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Micro eLearning Open Seminars on "School Based Distance Education" to Support K12 Teachers during the COVID-19 Pandemic of 2020

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Abstract

The emergence of the COVID-19 Pandemic in Greece resulted in the suspension of all schools both in spring (March-May) and in winter (November-December) in 2020. Teachers of all levels of education (165,000), were called upon to respond to the Emergency Remote Teaching needs of students in a short period of time. During the period March-December 2020, the Laboratory of Advanced Learning Technologies in Lifelong and Distance Learning (e-Learning Lab) of the University of Crete using its own resources tried to contribute to the support of teachers in their effort to meet the challenges of distance education as a result of the suspension of schools. In the above context, fast-track distance seminars were designed and implemented in order to support teachers in dealing with issues related to the pedagogical dimension of Distance Education. During the period March-December 2020, 23 distance training seminars were held (Micro eLearning Open Seminars) in which more than 50,000 teachers of Primary and Secondary Education from all over Greece participated. A first comprehensive presentation of the training activities is attempted in this paper.

Keywords: Micro eLearning, Microlearning, Distance Learning, eLearning, K12 teachers professional Development, Covid -19

Introduction

During the pandemic, the Ministry of Education of Greece deemed the suspension of all schools in 2 phases (spring and winter 2020) necessary. Teachers and parents were called upon to face the challenges of a necessary but urgent transition in a desultory manner from their familiar face-to-face teaching environment to a new and unfamiliar distance Education environment without the minimum appropriate conditions at the level of pedagogical planning, the necessary human resources (training) and technological resources (means, accessibility, etc.). Therefore, teacher support in key issues related to Distance Education has become a de facto urgent priority for the educational community as a whole.

The Pedagogical Department of Primary Education of the University of Crete and in particular the Laboratory of Advanced Learning Technologies in Lifelong and Distance Learning (e-Learning Lab), responding to the need to support teachers in the work they were required to carry out and using its own resources designed and implemented free fast-track distance learning programmes Micro eLearning Open Seminars on “School Based Distance Education”.

The purpose of this paper is, to depict the Micro eLearning Open Seminars on "School Based Distance Education" that took place between March and December 2020.

The structure of the paper is as follows: In the first section a first approach on the issues of the implementation of the School Distance Education in emergency Covid-19 conditions (Emergency Remote Teaching) is attempted. The second section summarizes the contribution of the University of Crete | eLearning Lab in the support / training of teachers in introductory issues related to School Distance Education focusing on the pedagogical dimension of the whole project. The third section presents the conclusions.

Distance School (?) Education (?) in times of emergency (Pandemic, Covid-19).

International Overview

The term "distance education" refers to the provision of education at the primary or secondary level, which is provided at a distance and is aimed at school-age persons and is divided into autonomous/independent and complementary (Anastasiades et al 2010; Murphy & Rodríguez-Manzanares, 2009; Vasla, 2005).

The need to halt the effects of the Covid-19 pandemic has led to decisions that have affected the entire educational community, students and parents internationally. Almost 80% of the global student population has been affected by restrictive measures in 138 countries (Chang & Yano, 2020), the impact of which has not yet been studied (Flores & Gago, 2020). The need to address the negative impact of the sudden / violent suspension of the educational process (face-to-face teaching) and to introduce measures to restart it, prompted the search for alternative ways of providing education / support, resulting in a shift in distance learning not as a choice but as an imposed de facto enforcement. (Anastasiadis, 2020; Toquero, 2020). A significant number of researchers internationally (Hodges et al, 2020; Bozkurt & Sharma, 2020; Karakaya, 2020) adopted the term Emergency Remote Teaching in order to describe the above situation, thus wanting to focus on shifting teaching to an alternative way of applying it remotely due to the emergency situation.

The situation in Greece

By decision of the Greek Government on March 11, 2020, the educational operation of the school units was suspended amid generalized concern. This resulted in the emergence of Distance Education as an urgent priority for the reconnection of students with the educational process, catching up missed classes and mainly the gradual restoration of basic communication with their classmates and teachers. Therefore, in the first period of the pandemic (March April 2020) the emphasis was de facto (Anastasiades, 2021):

A. to ensure access to the Greek School Network services, technological tools and infrastructure

B. the reconnection of students in an emergency with classmates and teachers in a technologically mediated educational environment (email with exercises at the beginning,

asynchronous environments, e-class, e-me later on), while the role played by educational radio and television was very important (Papadimitriou, 2020).

The response of the educational community exceeded all expectations as by overcoming significant and chronic problems in terms of technological means, infrastructure, accessibility and skills in ICT, it managed to significantly restore a first contact with students

During the 2nd phase (October-November 2020) at the level of central planning:

- The role of educational television was upgraded with the addition of new subjects, which should be further enriched and especially be interconnected with the school routine (be used as asynchronous supplementary educational material by teachers)

- The level of technological capabilities of the Greek School Network was upgraded as well as the access to the asynchronous environments of the e-class and e-me, both of which, however, are still two "parallel universes" causing significant malfunctions in the whole community.

- The technological access to a synchronous Distance Education environment was ensured for all the teachers and students and despite the dysfunctions of the first days, it managed to respond to a technological project that is unprecedented in current conditions.

- During the 2nd phase (as in the 1st) the emphasis was given to the technological dimension of Distance Education. The absence of a pedagogical framework was obvious and this resulted in the manipulation of Distance Education in technological terms with what this means for the quality of the courses offered and ultimately the effectiveness of the whole effort.

- The absence of a pedagogical framework, contributed to the "schoolification of synchronous Distance Education", i.e. the impetuous / mechanistic transfer of the school curriculum to a Distance Education school environment and ultimately the transfer of the model of information transmission in a teleconferencing environment, resulting in exceptional low levels of teacher-student interaction and the emergence of the "black screen" phenomenon which need further investigation.

- The absence of a universal teacher training program, which would emphasize the pedagogical use of ICT for the planning and implementation of School Distance Education actions was more than obvious.

- Finally, the inability to implement intervention measures to provide equipment (until November 2020) resulted in the transformation of digital dualism into educational dualism as a number of students (inability to access available official data) who according to common sense belong to socially vulnerable groups of the population could not participate in the Distance Education project.

In conclusion, during the pandemic, all efforts at both central planning and individual teacher level were spent on providing infrastructure, the availability of technological tools, and accessibility to networks, services and applications.

Inevitably this resulted (at best) in the impetuous transfer of the philosophy, methods and techniques of Face to Face Teaching in purely technological / techno-centered terms in distance learning environments, with all that entails (Anastasiades, 2021), whereas technology should be called in to serve the accomplishment of the learning objectives on the basis of the teachers' pedagogical approach of Distance Education (Bozkurt & Sharma, 2020; Lionarakis, 2006). The risk of considering distance education as a problematic option was obvious as the urgent transition to this form of education in these conditions makes it difficult to plan based on the principles and methodology that govern it in order to take full advantage of the benefits and opportunities it can offer (Anastasiades, 2021; Hodges, Moore, Lockee, Trust & Bond, 2020).

The absence of the minimum pedagogical conditions for the elementary implementation of School Distance Education was more than obvious. It was therefore necessary that teachers' efforts be supported on the basis of pedagogical approaches based on the fundamental principles of distance education, such as a. the interaction among learners, between learners and teachers, as well as between learners and the educational materials (Moore, 1989), b. practice communities (Wenger, 1998) and c. the three dimensions of the Inquiry community model (Social, Teaching and Cognitive Presence) (Garrison, Anderson & Archer, 2001) for the design and implementation of distance education activities.

Micro eLearning Open Seminars on "School Based Distance Education" to Support K12 Teachers in Greece, during the COVID-19 Pandemic of 2020.

In the first phase of the Lockdown the whole educational community were faced with an unprecedented challenge: never before had so many people been called to change the way

they teach and learn in such a short time. All this happened in a state of Lockdown, exclusion and asymmetric threat to their health.

So the teachers had to face 3 simultaneous challenges in a short period of time.

A. Access to the necessary technological means, services and applications from their home

B. Acquire Skills related to the use of technological means and applications

C. Acquire Skills related to pedagogical planning and implementation of courses in a School Distance Education environment

In order for the University of Crete / e-Learning Lab to respond to the above challenges, it designed and implemented fast-track distance seminars Micro eLearning Seminars, using its own resources, with the aim of supporting teachers in matters related to the pedagogical dimension of ICT in a School Distance Education environment without fees for the participants.

By Micro eLearning Seminars, we refer to distance learning programmes a feature of which is the immediate provision of targeted knowledge / skills, in a specific learning object, with the maximum possible flexibility:

- in Space (access from anywhere Ubiquitous learning)
- in Time (short duration, modules and subsections bite-sized courses / modules)
- in the learner's Pace
- in the Content (segmentation of learning objects, bite-sized content, bite-sized learning objects / understood with simple words and examples)
- in the Media (interactive, user friendly, modern)

According to research, Micro eLearning Seminars are more focused on the earners' needs (Giurgiu, 2017 & Freeman, 2016), encourage Inquiry Based Learning (Gutierrez, 2015) by improving student's learning ability (Mohammed, Wakil & Nawroly, 2018; (Cates , Barron, & Ruddiman, 2017),

The Scope of the Micro eLearning Seminars

The scope of the training actions is divided into 4 levels

A. Fundamental principles of Distance Education: Basic Theories, differences between Distance Education and Face to Face education, The significance of educational materials, Social dimension, etc.

B. The Pedagogical utilization of ICT in a School Distance Education environment (synchronous, asynchronous environments and blended Learning environments).

C. Design of Educational material: introductory activities for the critical utilization of the existing materials with the methodology of Distance Education / Development of lesson plans based on the methodology of Distance Education

D. Pedagogical Planning of Teleconferences

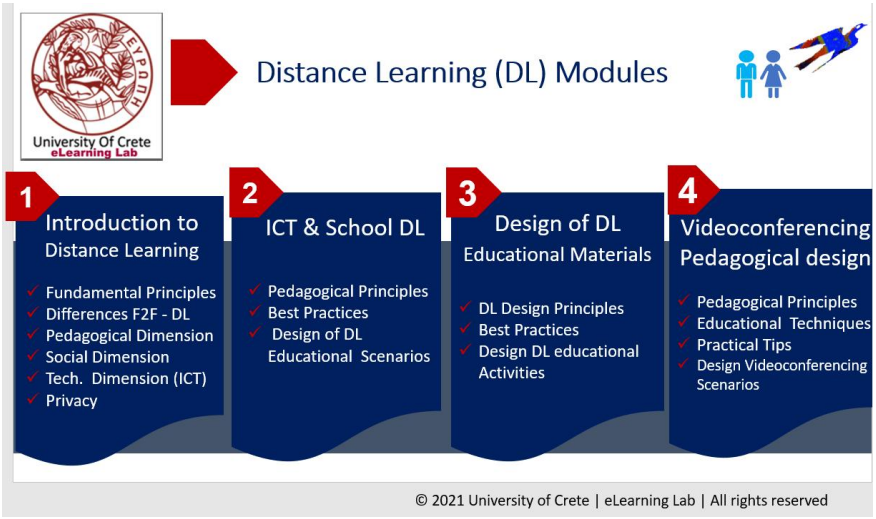

Figure 1: Distance Learning (DL) Modules (www.edivea.org)

Target group

Primary and secondary school teachers, school principals

Implementation Methodology

Each training seminar (micro learning on line seminar) lasted 9 hours and was structured on two levels:

1st Level. Synchronous (3 hours): In each training seminar there is one (1) 3-hour training meeting, in which those interested could participate:

- via video conference (for a limited number of participants) or real-time broadcasting - Live Streaming- (for an unlimited number of participants).

The option of the two instructors (tutors) was chosen for the most effective coverage of the needs of the training session and the overall support of the trainees. One of them focused on the synchronous Distance Education environment (teleconferencing), presented the activities and interacted with the participants in the teleconference, while the second one focused on social networks, interacting with the users who watched the live broadcast of the seminar. He received their questions and transferred them to the video conference room, giving answers via chat while also helping to coordinate the training activity.

2nd Level. Asynchronous Distance Education (6 hours)

In order to support the trainees, the seminars were accompanied by interactive educational material, specially designed with the method of distance education, which the trainees had the opportunity to study asynchronously in the place and time of their choice.

Finally, in the context of the training, the trainees were asked to prepare an optional assignment: a teaching scenario with the methodology of distance education so that there is a direct connection between theory and practice in the context of sharing good practices.

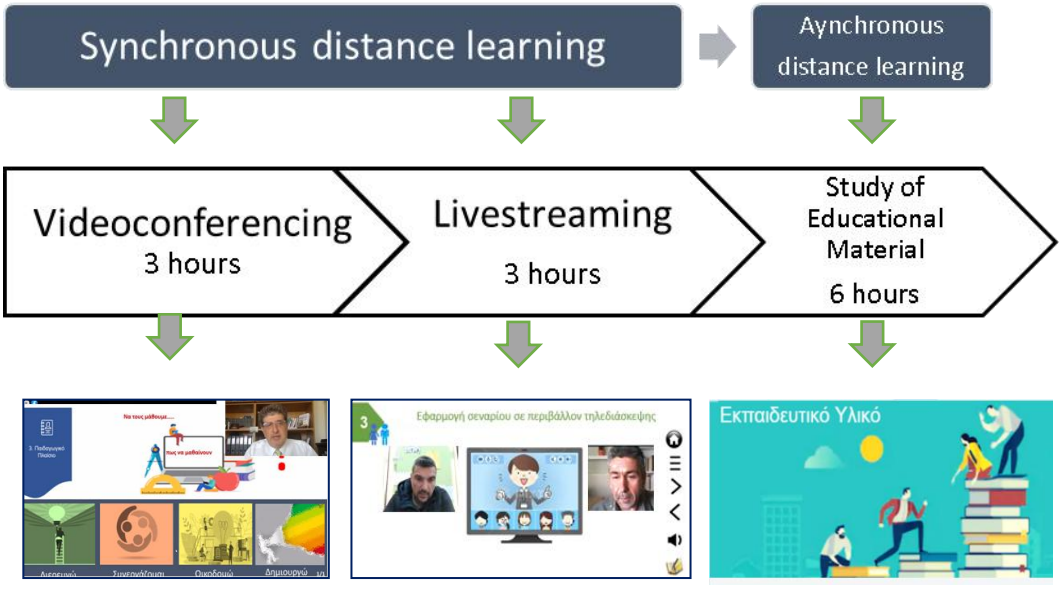

Figure 2: Methodology for the implementation of Training Seminars (www.edivea.org)

Within the framework of the educational Seminars, interactive educational material was designed with open access to the entire educational community.

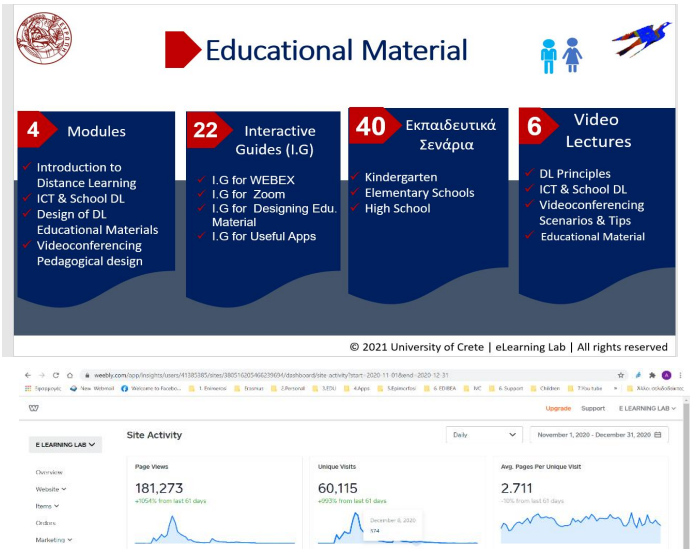

Figure 3 Educational Material (www.edivea.org)

In the framework of the above actions in the period March - April 2020 and November-December 2020 a total of:

- 24 Teleconferences in which 2050 trainees participated

- 9 Live Streaming Sessions in which 20,281 people participated in the "main hall" and 30,547 people from shared posts to a total of 175,000 unique viewers.

Finally, more than 60,000 unique visitors visited the site with the educational material (www.edivea.org).

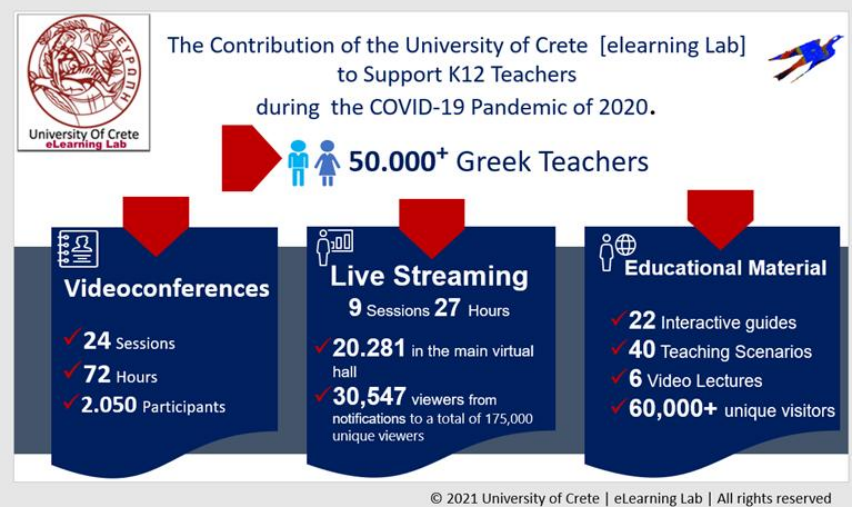

Figure 4: The Contribution of the University of Crete [elearning Lab] to Support K12 Teachers (www.edivea.org)

during the COVID-19 Pandemic of 2020.

The important experience gained by the University of Crete | e-Learning Lab played a key role in the design and implementation of these seminars:

A. in the distance training of teachers within the Major Training Program of the Pedagogical Institute (Anastasiades, 2012; Anastasiadis et al. 2011, Pedagogical Institute 2011) and the training of expatriate teachers within the Expatriate Education program of the University of Crete (Anastasiades, 2007; 2012, Damanakis & Anastasiades, 2005).

B. in distance education of teachers in the context of training seminars on New Technologies in education and distance education (Anastasiades, 2016; Anastasiades & Kotsidis, 2013) with emphasis on social eLearning. Anastasiades 2019; Kotsidis K, Anastasiades, P. (2019)

B. in school distance education, through the development of the ODYSSEUS programme (2000-2020), which is the first systematic effort to design and implement an integrated environment of complementary school Distance Education with the use of ICT in Greece through the pedagogical utilization of Interactive Teleconferencing in Primary schools of Cyprus during the period 2000-2003 (Anastasiades, 2003) and of Greece during the period 2004-2020 (Anastasiadis, 2017, Anastasiades et al 2010, Anastasiades 2009, Anastasiades, 2003).

Conclusions

The training of prospective teachers often lags behind in their preparation for distance learning (Debruler, Denton, McKay & Sicilia, 2020). Also, the teachers themselves consider (a) lack of knowledge in the field and (b) lack of confidence in designing and implementing teaching interventions based on Distance Educaton methodology impediments to the adoption of Distance Education (Mailizar, Maulina & Bruce, 2020).

Therefore, in order to maximize the benefits from the implementation of Distance Education, the contribution of educational activities such as those designed and implemented by the Laboratory of Advanced Learning Technologies in Lifelong and Distance Learning (eLearning Lab) of the University of Crete were important as they gave the opportunity to teachers to acquire basic knowledge of designing and implementing of teaching interventions based on the method of distance education, to acquire skills of using and utilizing available technological tools as well as to exchange experiences or share concerns creating in this way a

climate of optimism, solidarity and self-confidence, the cultivation of which is particularly important in conditions of threat and uncertainty.

For the realization of the seminars in the midst of restrictive measures, the solution of Synchronous Distance Education (teleconference, live streaming), which has been shown to contribute to the implementation of direct and quality training interventions that enhance interaction and facilitate practical training, was used since meeting in person was not possible. Moreover, research has shown that Synchronous Distance Education, under appropriate conditions, helps trainees to "learn better" and facilitates their communication with the trainer, thus helping to alleviate the feeling of isolation, by enhancing the interaction and active participation of trainees (Xenos, Stavrinoudis, Avouris, Komis & Margaritis, 2004; Panagiotakopoulos, Lionarakis & Xenos, 2003; Milioritsas & Georgiadis, 2010, cit. in Anastasiadis, 2014a).

In Greece, the introduction of Distance Education in emergency situations highlighted the problems in the state of readiness both at the level of central planning and at the level of school units as, on the one hand, the necessary preparations had not been done, and, on the other hand, there was a lack of experience regarding its implementation.

In order for the educational community to integrate Distance Education in a critical way and to take advantage of the possibilities and advantages it can offer, it was necessary to train teachers in understanding the basic principles of Distance Education, the methodology for designing educational material, as well as the acquisition of skills to utilize the available technological tools.

The contribution of the Laboratory of Advanced Learning Technologies in Lifelong and Distance Learning (eLearning Lab) in training teachers in school distance education is reflected in the implementation of training seminars which are structured as follows:

A. Fundamental principles of Distance Education: Basic Theories, differences between Distance Education and Face to face Education, the importance of educational material, Social dimension, etc.

B. The Pedagogical utilization of ICT in a School Distance Education environment (synchronous, asynchronous environments and Blended Learning).

C. Design of Educational material: introductory activities for the critical utilization of the existing material with the methodology of Distance Education / Development of lesson plans for teaching interventions based on the methodology of Distance Education

D. Pedagogical Planning of Teleconferences

The above seminars were implemented during the period March - December 2020 through the teleconferencing platform Webex Meetings, while they were also broadcast live on the page of the University of Crete | eLearning Lab on social media (Facebook).

During the period March - December 2020:

- 24 Teleconferences took place in which 2050 trainees participated

- 9 Live Streaming Sessions took place in which 20,281 trainees participated in the "main hall" and 30,547 from shared posts to a total of 175,000 individual viewers

- over 60,000 individual visitors visited the site with the educational material (www.edivea.org)

All the above actions were supported by the eLearning Lab of the University of Crete, using its own resources.

- Those who contributed to the seminars: trainers (12 scientific associates), design of educational material (28 scientific associates), technological support (4 technicians), administrative and organizational support (5 associates).

-Technological Infrastructures (synchronous Distance Education via WEBEX, asynchronous Distance Education, registration management system and issuance of certificates with information systems and applications developed by EDIVEA)

Finally, the data from the evaluation process of all the training activities in which approximately 6,000 teachers participated are currently being processed.

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