign students: Observations on creating a relationship correlation between educational objectives and subjective learning needs in Skourtou, E. (2000), *Notebooks of Naxos: Diglossia*, p 17-34 (p. 19).
[8] İbib, p. 17, 22.
[9] O.EP.EK (Teacher Training Agency) Material teacher training Reception Class (RC). and Support Courses, Athens: Ministry of Education, Lifelong Learning and Religious Affairs, 2011 (p.4).
[10] Law 2413/96 (ΦΕΚ 124 τ. A/17.6.1996), Article 34, paragraphs 1και 2.
[11] Ministerial Decision, FEK 1789/1999 - Φ.10/20/Γ1/708/28-09-1999.
[12] Returnees, Bampiniotis G. D., Dictionary of Modern Greek Language, 3trd edit, Athens 2008 (1307).
[13] Circular, F1.T.Y./1073/117052/Γ1/23-9-2009.

in the exam center of Kavala in December 2011. Teachers who wished to take part in the training program submitted applications and were selected by lots to attend it, after school hours.

Body of evaluation

The questionnaire used to evaluate the attitudes and views of the subjects was anonymous in order to ensure their openness and free expression.[14] It was a questionnaire of 12 questions-statements with answers of a Likert-type, five-point scale which investigated attitudes towards Level B Training, the Internet, educational software and the creation of educational teaching scenarios using the actual software[15]. The subjects were asked to choose one of the possible answers expressing the extent of agreement or disagreement on a certain statement[16].

Data collection process

The training program lasted six months (December 2010 to June 2011) and the theoretical part was carried out in suitably equipped computer labs after school hours, in the afternoon, twice a week for three hours[17]. Apart from the theoretical part, the trainees practiced on teaching courses with interventions. Specifically, the trainees got acquainted with and practiced on several educational software[18], general and special tools, the Internet, especially tools and services web 2.0 (blogs, wikis, podcasts, rss feeds, social networks, 3D Virtual Environments, e-portfolios etc.), which can be used in order to integrate new technologies in the classroom.

Upon completion of the training, the trainees had to present an educational teaching scenario about a thematic unit of their classroom's courses. The educational teaching scenario is a series of actions that focus on one or more subjects using not only the usual teaching tools but also new technologies. Teachers, based on the objectives set by the APS, the Cross Thematic Curriculum Framework and the cognitive goals, use a basic concept to design the scenario while determining the role of the teacher and the students. A series of activities for the students, either in digital or other form[19], completes the scenario.

The training was completed at the end of the school year 2010-2011 and the first certification exams were conducted in November-December 2011 in accredited exam centres throughout Greece. The trainees were able to choose the centre they desired to be examined at. The aim of a research following the exams was to study the attitude of teachers, who took part in the exams at the certification centre of Kavala[20], towards the

[14] Christos Kampitsis, & Harahousou – Kampitsi, Yvonne, *Technical research in sports science* (Thessaloniki: Maiantros,199), 44-49.

[15] Nota Kyriazi, *The Sociological Research: A Critical View on Methods and Techniques* (Athens: Pedio, 2011), 70-76.

[16]

A/A	QUESTIONS	AGREE	RATHER AGREE	NO OPINION	RATHER DISAGREE	DISAGREE

[17] Training Support Centres - TSC, are computer labs usually at schools, all over the country, with expert instructors, who have been specially trained in University Training Centres – UTC.

[18] The trainees practiced on a number of educational software for the six grades of primary schools, such as, Hot Potatoes, Kidspiration, Google Earth.

[19] Panayiotis Piliouras, et al., Teachers' Material on ICT in the 800 all-day primary schools with Unified Reformed Education Programme. (Athens: Ministry of Education, Lifelong Learning and Religious Affairs, 2007-2013 (p. 47-48).

[20] Kavala is a city in the region of Eastern Macedonia and Thrace with a School of Computers.

training, the educational software and the Internet services. They were also questioned about the creation of educational teaching scenarios and the teaching of courses.

Results

Results showed that the teachers who participated in the training improved their knowledge and skills in relation to new technologies[21] and the educational software[22] (see Figure 1) and developed to a degree their ability to create educational scenarios[23] (see Figure 2).

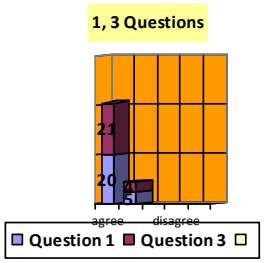

Figure 1: *Results of the questions 1and 3*

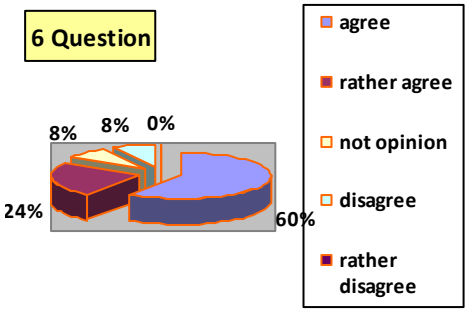

Figure 2: *Results of the question*

Additionally, results showed that the trainees had difficulty in the questions about the creation and implementation of new technologies and educational teaching scenarios[24] in the teaching process (see Figure 3). This difficulty of integration is attributed, according to the results, to the lack of technological infrastructure in their school,[25] but mainly to the need for further training on the new technologies[26] with thorough practice on the use of educational software for the Primary Education (see Figure 4)[27].

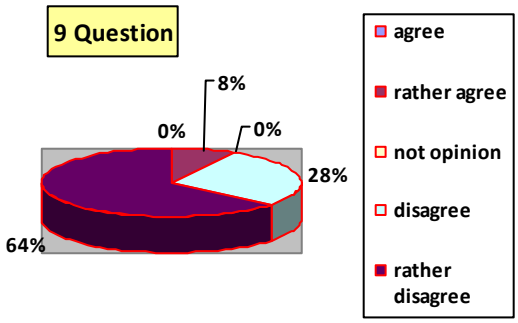

Figure 3: *Results of the question 9*

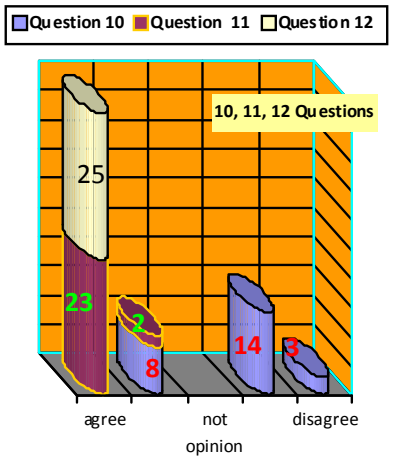

Figure 4: *Results of the questions 10, 11 and 12.*

[21] Question 1: Has your participation in the training improved your knowledge and skills in new technologies?
[22] Question 3: Was being introduced to Primary Education Software a positive experience?
[23] Question 6: Was it difficult to experimentally create educational scenarios?
[24] Question 9: After the training, did I use educational scenarios in the classroom?
[25] Question 10: Teachers do not implement educational scenarios in the classroom due to schools' inadequate technological infrastructure.
[26] Question 11: Is there need for further training on new technologies?
[27] Question 12: Is there need for more thorough practice on the use of educational software?

Discussion - Conclusions

The starting point for the educational reform and the implementation of the "New School" objectives is the development of a new curriculum, the pilot application of which took place in 2010-2011 in 805 Primary Schools with Unified Reformed Education Programme throughout Greece. On the next school year 961 schools implemented the new curriculum[28]. However, those who will actually support the reform, are the teachers themselves. That's why the New School gives priority to their training on new technologies which, if used appropriately, lead to the desired modern cognitive results[29]. The training involved teachers who had been certified at the Level A use of new technologies in education[30].

In addition, the classroom as part of intercultural education is organized by developing dynamics so it works as a complement to the world of children and as an extension parallel to the adult world. The problem of foreign language speaking students are not mental, but linguistic, because the level of cognitive development is much higher than the level of language development. They are able to take part in in cognitively demanding activities but their linguistic tool is inadequate. In such cases, for example, not understanding the utterance of exercise, the risk of mishandling on the part of the teacher is to be driven to simplify the exercise instead of ensuring that its pronunciation has been understood (eg possibly using sketches, photos, etc.)[31]. Digital applications and educational software are tools for achieving these goals, because they offer audiovisual capabilities, are relevant to everyday life of young people, and most importantly, are a common place and scope with the rest of the school and social environment by reducing the differences and converging at points matching.

This study evaluated the attitudes of primary school teachers who attended the Level B training on the use and application of new technologies in the classroom, and took part in the certification exams. The results showed that they significantly improved their knowledge and skills on new technologies and particularly on the educational software that can be used in Primary Education, as well as the tools and Internet services such as the web 2.0 applications[32]. What can be inferred from the teachers' answers, in relation to the use of new technologies and educational scenarios, is that the trained teachers find it difficult to implement them in their classroom. These difficulties are to some extent attributed to the lack of technological infrastructure in their schools, but mostly to the need for further, more practically-purposed training. Besides, the number of educational software for the six grades of Primary Schools is too large to allow the teachers to familiarise with them in the limited time of their training, despite adding to their knowledge.

Moreover, according to the data listed on the official website of the Ministry of Education in Greece, only 35% of teachers claim that they have used ICT in the teach-

[28] Ministry of Education, Lifelong Learning and Religious Affairs, "New School: All-Day Primary Schools", available March 27, 2012, http://www.minedu.gov.gr/apo-to-simera-sto-neo-sxoleio-me-prota-ton-mathiti.html.

[29] Operational Programme "Education and Lifelong Learning", "The New School", available February 14, 2012, http://www.edulll.gr/?page_id=7.

[30] Teacher training on the use of ICT.

[31] O.EP.EK (Teacher Training Agency) Material teacher training Reception Class (RC). and Support Courses, Athens: Ministry of Education, Lifelong Learning and Religious Affairs, 2011, (p. 10, 38, 39).

32 "Level B teacher training".

ing process, while the average figure in Europe is 74%. In fact, 31% of teachers say that they have very little or no experience in the use of new technologies (with the average in EU being 7%). Also, although it is officially stated that 40% of schools have their own website, it is estimated that only 10-15% of them are active[33]. In addition to the above, only 1.4% of teachers in the Primary and 3.7% of teachers in the Secondary Education have an active webpage on the Greek School Net[34].

In conclusion, the data cited by the Ministry of Education of Greece about the technological literacy of teachers and the findings of intervention research suggest that there is need to strengthen the technological infrastructure at schools. What is imperative, though, is that teachers train and practise on educational software and Internet applications that can be implemented in Primary Schools. On competition of the training teachers can refer to the distant learning platform for support and encouragement.

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[33] "The Digital School".

[34] The Greek School Network is an advanced educational intranet of the Greek Ministry of Education which interlinks all schools, teachers and many administrative departments and supervised entities and it is internationally recognized as a valuable educational network that promotes the use of Information and Communication Technologies (ICT) in Greek Education. Greek School Network, accessed March 19, 2009, http://www.sch.gr.

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