Distance Teacher Training in Periods of Emergency (COVID-19 Pandemic)

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Abstract

The closing of schools at the beginning of spring 2020 in Greece highlighted the need for school distance education to make up for lost teaching time and to maintain learners' contact with the educational process and other members of the school community. However, the teachers needed support in this urgent situation since they did not have previous experience with school distance education. The Laboratory for Advanced Teaching Technologies for Lifelong Learning and Distance Education (E-Learning Lab) of the University of Crete attempted to contribute with its own means to the support of these teachers. Within this framework, fast-paced, distance seminars were designed and implemented to support teachers on pedagogical issues of distance education. A total of 20 distance training seminars were conducted from 19 March to 29 April 2020, in which more than 40 000 teachers of primary and secondary education in Greece participated. The overall presentation and assessment of the training actions showed not only the enormous interest of the teaching community but also the need for such training actions. The paper proposes that particular emphasis should be placed on the principles and the methodology of school distance education, synchronous and asynchronous learning environments, and the design of lesson plans based on pedagogical approaches compatible with distance learning.

Keywords: teacher training; school distance education; COVID-19

Introduction

During the COVID-19 pandemic there was an immediate necessity to integrate technology in teacher preparation (Greene 2020, 35). Supporting teachers with key issues regarding distance education (DE) became a major priority during the first lockdown, as the teachers had no previous experience with school distance education (SDE). According to recent research, the training of prospective teachers often lags behind in the preparation for distance learning (Debruler et al. 2020, 191).

The Department of Primary Education of the University of Crete and more specifically the Laboratory for Advanced Teaching Technologies for Lifelong Learning and Distance Education (E-Learning Lab) responded to the need for teacher support, and designed and implemented fast-paced, free distance learning programmes for primary and secondary education teachers.

The purpose of this paper is, on the one hand, to summarise the training activities that took place in the first period of the lockdown in the direction of introductory training of teachers on issues related to SDE, and, on the other hand, to investigate teachers' attitudes to participation in training. This case study may be utilised as a guideline for designing and implementing such training seminars in the future.

The structure of the article is as follows: In the first section, the issues of the implementation of SDE in an emergency situation, such as the COVID-19 pandemic, are explored. The second section summarises the contribution of the University of Crete and the E-Learning Lab to the support and training of teachers on introductory issues related to SDE focusing on the pedagogical dimension of the whole project. In the third section, a comprehensive assessment of the training activities during the first period of the lockdown (March to April 2020) is done. The paper finishes with a conclusions section.

School Distance Education in Periods of Emergency (COVID-19 Pandemic)

The term "school distance education" refers to the provision of primary and secondary education that is provided remotely; it focuses on school-age individuals, and is autonomous and complementary (Vergou, Koutsoumpa, and Mouzakis 2016, 26). During the first period of the COVID-19 pandemic, 80% of the global student population was affected by restrictive measures imposed in 138 countries (Flores and Gago 2020, 510). The need to deal with the negative impact of the suspension of the educational process pushed the shift to distance learning not as an option but as a coercive de facto enforcement (Toquero 2020, 171).

The emphasis in this first period of the pandemic was therefore placed on (Anastasiades 2020):

- ensuring access to the Panhellenic School Network services, technological tools and infrastructure; and

- reconnecting students with classmates and teachers in an educational environment of technological mediation.

The response of the teaching community exceeded all expectations as it managed to significantly restore first contact with the students, despite the technological problems and teachers' lack of training. Obviously, the indiscriminate transfer of the philosophy of face-to-face teaching methods and techniques into purely technological or technocentric terms in DE environments created risks of regarding DE as a problematic choice.

The absence of the minimum pedagogical conditions for the basic implementation of SDE in primary and secondary schools in Greece was more than obvious. It was therefore necessary to try to support teachers on the basis of pedagogical approaches based on the fundamental principles of DE, such as the interactions between learners, learners with teachers and learners with educational materials, practice communities, and the three dimensions of the exploration community model (social, teaching and cognitive presence) (Garrison, Anderson, and Archer 2001, 14–15). These principles helped to design and implement distance learning school activities with an emphasis on social interaction (Anastasiades 2018, 603).

Case Study Description

The E-Learning Lab of the Department of Primary Education at the University of Crete responded to the need to support primary and secondary education teachers in their efforts to implement introductory activities of DE with their students, in the period of March to April 2020, by designing and implementing fast-paced seminars with the method of DE at no cost for them.

The objectives of the training actions are divided into three thematic units:

- Fundamental principles of DE: Basic theories, differences between DE and in-person teaching, the importance of educational material, and the social dimension;

- The pedagogical utilisation of information and communications technology (ICT) in an SDE environment (synchronous, asynchronous and blended learning environments);

- The design of educational material: Introductory activities for the critical utilisation of the existing material with the methodology of DE or development of scenarios of teaching intervention based on the methodology of DE.

The target group of the programme was composed of 41 560 primary and secondary school teachers, who participated voluntarily, either via teleconferencing or live-streaming.

Implementation Methodology

Each training seminar lasted six hours and was structured on two levels, as discussed below.

Synchronous School Distance Education (3 hours)

Each training seminar provided one training meeting, in which interested parties could participate via

- videoconferencing for a limited number of participants (150), or

- real-time streaming (live-streaming) for an unlimited number of participants.

For the most effective coverage of the needs of practice and the thorough support of the trainees, two tutors were chosen. The tutors were chosen among the scientific associates of the E-Learning Lab due to their expertise, as they were holders of postgraduate degrees in e-learning and had significant experience in the field. The first tutor focused on the synchronous e-learning environment (teleconferencing), presented the activities and interacted with the participants in the teleconference. The second tutor focused on social networks and interacted with the users who watched the live broadcast of the seminar. The second tutor received their questions and transferred them to the video conference room, giving answers via the chat option while helping and coordinating the training activity.

Asynchronous Distance Education (3 hours)

The seminars were complemented with interactive educational materials, specially designed with the method of DE, which the trainees had the opportunity to study asynchronously in the space and time of their choice. Finally, in the context of the training, the trainees were asked to do an optional task related to the creation of a teaching scenario using the methodology of DE. This was done to establish a direct connection between theory and practice in the context of sharing good practices.

Implementation of Training Seminars

In the context of the foregoing, the following were carried out from March to April 2020:

- 20 teleconferences with the participation of 1 560 trainees; and

- Six live-streaming sessions with 15 000 participants on the Facebook page of the E-Learning Lab and another 25 000 participants from notifications from a total of 175 000 unique viewers.

- The website with the educational material (www.edivea.org) was visited by over 60 000 unique visitors, who had the opportunity to study asynchronously in the space and time of their choice.

Research Methodology

The purpose of this research is to explore the views of trainee teachers regarding their impressions of their participation in this training programme.

How satisfied are the participants with their participation in the training seminar in terms of the trainers?

The survey was conducted in March and April 2020. It was an action survey that was synchronous, field-based and quantitative. A questionnaire was used as a means of data collection, which included closed-ended questions.

The sample of the research consisted of the 4 239 teachers of different specialities that took part in the survey on a voluntary basis (see Table 1).

Table 1: Participants via teleconferencing and live-streaming

Gender	Participants via live-streaming N	Percentage %	Participants via teleconferencing N	Percentage %	Total	Percentage %
Male	609	21.6	242	17	851	20.1
Female	2 209	78.4	1 179	83	3 388	79.9
Total	2 818	100	1 421	100	4 239	100

Presentation of Results

According to the results of the research, the participants in the training seminar via teleconferencing stated that they were satisfied (4.31) with the trainers (see Table 2).

Table 2: Degree of satisfaction with the training programme of participants via teleconferencing

How satisfied are you with your participation in the training seminar regarding	Participants via teleconferencing			
	Low level of ICT literacy			
	N	MO	SD	
the trainers	90	4.40	0.761	
	Medium level of ICT literacy			
	N	MO	SD	
the trainers	808	4.33	0.781	
	High level of ICT literacy			
	N	MO	SD	
the trainers	513	4.26	0.85	
	Total			
	N	MO	SD	sig
	1.412	4.31	0.805	0.151

According to the results of the research, the participants in the training seminar via live-streaming stated that they were satisfied (4.38) with the trainers (see Table 3). There were slight variations in the satisfaction level depending on the level of ICT literacy of the participants: participants with very low ICT literacy were least satisfied (4.18); participants with a moderate level of ICT literacy were more satisfied (4.34); and participants with a high level of ICT literacy were the most satisfied (4.46). The difference of the grade point average (GPA) is considered statistically significant ($p = 0,000$).

Table 3: Degree of satisfaction with the training programme of participants via live-streaming

How satisfied are you with your participation in the training seminar regarding	Participants via live-streaming			
	Low level of ICT literacy			
	N	MO	SD	
the trainers	133	4.18	0.869	
	Medium level of ICT literacy			
	N	MO	SD	
the trainers	1.556	4.34	0.763	
	High level of ICT literacy			
	N	MO	SD	
the trainers	1.128	4.46	0.720	
	Total			
	N	MO	SD	Sig
	2.817	4.38	0.755	0.00

Conclusions

The results of the concluding evaluation, based on the answers of the 4 239 participants, are given below.

The participants in the training seminar stated they were very satisfied with the trainers. There were slight variations in the satisfaction level depending on the level of ICT literacy of the participants: participants with very low ICT literacy were the least satisfied (4.19); participants with a moderate level of ICT literacy were more satisfied (4.34); and participants with a high level of ICT literacy were the most satisfied (4.46). The difference of the GPA is considered statistically significant ($p = 0,000$). Overall, the participants felt satisfied (4.38).

The E-Learning Lab designed and implemented 20 fast-paced seminars, from 19 March to 29 April 2020, through the teleconferencing platform of Webex Meetings, and they were also broadcast live (live-streaming) on the webpage of the University of Crete and the E-Learning Lab and on social media (Facebook). Emphasis was placed on the principles and methodology of DE, the environments of synchronous and asynchronous DE, and the design or formulation of teaching scenarios based on pedagogical approaches compatible with DE in order to support teachers.

The satisfaction of 41 560 teachers of all levels with the whole training process highlighted the importance of the pedagogical approach in the design and implementation of the seminars, which was based on the practical training of the trainees in both synchronous and asynchronous distance learning environments.

A key role in the design and implementation of these seminars was played by the experience accumulated by:

- the distance training of teachers (Anastasiades 2012, 243); and

- SDE through the Odysseus programme (Anastasiades 2003, 28).

The results of this case study can be used for the design and implementation of similar programmes in the future.

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