Distance teaching process as a result of the sudden, immediate and without prior design implementation of online education in Greece is the subject of this study. The combined use of synchronous and asynchronous teaching, teachers’ insufficient training to efficiently meet the requirements of the new teaching method because of the pandemic and the suspension of the operation of school units, as well as the necessary electronic equipment that teachers and children needed are considered important factors that caused stress, fear, reluctance, discomfort, etc. However, after the participation in the distance teaching process, the question arises: what is the opinion that the involved parties (teachers, children, parents) shaped about distance education? Is it a positive or a negative one? Would they wish to see face-to-face teaching being replaced by distance teaching? Were there any advantages and disadvantages during its implementation? If yes, what were the most important ones in each case? This study attempts to answer these questions.

Keywords: Covid-19 pandemic, distance learning, hybrid teaching, online education, primary education.

I. INTRODUCTION

The coronavirus pandemic brought about changes in all fields of people’s lives and, therefore, also in children’s education. By means of a government decision and following recommendation of specialists, the Ministry of Education and Religious Affairs of Greece, as well as the respective ministries of most other countries, to respond immediately to the new sanitary conditions, suspended the operation of the traditional education institutions. A lockdown was imposed to all school units, in order not to favor the virus spread among the children, given that children are more sociable than adults and develop friendlier behavior. In addition, research showed that the virus is more contagious at children’s age. For these reasons, the Ministry of Education activated digital tools that allowed distance teaching. In this way, teachers and students could maintain contact and continuity of the education process could be ensured.

Distance education is an alternative that has been implemented for several years in various countries (Keegan, 2001). It is an alternative and flexible education system, which is the result of technology development that deviates from conventional education programs (Res, 2004). This system is known for several identical concepts, such as homeschooling, e-learning, computer assisted learning, online learning, online education, web-based education, etc.

In Greece, this form of education was a new experience for most teachers, because they were called to implement it to respond immediately and adequately to the new conditions of online education (Nikolopoulou & Kousloglou, 2022). Therefore, teachers of all ages, with a different scientific background, since several of them had only a basic degree, without being familiar with new technologies and without any training offered by the Ministry of Education, upon initiative of the school leadership would have to cooperate to become familiar with the two important pillars on which the modern teaching process relies, namely synchronous and asynchronous education.

Within this context, teachers were obliged to implement synchronous and asynchronous teaching in a combined way, to provide students with a comprehensive educational experience. They were also obliged, within the context of synchronous online education, to perform “live” daily videoconferences through Webex Meetings platform, following a specific schedule, adapting the teaching practices of traditional teaching to the possibilities offered by distance education environments (Lionarakis et al., 2020). In parallel, there was direct teaching and transmission of the class by the teacher in real time with active participation of all children in a virtual teaching classroom (Crahay & Delhaxhe, 1986). Videoconference allowed teachers to see and listen to their class children and interact with them remotely (Lionarakis, 2005). Students only had to click on the teacher’s link to follow the class “live,” through an online platform and from any computer device.

During the teaching process, each teacher:
1) Made sure that he/she was friendly and clearly formulated the learning objectives and expected...
outcomes using a slide or a text at the beginning of each unit, to reinforce the teaching and learning value of the educational material (DeCoito & Estaiteyeh, 2022).

2) Chose appropriate, active verbs (e.g., recognize, enumerate, define, make, etc.) describing an action, which could be measured in relation to the expected outcome (IEP, 2020).

3) Utilized a rich, carefully selected without excesses multimedia material (pictures, images, video, animations, sound excerpts), which, on one hand, should comply with education principles, and, on the other hand, respond to students’ interest in and motivation for learning (Manousou et al., 2020).

4) Integrated presentations, clarifying and supporting texts, to encourage questions on the teaching subject by means of real-time dialogue (Stamatis, 2021).

5) Reinforced the implementation of co-teaching, educational material management, interaction in common files, work in teams with defined roles for the team members, so as not to feel excluded from the education community and process and consider the course and completion of distance education successful (Tzimogiannis, 2017).

Together with the asynchronous online education, children had the possibility to access the learning material (e.g., sources, exercises, projects, etc.) at any place and any moment through specific internet pages and digital education platforms provided by the Ministry of Education (see Fig. 1, Fig. 2, and Fig. 3).

Thus, there was flexibility regarding the learning time, place, and pace. Children could participate in forum discussions among students but also with their teacher (Bao, 2020). Students could also participate in self-assessment tests, where they could see immediately their effort (except for the synchronous teaching time).

The leadership of each school unit in cooperation with the teachers had to inform children’s parents about:

1) Technical infrastructure required for online education (e.g., computer with a microphone and optional camera, tablet, mobile phone).

2) Internet connection.

3) Registration to the Panhellenic School Network.

4) Students’ behavior during online classes.

In addition, each school unit management sent detailed instructions to higher classes students about how to connect to the online classroom as well as the Weekly Online Education Schedule with the respective links for each teacher.

II. METHOD

A. Formulation of Research Reflections

Distance education is an evolution of teaching technology. The implementation of online education at school units requires specific equipment that teachers and students must possess, new knowledge about its use, new processes for its utilization and greater effort. But did teachers have the required knowledge and skills for the online education venture? Were the participants satisfied with the course of distance learning and learning outcomes? Did they see any advantages in the overall process and completion of online education? Did they find any disadvantages? Would they like to continue this type of education, or would they prefer face-to-face teaching?

B. Research Objective

The purpose of this study was to understand the attitude, the behavior and effort of primary education teachers to immediately respond to the new teaching conditions brought about by the pandemic because of the suspension of the operation of school units and the online education implementation. In addition, the study aimed to investigate the views of children and parents who participated in this new online education experience (Fernández-Batanero et al., 2021).

Within the framework of the approach of the above-mentioned objectives, the following three research hypotheses were formulated:
H1: Primary education teachers were pleased to accept the new education change of online education and worked to implement it smoothly.
H2: Children were able to learn better in the new learning environments.
H3: Parents contributed efficiently to the online education implementation.

C. Formulation of Research Questions
This study focused on the following research questions:
1) Were you happy with online education as teachers (or children or parents) who participated in it?
2) Would you like online education to continue in the future?
3) Would you like to go back to face-to-face education?
4) Could you please mention two of the most important advantages of online education?
5) Could you please mention two of the most important disadvantages of online education?

D. Research Design
The technique used to conduct the survey was structured interview. This technique is the most widespread method for data collection in qualitative research. It was based on a structured questionnaire. Thus, it has been possible to describe perceptions, experiences, attitudes, emotional reactions of teachers, children, and parents in limited questions, using quantitative data, so as to generalize, to the extent this was possible, the findings, and to ensure impartiality and objectivity in the survey (Creswell, 2011).

The questionnaire of the structured interview included five strictly defined questions on very specific topics, with specific answers. All participants were asked exactly the same questions, with the same wording and in the same order.

The next step was to conduct the interviews with the target population. In an atmosphere of respect, familiarity, sympathy, and trust between the two parties (researcher-interviewee), teachers, children, and parents responded willingly, despite their workload and the conditions that prevailed in education during this period. Following the completion of the process described above, the research data were listed, and their statistical analysis followed.

E. Survey Sample
The target population of the survey consisted of fifteen (15) primary education teachers of various specializations working on the island of Rhodes, thirty (30) children that attended a public primary school and fifty (50) parents. All participants voluntarily accepted to participate anonymously in the conduct of the interview, represented the characteristics that were studied and constituted the sample of the survey. The study was conducted during the first quarter of 2022.

F. Survey Tool for Data Collection
To achieve the objective and investigate the hypothetical questions, structured interview was used as data collection method. Prior to the conduct of the interview, the participants were informed about the subject of the survey, the purpose, the methodology, the freedom to choose to participate or not participate in the survey, the preservation of anonymity and personal data protection. In addition, they were given an informed consent form for signature, which ensured the application of the required ethical principles. In this way, the participants understood better the methodology and interview process.

The interviews took place in venues where participants could feel comfortable, without fear, hesitation, or nervousness, avoiding external interventions (e.g., noise, disturbance from other people, etc.) that could distract their attention. The time and date of the interview was chosen by the participants themselves, in order to have their replies to the research questions of this survey (Robson, 2010).

G. Data Analysis Processes
During the data analysis process, descriptive and inductive statistics were used. The questionnaire was developed around three axes, as follows:

1) Demographic data (3 questions, A.1, A.2 & A.3).
2) Closed-ended questions (3 questions, B.1, B.2 & B.3).
3) Open-ended questions (2 questions, C.1 & C.2).

The first axis included 3 demographic data questions about the participants’ category (A.1), gender (A.2) and age (A.3).

The second axis included 3 questions (B.1, B.2 and B.3). All three questions of this axis concerned bilateral scales with standardized answers (YES – NO). Question B.1 examined if the participants were pleased with the online education process. Question B.2 was about their wish or not to continue this flexible form of learning and education in the future replacing face-to-face teaching. The bilateral scale was applied also to question B.3., which invited the interviewees to answer whether they wished to go back to face-to-face teaching in school units.

The third axis included two open-ended questions (C.1 & C.2) and aimed at identifying the two most important advantages and disadvantages, in the opinion of the interview participants, ascertained during the online education period.

III. RESULTS

A. Demographic Data
1) Participants’ categories

As it can be seen in Fig. 4, 15 primary education teachers serving on the island of Rhodes (16% of total participants), 30 children (32% of total participants) and 50 parents (53% of total participants) participated in this survey. As it can be noted, the majority of the survey participants were parents.
2) Participants’ gender

As it can be seen in Fig. 5, 3 male teachers and 12 female teachers, 10 boys and 20 girls, and 20 fathers and 30 mothers participated in the survey. Therefore, the majority of the survey participants consisted of women.

![Fig. 5. Gender of participants.](image)

3) Participants’ age

Regarding age (Fig. 6), the largest share of the sample belongs to the age group 35-45 (37%); 35 participants (teachers and parents) participated in this age group.

![Fig. 6. Age of participants.](image)

B. Closed-Type Questions

1) “Were you happy with online education as teachers, children or parents who participated in it?”

Fig. 7 shows that of the 15 teachers who participated in this survey, 13 stated that they were not happy with distance education, despite the effort they made, the organization, the design and preparation, for the reasons mentioned below. Only 2 teachers were happy with online education, because they avoided commuting to their workplace.

![Fig. 7. Satisfaction of participants related to distance education.](image)

2) “Would you like online education to continue in the future?”

To the question if the teachers, students and parents who participated in the survey would wish the online education to replace the face-to-face education and continue in the future giving teachers the possibility to deliver classes remotely through a virtual reality system and children to follow classes from home, 85 participants gave a negative answer (89% of participants) and only 10 individuals expressed a positive opinion (11% of participants) (Fig. 8).

![Fig. 8. Willingness of participants to continue online education.](image)

3) Would you like to go back to face-to-face education?” (Fig. 9).

The same percentages as to question 2 were noted in the answers of participants to question: Would you like to go back to face-to-face education?

![Fig. 9. Desire of participants to return to face-to-face education.](image)

C. Open-Ended Questions

1) “Could you please mention the two most important advantages of online education?”

What they considered as an advantage of online education was the fact that teaching was offered at the place where each one of the participants was. Other reported advantages included the possibilities offered to the participants by digital education platforms and the internet, through which children’s familiarization with new technologies was achieved, easy navigation in the content of sources, sharing of a large amount of information and material and access to knowledge sources that would not have been feasible under different circumstances. Finally, avoiding commuting was also mentioned as an advantage.

2) “Could you please mention the two most important disadvantages of online education?”

Several participants considered as the main disadvantage the lack of physical presence in the teaching classroom, which they characterized as “impersonal communication.” Participants believe that impersonal communication had a negative impact on children’s socialization, since it limited
their everyday interactions and harmonious coexistence with other children at school units. Children staying constantly at home is considered as one of the causes that contribute to the increase of domestic violence.

Some children mentioned that they did not have the necessary equipment (e.g., desktop PC with a microphone and camera, laptop, tablet, mobile phone, etc.) with internet connection. Parents of children at lower grades stated that they were obliged to be constantly next to their children during the classes and help them by clicking the appropriate links they had to use to connect with their teachers, according to the weekly schedule.

Some older teachers stated that they faced difficulties with the use of the digital platform or with screen sharing or filling in exercises for classes, etc.

IV. CONCLUSIONS

The results of the statistical processing of the survey data led to useful conclusions regarding the research questions that had been formulated. More specifically, all 15 teachers of different specializations that participated in this survey served during the first quarter of 2022 in public primary education schools on the island of Rhodes in the prefecture of Dodecanese. The participation rate of children and parents in this survey is considered satisfactory given that during the conduct of the survey and structured interview restrictive measures had been implemented to deal with COVID-19.

Teachers were called on to implement, for the first time, synchronous and asynchronous teaching using a computer. Children lived the experience of distance education through their participation in it. Parents helped children by any available means, so that children could participate in this sudden change in the way of teaching. It is therefore allowed to reach satisfactory conclusions through their views, because the subject of the survey was directly linked with the rapid change in the field of education in practice, meaning distance education, and therefore, the participants (survey sample) had a direct understanding of the issue.

To register the participants’ views about online education, the methodological tool used for data collection was structured interview, with closed-ended questions, based on bilateral scales with standardized answers (YES–NO) but also open-ended questions.

Regarding the 1st research question, about the experience they acquired from distance education, based on the interviewees’ answers, it can be concluded that for most of them the experience was a negative one because of the difficulty they faced in connecting to the internet, impersonal communication, lack of interpersonal interactions etc.

Regarding the 2nd research question, which referred to the participants’ wish about online education, regarding whether this education form could continue in the future or not, the interviewees gave a negative answer, stating that online education does not help children socialize.

The majority of the interviewees gave a positive answer to the 3rd research question, which was about going back to face-to-face education, stating that in-person teaching and interaction between children and teachers are irreplaceable.

Regarding the 4th research question, which concerned the most important advantages that participants obtained from the online education processes, they mainly stressed the possibilities offered by the digital education platforms and in general the internet, which allowed direct access to a rich educational material.

Finally, regarding the 5th research question, which focused on the most important disadvantages of online education the participants referred to the absence of physical presence at the premises of school units and insufficient interaction among all members of school community.

V. LIMITATIONS OF THE SURVEY

In any survey there can be obstacles or weaknesses that may have an impact on the study of the results. For this reason, the researcher may wish to identify and state them (Creswell, 2011). In this study, one of the problems was the timing of its conduct since teachers had been charged by the Ministry of Education during the same period with the implementation of Skills Laboratories and Evaluation of Teaching. Nevertheless, the survey sample ensured validity issues in a satisfactory way, even though the conclusions cannot be generalized.

It is estimated that the answers of the interviewees were sincere, although completely subjective (Robson, 2010). The interviewees may have been influenced by closed-ended answers, which did not leave them any margins to elaborate their thinking. Thus, an attempt was made to ask simple questions about complex issues and the interviewees were not given the possibility, by answering open-ended questions, to express more their views.

REFERENCES

Bao, W. (2020). Covid-19 and online teaching in higher education: A case study of Peking University. Human Behavior and Emerging Technologies, 2(2), 113–115.

Crahay, M. & Delhaxhe, A. (1986). How to encourage children’s verbal participation in kindergarten. In J. Tison & P. Dorobuz (Ed.), Proceedings of the colloquium on evaluation Valenciennes (pp. 61–98), Valenciennes.

Creswell, J. W. (2011). Research in education. Planning, conducting, and evaluating quantitative and qualitative research. Athens: Hellenic Publications.

DeCoito, I., & Estaiteyeh, M. (2022). Transitioning to online teaching during the covid-19 pandemic: an exploration of stem teachers’ views, successes, and challenges. Journal of Science Education and Technology, 31(3), 340–356.

Education Policy Institute, (2020). Guide to the educational design of distance courses. Athens.

Fernández-Batamero, J. M., Román-Graván, P., Reyes- Rebollo, M. M., & Montenegro-Rueda, M. (2021). Impact of educational technology on teacher stress and anxiety: a literature review. International Journal of Environmental Research and Public Health, 18(2), 548–560.

Keegan, D. (2001). The basic principles of open and distance education. Translated by A. Melista. Athens: Metaximio.

Lionarakis, A. (2005). Open and distance education and learning processes In P. Vasala, I. Giosos, M. Koutsoupa, A. Lionarakis, M. Xenos, & C. Panagiotakopoulos (Eds.), Pedagogical and Technological Applications. Patras: E.A.P.

Lionarakis, A., Matoussou, E. & Harofylaka, A. (2020). The experience of the Hellenic Open University and its utilization at all levels of education. Retrieved from https://www.esos.gr/artha/66695/i-
Manousou, E., Hartofylaka, T., Ioakeimidou, V., Papadimitriou, S., & Karagianni, E. (2020). Educational course design in distance education. In A. Lionarakis, A. Kokkos, T. Orfanoudakis, A. Embalotos, & N. Grammenos (Eds.), Massive Open Online Course (MOOC): Training of Primary & Secondary Education teachers in distance education. IEP-EAP. Retrieved May 31, 2020, from https://drive.google.com/file/d/1atxO74h2KD2oBq62Shh4cPanYFp2Qp4Z0R/view.

Nikolopoulou, K., & Kousloglou, M. (2022). Online teaching in covid-19 pandemic: secondary school teachers’ beliefs on teaching presence and school support. Education Sciences, 12(3), 216–227.

Res, G. (2004). The new technologies in education. Problems and prospects. Education and New Technologies, 1, 10–19.

Robson C. (2010). Researching the real world: a tool for social scientists and professional researchers. Translated by V. Dalakou & K. Vasilikou. Athens: Gutenberg.

Stamatis, P. J. (2021). Impact of COVID-19 on teaching and classroom management: Thoughts based on current situation and the role of communication. European Journal of Education and Pedagogy, 2(1), 5–63.

Tzimogiannis, A. (2017). E-Learning: Theoretical approaches and educational designs. Athens: Critique.

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