Exploring Attitudes of Greek Teachers of Foreign Language in Secondary Education on Training in Digital Technologies in Foreign Language Teaching

Athina Varsamidou

Department of French Language and Literature, Aristotle University of Thessaloniki, Greece

Email: avarsamidou@frl.auth.gr

Abstract

The article traces aspects of the existing training of foreign language teachers in the pedagogical use of digital technologies in foreign language teaching. Specifically, it reflects the views of teachers who teach foreign languages in secondary education in Greece on the content, objectives and methodology of training programs concerning the utilization and application of digital technologies in teaching practice. Semi-structured in-depth interviews were implemented as the research tool to gather teachers' perspectives. The findings of the research were fed by a sample of 15 foreign language teachers (regular and contractual) selected by the method of "simple" random sampling and who were serving in the Secondary Education of the prefecture of Thessaloniki between October 20-20 November 2023. The findings show that, on the one hand, foreign language contractual teachers have not been trained in the integration of digital media in teaching, and on the other hand, although a large percentage of regular foreign language teachers have been trained in the application of digital technologies in teaching practice and express satisfaction with the training programs, they do not feel secure and often hesitate to integrate digital material into their lessons. Deterring factors include lack of teaching time, classroom management, technical support, concerns about the security of personal data, and entrenched teaching beliefs associated with the traditional model of foreign language learning. They seek systematic training that links theoretical knowledge with its application in real-life foreign language classroom situations, support and updating of their knowledge. In summary, according to the findings of the research, training programs for the use and pedagogical use of digital media in foreign language teaching should be open to all teachers (permanent and contractual), providing practices for immediate implementation, provide teaching examples and scenarios to foster digital culture and digital literacy, alongside the development of language and communication skills, which are the basis for teaching a living foreign language.

Keywords: training, digital technologies, foreign language, teaching, secondary education

Introduction

Formulation of the research problem

The rapid development of digital technologies in every field of human activity has penetrated the field of education, a field capable and suitable for the introduction and integration of innovative tools and methods. In particular, the information overload with which modern man is inundated, the presence of artificial intelligence, the demand for high quality education and training, leading to the obsolescence of knowledge, make our times demanding. Today, more than ever before, schools must actively participate in social and economic development and change their mentality and orientation if they are not to be marginalized. The rapid progress in the field of web technologies offers new powerful tools in scientific research and education and provides great tools for defining and solving educational problems (Bayar, 2014). In the Greek educational system, the integration of digital media and applications in all subjects is now a reality with the New Curricula (2021) implying a new dimension in the teacher-student-learning process system. In foreign language courses taught in secondary education (English, French, German), teaching scenarios are proposed, which include activities using digital tools, media and applications, aiming at the cultivation of literacies (digital, visual, social, intercultural). Their implementation requires teachers' prior familiarity with digital technologies and is therefore directly linked to the issue of training. Of course, teachers do not approach the use of digital technologies in the classroom in the same way. Reactions range from over-enthusiasm to complete rejection of digital media, and not all of them have the skills to handle the new educational applications (Tzimogiannis, 2021). The problems are compounded by inadequate infrastructure, the absence of technical support, and concerns about classroom management and teaching time (Tzimogiannis, 2021). The multiplicity of the potential of digital technologies in foreign language teaching for the development of linguistic, communicative, pragmatic, and intercultural skills necessarily determines a corresponding multiplicity in the organization of lessons, in the teaching material to be used, in the role of the teacher and finally a multiplicity of the teaching situations themselves (Mitsikopoulou, 2022). Of course, technology should not be a self-purpose, but should find its place where it really contributes to the improvement of the lesson. The effective use of digital technologies in teaching practice means, on the one hand, the acquisition of a range of skills and, on the other hand, the cultivation of attitudes, mentality, creative and critical thinking towards web technologies (Koutsogiannis, 2018). The very important role of the teacher can, in the context of the transformation of courses with the support of digital media and applications, be radically transformed and from being a sole knowledge carrier to becoming a catalyst, facilitator, mediator (Papadopoulou & Papanastasiou, 2020).

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

Our research attempts to investigate the changes, additions and reorganizations required in the methods of training and education of foreign language teachers in digital technologies in order for them to be effective in foreign language teaching, always in line with the principles of the CEFR (2021) and the Digital Competence Framework (2017), but also with the actual needs of teachers and students. More specifically, we attempt to investigate: a) the degree of satisfaction of foreign language teachers with the training in new technologies that they have received either in their basic studies or from the various training programs they have attended, b) their degree of satisfaction with the organization and methodology of the training programs in relation to the digital media in which they have participated, c) to what extent they apply the knowledge they have received from the training programs and how often and d) whether they make use of the knowledge they have acquired in teaching the foreign language. For the sake of brevity, in this article, we will address the first 3 research questions, which are the main thrusts of the research.

Training in digital technologies in the Greek educational system

The first systematic and institutionalized training procedures for teachers of all specializations on new technologies in Greece, date back to the early 1990s, in the context of the Regional Training Centers (Dagdillelis, 2014). The training of teachers in the didactic uses of communication and information technologies, in the context of these seminars, was approximately elementary as it included exclusively basic computer use lessons. Gradually, plans began to be formulated and training cycles were held which tried to consider the newest data. The second half of the 1990s was characterized by a large number of training seminars on the use and pedagogical exploitation of new technologies, but these did not have a great impact on teachers. It is a fact that during the 1990s, the Greek state failed to organize systematic teacher training. Thus, even the much-discussed teacher training program in the context of the "Information Society", which started to be implemented in March 2002, was essentially limited to 48 hours of training in basic computer skills (Dagdillelis, 2014).

Training in digital technologies for foreign language teachers

In Greece, three foreign languages are taught at the three levels of public and private schools: English as the first compulsory language and French and German as the second language of choice. The systematic training of foreign language teachers in digital literacy and the pedagogical use of web technologies in foreign language teaching started in 2018 with the training of 50 foreign language trainers at University Centers for 350 hours. After the successful certification of the trainers, distance training sessions for foreign language teachers lasting 60 hours on the utilization and application of digital technologies in teaching practice were organized from March 2020 to July 2020 (Training of teachers on the utilization and application of digital technologies in teaching practice / B2 Level ICT training). While the initial combination provided for face-to-face sessions, in the end, due to the COVID-19 health crisis, the training was conducted remotely through a special platform.

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

Participation was lottery-based, and 450 language teachers participated. Prior to this first systematically organized training program exclusively for foreign language teachers, there was the general training in digital technologies (Level A) common to all teachers, and the program "Introductory training for the educational use of ICT (B1)", but there were no sections exclusively for foreign language teachers. Subsequently, from March 2023 to July 2023, the same training program (Level B2) was repeated, lasting 80 hours (20 hours of practical classroom application were added). The same number of teachers participated. In the meantime, due to the health crisis and the mandatory distance education, another training course, lasting 20 hours, was held, which focused more on distance education, familiarization with tools and platforms and less on the pedagogical use of digital technologies in teaching practice (February-March 2021). Finally, from March to July 2024, a new training period on the pedagogical use of digital technologies for foreign language teachers is planned for a total of 60 hours (Level B1). At the same time, the New Curricula for Foreign Languages (2021) largely advocate the introduction of digital tools/media with a pedagogical orientation in foreign language teaching and the cultivation of multilingualism using digital technologies. It is worth mentioning that school foreign language advisors often organize training workshops and seminars on the integration of digital technologies in foreign language teaching.

Content of training on the use of digital technologies in the foreign language classroom

In the context of the Level B2 training, the foreign language teacher trainees approach the following thematic areas: theoretical framework for the design and implementation of teaching scenarios, assessment of students in alternative ways, interactive foreign language textbooks, new textual reality and the development of linguistic and digital literacy, analysis of digital texts, understanding the contribution of digital web 2.0 tools and collaborative learning environments in foreign language learning, creation and pedagogical use of infographics, word clouds, timelines, interactive posters (Glog), podcasts/vodcasts, blogs, wikis, digital storytelling. Special emphasis is placed on the development and evaluation of educational scenarios and the adaptation of scenarios according to the age and language proficiency level of students, scenario structure, worksheets (Mitsikopoulou, 2022; Papadopoulou & Karava, 2020).

Exploratory questions of the problem

The research problem posed in our research was the context of the utilization of digital technologies in foreign language teaching in relation to the existing teacher training in digital technologies. To better investigate the above purpose question, we posed the following research questions:

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

a) Do foreign language teachers consider the knowledge they acquire from their basic training at the university and then from the institutionalized training programs in digital technologies to be sufficient?

b) Are they satisfied in terms of the organization (content, duration, periodicity) and methodology of their training in digital technologies?

c) Do foreign language teachers have the opportunity to use digital technologies in their daily teaching and apply the knowledge gained from the training in the classroom? If so, how often? If not, what difficulties/obstacles arise?

d) To what extent do they feel competent to use software, digital applications, and media as tools for their learning? For the sake of brevity, in this article we will limit to the first three research questions.

Research methodology

The sample consists of 15 foreign language teachers (regular and contractual teachers) who served in public schools of Secondary Education in the Prefecture of Thessaloniki between October 20 and November 20, 2023. The selection was made using the "simple" random sampling method to ensure equal probabilities for each member to be included in the sample. The methodological tool used would have to be considerably more flexible than the questionnaire. The questionnaire method would have serious disadvantages and would not be the most appropriate choice. The written answer would be considered binding and would be treated with a great deal of suspicion. There was also a high risk that the response rates would be too low, so that a biased sample would be obtained. Furthermore, there was the possibility that the same question could be interpreted differently. In addition, there was a visible risk that some of the responses were not included in our questionnaire. Thus, we used the interview as a research tool, and in particular the semi-structured in-depth interview (Paraskevopoulos, 1999), so that the teachers in the sample were able to comfortably express their views and concerns about the research questions. For these reasons we chose the in-depth interview. With this we would attempt to gather as much information as possible about the experiences, opinions, attitudes, and representations of the participants. We chose the semi-structured interview, as we sought to direct the interviewee on key issues, but to allow the interviewee to develop their thoughts and opinions freely and in depth. Thus, we designed a set of predetermined questions, but with flexibility in terms of their order, in terms of modifying their content according to the interviewee and in terms of adding questions and topics for discussion. During the interview we chose to use mostly open-ended questions. The reasons that led us to switch to this choice are: Open-ended questions allow respondents some degree of flexibility in their answers. Therefore, they can choose what they feel is most appropriate. Furthermore, through such answers, we would have the opportunity to discover something that we might not have anticipated. This could provide greater depth to our investigation. In

addition, we would have been able to offer stimuli, as well as to ask for clarification or more information from the teacher respondents. In addition, we designed opinion questions to explore their attitudes and perceptions of our specific research questions. Finally, we designed descriptive questions to elicit specific information from respondents related to specific characteristics and knowledge, such as gender, age, level of education, years of service, professional status (regular/contractual), level of training in web technologies, and specialization. In order to create a climate of acceptance and honesty, we have tried to make the objectives of our research fully understandable and to point out that this is done in the context of scientific research and the results will not be used by any other person or institution. Of course, we stressed that the anonymity of the interviews would be guaranteed. Several interviews were postponed due to various obstacles such as lack of time or other commitments and had to be rescheduled. However, despite any hesitations by the interviewees or difficulties presented, once they participated in the interview, they responded enthusiastically. The atmosphere was positive and most of them told us that it was a pleasant experience, and they were able to speak their mind somewhere. The interviews were conducted in any place the interviewee wished (home, work environment or even via a digital platform). In presenting the findings of the survey we stick to a qualitative analysis due to the small sample size. It is important to mention that the role of the researcher was neutral and there were no interventions or evaluations positive or negative on the part of the researcher in terms of expressing the personal views of the research participants.

Demographic data

A total of 15 foreign language teachers working in the public sector in the year 2023-24 in educational units of Secondary Education in the Prefecture of Thessaloniki participated in the survey. Of these, 10 (ten) are female and 5 (five) are male. Nine (9) are regular teachers and six (6) contractual teachers participated. There are 8 (eight) English language teachers, 4 (four) French language teachers and 3 (three) German language teachers.

Table 1. Demographic data of participants

N	Gender	Age	Discipline	Professional Status	Years of service	Training in digital technologies
I1	Female	35-45	English	Regular	10-15	B1
I2	Male	25-35	English	Contractual	5-10	None
I3	Female	45-55	English	Regular	10-15	B1
I4	Female	35-45	French	Regular	15-20	A
I5	Female	55+	German	Regular	20+	B1

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

I6	Female	55+	French	Regular	20+	B1
I7	Male	25-35	English	Contractual	5-10	None
I8	Female	25-35	German	Contractual	5-10	None
I9	Male	35-45	English	Regular	10-15	B2
I10	Female	45-55	English	Regular	15-20	B2
I11	Male	25-35	French	Contractual	0-5	None
I12	Female	25-35	German	Contractual	0-5	None
I13	Female	55+	English	Regular	20+	B1
I14	Male	25-35	English	Contractual	0-5	None
I15	Female	45-55	French	Regular	15-20	B1

The age group of participating teachers in relation to gender is reflected in the table below.

Table 2. Age in relation to gender of participants

Age	n	f	m
25-35 years old	6	2	4
35-45 years old	3	2	1
45-55 years old	3	3	0
55+ years old	3	3	0

The table below describes the status of the teachers in the sample (regular or contractual) in relation to gender.

Table 3. Professional status in relation to gender of participants

Professional status	n	m	f
Regular	9	1	8
Contractual	6	4	2

The table below shows the specialties of the teachers in relation to gender.

Table 4. Specialty in relation to the gender of the participants

Discipline	n	m	f
English	8	4	4
French	4	1	3
German	3	0	3

We supplement the demographic data of the participants with the table below which shows the years of service of the sample teachers in relation to professional status and discipline.

Table 5. Years of service in relation to specialization

Years of service	n	Regular	Contractual	English	French	German
0-5	3	0	3	1	1	1
5-10	3	0	3	2	0	1
10-15	3	3	0	3	0	0
15-20	3	3	0	1	2	0
20+	3	3	0	1	1	1

We conclude with the profile of the survey participants regarding training in digital technologies in relation to professional status and specialization.

Table 6. Training in digital technologies in relation to professional status and specialization

Training in digital technologies	n	Regular	Contractual	English	French	German
Level B2	2	2	0	2	0	0
Level B1	6	6	0	3	2	1
Level A	1	1	0	0	1	0
None	6	0	6	3	1	2

Analysis of responses

 a) Degree of proficiency in basic training and from participation in training programs.

Newcomer foreign language teachers state that despite the knowledge they received during their basic training, it is difficult to integrate digital technologies in the physical classroom environment. Contractual teachers, apart from the basic knowledge received during their academic training, have not taken part in the institutionalized training programs. A contractual teacher of English (I14) states: "…I have not had the opportunity to attend a training program, either due to travel or lack of time. I am trying to integrate digital technologies into my English lessons by searching for materials and resources on my own and this is very time-consuming. At university I did similar courses, but I would like more connection between theory and practice. Knowledge is evolving and I need regular training experiences." Contractual teacher of German (I12) reports: "…. I have not been formally trained in digital technologies and I am afraid to experiment in the classroom. I have attended various

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

seminars from time to time, but not the statutory training programs at Level B1 and B2. I try to motivate students, the digital applications motivate participation, but I would like to have instant access to resources and materials, so I don't waste time. Students find the course more relaxed and often don't respond so I would like an application framework that is very specific and tested. At university I had similar courses, however this knowledge needs to be updated." A regular English Language teacher with many years of teaching experience and a B2 (I10) level qualification, she stresses: ".... I have attended the B2 level training course and have been successfully certified, I consider my knowledge to be satisfactory. It helped me especially during the pandemic period and distance learning. Unfortunately, in the foreign language class we do not have much teaching time to introduce innovative practices and digital media. I try to enrich the lesson and make it interactive and enjoyable, but this is time-consuming and stressful." A regular French Language teacher (I15) who has attended the Level B1 training course underlines: "...during the compulsory distance learning we taught ourselves how to use digital tools in teaching. The Level B1 training helped me to learn some basic concepts and I would like to go deeper. At university we did some introductory courses, but it's been many years since then. Unfortunately, in school we don't have technical support if something happens, often the teacher can't resolve it, and this is a deterrent." Finally, a regular French language teacher (I6) with many years of teaching experience and B1 level training states: "...I did the B1 training in a class with colleagues from other disciplines and we did not focus so much on teaching the foreign language. I would like there to be an opportunity to apply in real-life settings the scenarios we design to evaluate the possibility of integrating digital technologies in the classroom with our students, not just vaguely designing."

It emerges that the contractual foreign language teachers in the study have not yet participated in institutionalized training programs and the effort to integrate digital media into teaching is personal and voluntary. They seek a link between theory and practical application and access to materials and resources for immediate implementation. Knowledge of basic academic training needs to be updated. Regular teachers who have been trained in pedagogical use of digital technologies consider that the training helped them during compulsory distance teaching due to the pandemic. They point out that the technical problems that arise, the lack of technical support and the limited teaching time act as a deterrent and prevent the application of digital technologies in teaching practice.

b) Degree of satisfaction of foreign language teachers in terms of the organization (content, duration, periodicity) and methodology of their training in digital technologies.

The foreign language teachers in the survey who were asked about their level of satisfaction with the organization and methodology of their training in digital technologies expressed a variety of opinions. A regular English language teacher (I1) who has been trained in the use of digital technologies in teaching (B1) stresses: ".... I

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

am very satisfied with the structure and content of the B1 training, but I would like it to be targeted to the needs of foreign language teachers. I was in a class with literature and art teachers, and I did not feel that I was learning something that I could integrate into my own class. The organization is systematic, and the methodology is good, but I would like more material that has already been applied in the foreign language classroom." A regular English language teacher (I9) who has been trained in pedagogical use of digital tools in teaching (B2) argues that "...more emphasis should be put on practical applications of digital tools; this would help us in everyday teaching. It is very good that we were asked to do practical application of the digital scripts we created and apply them ourselves, but this should be repeated". A regular French language teacher (I4) who has attended the Level A training program underlines that "... the program was very short, and the knowledge was elementary and general. After that I did not have the opportunity to attend another training program due to lack of time. I would like to enrich my knowledge of digital technologies and make my course more interactive". The contractual teachers of foreign language did not attend any of the training programs in digital technologies and emphasize their personal effort. "...unfortunately, I did not have the opportunity to participate in institutionalized training, but especially during the pandemic I was greatly helped by groups of teachers in social networks that created a safety and support network for teachers. I am waiting for the training programs to start so I can take part" (I11). There is therefore an urgent need to offer training programs to teachers new to education, linking them to the foreign language subject matter and applying them to real-life situations.

c) Are foreign language teachers able to use digital technologies in everyday teaching and apply what they have learned in the classroom? If so, how often? If not, what difficulties/obstacles arise?

Contractual teachers, upon joining the active teaching force, are particularly preoccupied with their daily teaching work, where maintaining discipline and classroom organization is of primary importance, so that planning activities using digital technologies in teaching is among the issues that are of little concern to them in their first years of teaching service (Charalambous & Chrysostomou, 2002). When one considers the difficulties of integrating contractual into the educational unit from the status quo established by their senior colleagues, it seems extremely difficult to engage with innovative methods in a predominantly obsolete learning environment.

An contractual teacher of English (I2) reinforces the above statement by stating that "... although my knowledge of digital technologies allowed me to integrate them relatively well into the learning process, I had to actually clash with my colleagues' preconceived notions and beliefs about how to conduct the course, many of whom consider them to be a totally ineffective teaching tool", while a contractual French language teacher (I11) observes that "...there is so much that newcomers to the classroom have to learn on their own, due to the indifference of additional support

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

from the administration, and should also have a very good background to at least immediately apply innovative methods in their work, such as digital technologies, since their primary concern is their survival in the classroom".

Those who said that they use digital technologies in their teaching, the use is focused on structural type exercises with closed software. In contrast, activities related to critical use of digital tools, media, and applications for literacy development outside of instrumental reasoning are rare. A regular German language teacher (I5) claims that ".... often, I use some digital tools for exercises such as fill-in-the-blank, multiple choice, true-false. These can also be done with photocopies but viewing them on the interactive whiteboard makes them more enjoyable". Barriers to the integration of digital tools in the classroom are seen as lack of teaching time, classroom management, technical support, and concerns about the security of personal data. A regular French language teacher (I6) claims that "...there are often technical problems that I cannot solve, and teaching time is lost. Students underestimate the lesson and are very anxious. It is not easy for the teacher to manage the class". A regular English language teacher (I3) also raises the issue of personal data and distraction "...I often receive complaints from parents that there are risks for children from constant involvement with computers and there is also a risk of leakage of personal data, photos, etc.". There is also the issue of the availability of a classroom with appropriate equipment. Foreign language teachers rarely have their own classroom and access to the IT laboratory is often not possible. A contractual German language teacher aged (I12) states "...we have to bring our equipment from home to do the lesson with digital media, as many classrooms are not adequately equipped". The need to provide substantial support to young teachers in the form of personalized assistance at their school and an organized series of training courses on the use and integration of digital technologies in education is therefore evident.

Interpretation of the findings - Discussion

From our research study it is clear that the thorny issue of the introduction and integration of digital technologies in the educational process is a serious concern for Greek teachers. Teachers show that they understand the importance of pedagogical utilization of digital media in teaching, however, they submit concerns regarding the duration, periodicity, content, and objectives of the relevant training programs (Koutsogiannis, 2017; Sergis & Koutroumanos, 2013). They believe that the training provided should be extended, should concern all foreign language teachers, and should give them theoretical knowledge and connection with everyday teaching practice. They demand access to open sources and material that can be directly used in the classroom, without losing valuable teaching time (Kostara, 2016; Kostopoulou & Koutsimani 2018). At the same time, they turn the focus of the discussion to issues of technical support, logistical infrastructure, and classroom management. Finally, they argue that they find it difficult to integrate and implement teaching scenarios in the classroom using digital technologies (Dimitriou & Tzimogiannis, 2016). The State

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

should investigate their real training needs, combine, and exploit the use of digital technologies in teaching practice with their personal and professional development. According to Tzimogiannis (2021), it is imperative for the Greek educational system to identify and adopt an integrated model for the further education of practicing teachers and adequate training of prospective teachers, which will aim to integrate digital technologies in education. The success of this model is determined by:

- the adequate justification of the integration of digital technologies in the educational process in terms of pedagogy and didactics,
- the adoption of digital technologies as educational and learning tools for literacy development,
- the acquisition of solid and lasting skills in the use of digital technologies,
- continuous pedagogical support and the acquisition of skills to integrate digital technologies into teaching practice,
- the cultivation of a general culture concerning the application of digital technologies in the educational process.

In similar research in the international context (Kuzu, 2022), similar concerns are expressed by teachers and the findings of the present research are confirmed: issues of infrastructure, access to open resources, classroom management are of concern to teachers. Also, research related to the use of digital media during the health crisis (Watermeyer, et al., 2022) reaches similar conclusions.

Based on the qualitative analysis of the research data, it is suggested that training programs on the use and application of digital media should always link theory and practical application in the classroom. In addition to theoretical study, it is suggested that the knowledge should be applied in the classroom and integrated into the foreign language lesson. Technical and infrastructural issues (technical support, classroom equipment, access to free materials that can be used in foreign language teaching) should also be addressed. Finally, it is proposed to improve and extend the content of the foreign language curricula (enriching the material with scenarios using open sources and digital media in order to foster digital literacy and critical thinking and avoiding the idea that digital media are merely tools accompanying the course). The findings of the present study are quite significant, stimulating further research, but it should be noted that they occur from a relatively small sample (samples of this size provide insufficient statistical power to identify any - except the most significant - relationships between the independent and dependent variables), which consisted of teachers from a specific geographical region of the country with very specific characteristics. It is evident that further investigation of the hypotheses of the survey is required using a representative sample of teachers as well as the general population.

Bibliography

[1] Bayar, A. (2014). The Components of Effective Professional Development Activities in terms of Teachers' Perspective. International Online Journal of Educational Sciences, 2014, Vol. 6, No. 2, p. 319-327 ISSN: 1309-2707. Retrieved January 10, 2024, from https://files.eric.ed.gov/fulltext/ED552871.pdf

[2] Charalambous, K. & Chrysostomou, C. (2002). The preparation of teachers for the pedagogical use of ICT: From Basic Training to In-service Training. In Anthology: A. Dimitrakopoulou (ed.). Proceedings of the 3rd Panhellenic Conference with International Participation. Rhodes, Greece.

[3] Dagdillelis, V. (2014). The Mixed Model of Teacher Education as a combinatorial innovation: design problems. P. Anastasiadis, N. Zaranis, V. Ddigilidis, V. Economidis & M. Kalogiannakis, (Eds.). Proceedings of the 9th Panhellenic Conference with International Participation "Information & Communication Technologies in Education". University of Crete, Rethymnon, 3-5 October 2014. Retrieved on 16 January 2024, from http://www.etpe.gr/custom/pdf/etpe2256.pdf

[4] Dimitriou, D., Tzimogiannis, A. (2016). Investigating teachers' Technological Pedagogical Content Knowledge for the integration of ICT in classroom educational practices. In TA. Mikropoulos, N. Papachristos, A. Tsiara, P. Halki. Proceedings of the 10th Panhellenic Conference with International Participation "ICT in education". Ioannina. ISSN 2529-0916, ISBN 978- 960-88359-8-6. Retrieved on 30 January 2024, from http://www.etpe.gr/custom/pdf/etpe2434.pdf

[5] Kostara, E. (2016). Teachers and digital technologies: The role of familiarity and professional development. Pedagogical Issues, 59(1-2), 71-88.

[6] Kostopoulou, A. Koutsimanis, T. (2018). Educators and technologies: Addressing technical problems in education. Educational Technology and Training, 21(1), 5-20.

[7] Koutsogiannis, D. (2017). Framework of principles for the creative use of digital media in education. Retrieved January 16, 2024, from https://www.academia.edu/34673980/

[8] Koutsogiannis, D. (2018). Print literacy and digital literacy. Training of ICT trainers at the second   level (Training Material-Special part, Section 3.10).

[9] Kuzu D., E. Özbek, A. B., Demir, K. (2022). Exploring Turkish special education teachers' experiences of emergency remote teaching during the COVID-19 pandemic. Journal of Educational Technology and Online Learning, 5(2), 316-335. https://doi.org/10.31681/jetol.1076853

ISSN 2601-8616 (print)
ISSN 2601-8624 (online)

European Journal of
Education

January - June 2024
Volume 7, Issue 1

[10] Mitsikopoulou, V. (2022). Introduction to the educational scenario: design principles, theoretical framework, and evaluation. B2 Level training material, Foreign Language Cluster. Practice: Training of Teachers on the use and application of digital technologies in teaching practice - Level 2 ICT Training/B cycle.

[11] Papadopoulou, M., Karava, E. (2020). The role of digital literacy in preparing students for the use of Information and Communication Technologies (ICT). Pedagogical Issues, 73, 59-80.

[12] Papadopoulou, M., Papanastasiou, E. (2020). The role of the teacher in the era of information and communication technologies. Educational Technology and Training, 21(2), 215-228.

[13] Paraskevopoulos, I. (1999). Questionnaire of interpersonal and intrapersonal adjustment. Hellenic Letters.

[14] Sergis, S., Koutromanos, G. (2013). The impact of training in Information and Communication Technologies for teachers. Issues in Science and Technology in Education, 6(1 -2), pp. 67- 84, 2013. Retrieved December 08, 2023, from http://earthlab.uoi.gr/thete/index.php/thete/article/view/157

[15] Watermeyer, R., Chen, Z., & Ang, B. J. (2022). 'Education without limits': The digital resettlement of post-secondary education and training in Singapore in the COVID-19 era. Journal of education policy, 37(6), 861-882. https://doi.org/10.1080/02680939.2021.1933198

Websites

[1] https://www.coe.int/fr/web/common-european-framework-reference-languages

[2] https://elearning.iep.edu.gr/study/course/index.php?categoryid=8

[3] https://publications.jrc.ec.europa.eu/repository/handle/JRC128415