

Inclusive Education during Pandemic Crisis of COVID-19

By *Constantia Charalambous*^{*} & *Christos Papademetriou*[‡]

The recent expansion of the COVID-19 outbreak has drastically altered the educational landscape, causing certain schools to operate on a distance education basis. The goal of this study is to investigate this phenomenon in depth, focusing on the elements that may contribute to the marginalization of students with learning disabilities and their immigration biography. At the same time, it attempts to investigate the perspectives of a group of students, teachers, and parents on how to avoid marginalization as a result of distance education. We employed a mixed research style to study the aforementioned problem. A total of 132 secondary school students, 52 secondary school teachers, and 49 secondary school parents were included in the study. As research tools, questionnaires, focus groups, observations and interviews were used. The data analysis reveals that the elements which may contribute to marginalization in remote education are primarily related to attention challenges, but also to technical difficulties. According to the participants, a closer collaboration between the Ministry of Education, school administrations and teachers, as well as revisions to the substance of teaching subjects, may be the solution to the problem.

Keywords: COVID-19, distance learning, inclusive education

Introduction

The widespread of COVID-19 has resulted in the creation of new educational data (Huang, et al. 2020), as well as the potential for the educational community to highlight the importance of online platforms for interaction in the educational process (Dhawan, 2020). The ability to provide remote education has effectively supplanted traditional face-to-face instruction, assuming, of course, that technology equipment and knowledge are available to support this method of instruction. Simultaneously, it provided students and teachers with the opportunity to experience a new type of education (Pokhrel & Chhetri, 2021), which had a number of benefits, including the development of students' creativity and increased collaboration between teachers (Doucet, Netolicky, Timmers, & Tuscano, 2020). Microsoft Teams is the main platform utilized in the Cypriot educational field for distance learning (Ministry of Education, Culture, Sports and Youth, 2020).

The new era created in the provision of education due to the pandemic have also created new data in matters concerning the quality of the education provided. The issue is not simply the coverage of the teaching material per subject, something from which only excellent students benefit, but at the same time the

^{*}Teacher, Cyprus.

[‡]Assistant Professor, University of Neapolis, Cyprus.

inclusion of all students. During distance education, teachers must provide equal learning opportunities to students who tend to be marginalized, such as student with learning disabilities and students with an immigrant background (Nosek, 2023).

Literature Review

Inclusive Education

In recent decades, there has been a major emphasis on the implementation of inclusive education in order to create an effective school culture on a global scale (Papademetriou, 2012). It is a method of education that attempts to integrate all students in the educational process, while also taking into account their educational and social requirements, as well as their diversity (Charalampous & Papademetriou, 2019). As a result, it encompasses all children, regardless of their educational backgrounds, any form of dysfunction, behavioral issues, sexual preferences, or cultural, religious, or linguistic differences (Charalampous, 2022).

The phenomenon of marginalization of students who are classified as people with special needs is visible in present Cypriot educational data, so, the content of the inclusive theory must be implemented. As a result, in Cyprus, efforts to integrate kids in their neighborhood's schools have been maximized (Charalampous & Papademetriou, 2018).

It's worth mentioning at this point that "students with learning difficulties" refers to kids who have been identified as having learning problems by the Provincial Committee on Special Education. They frequently attend supporting teaching courses with a customized timetable for one or two teaching sessions each day that differs from the standard class schedule (Charalampous & Papademetriou, 2021). They take supportive teaching courses in the examined courses during these times. The term "immigrant students" refers to school-age students who have immigrated from their home country (either themselves or their parents) for whatever reason (European Commission, 2019).

Distance Learning During a Pandemic

Immediately following the pandemic's outbreak, school units as well as the Ministries of Education worldwide were called to take measures to create the appropriate conditions for the implementation of distance teaching, but unfortunately there was no adequate planning to cover the educational needs of the students with special educational needs and immigrant background (Jia & Santi, 2021). This fact has created a lot of psychological pressure on both students and teachers (Perdana & Sutarsyah, 2021).

Due to the expansion of the coronavirus epidemic and forced confinement at home, online education has become an unavoidable phenomenon in the previous two years. Of course, effective distance education implementation necessitates more than the availability of a computer and an Internet connection (Butnaru, Nita,

Anichiti, & Brînza, 2021), technological competence among teachers and students, and parental support (Pokhrel & Chhetri, 2021).

Vlassopoulos, et al. (2021) propose financial aid to students for the purchase of appropriate technological equipment and the organization of seminars with distance learning teaching as approaches toward the optimal provision of distance education (Charalampous & Karava, 2022).

The Application of Inclusive Theory in Distance Education

The segregation policy generally followed by the Cypriot educational system unfortunately also exists in the distance education of students with special needs (Symeonidou, 2022) and also in the education of students with an immigrant background.

Students with learning difficulties, according to Ayda, et al. (2020), may not gain much from distance education, resulting in marginalization. Petretto, Masala, and Masala (2020) bolster this argument by pointing out that students with learning disabilities are more likely to require additional assistance from a family member during distance education, such as parents (Garbe, Ogurlu, Logan, & Cook, 2020). Toseeb et al. (2020) pointed out that there are no clear guidelines for avoiding marginalization in distance education, while the degree of socialization of adolescent students appears to decrease (Scarpellini et al., 2021), which is a necessary component for the inclusion of students with learning disabilities and immigrant biographies.

Chinaza, Ijeoma and Mofoluwake (2021) emphasize that it is now necessary in every school organization to have the appropriate logistical infrastructure that will be provided to both teachers and students in order for the education system to respond adequately in case of a shift to distance education due to a new pandemic crisis. This equipment should explicitly cover any potential challenges that kids may face owing to special learning difficulties or difficulties that students with an immigrant background may face.

Specific Problem

We projected that a part of Secondary Education pupils in Cyprus may be marginalized based on the aforementioned.

The current study looked into the influence that the COVID-19 pandemic, as well as mandatory home confinement, had on high school students.

Research Questions

The following were the primary research questions of this research:

- In distance learning courses, are students with learning difficulties and immigrant biographies marginalized?
- In times of pandemics and distance learning, what variables influence the inclusion of students with learning difficulties and immigrant biographies?

- What are some strategies for avoiding probable marginalization in distance learning?

Methods

The study as mentioned earlier, was carried out in March of 2021. The research was conducted using a mixed research methodology.

Research Design

The study was based on Creswell's (2014) recommended follow-up exploratory technique. The collection of qualitative data comes first in this research, followed by the analysis. The researchers are then directed to gather and analyze quantitative data in order to explore the same issues that have already been investigated using the qualitative method, hence increasing the research process' validity.

Data Collection and Data Analysis

The combination of these methods can highlight various parameters related to the opinions of the participants on the subject under investigation (Creswell, 2014). Mixed methodology draws data from a variety of research tools, such as interviews, observations, and questionnaires. It allows the combination of quantitative and qualitative methodology and also data triangulation (Rendani Sipho, 2012). Furthermore, it can generalize the findings to ensure a clear and deep understanding of the research topic, resulting in greater validity and reliability. According to Klette (2012), mixed methodology limits not only the criticisms leveled at the qualitative method for subjectivity, but also the deviation that can occur in a quantitative study due to possibly incorrect handling of numerical results.

At the same time, grounded theory was used to analyze data. Grounded theory is especially useful in this situation because it considers participants' impressions, environment, behavior, and nonverbal parameters (Strauss & Corbin, 1990).

Qualitative methodology collects data through verbal and visual stimuli (Devetak, Hajzeri, Glažar, & Vogrinc, 2010). According to Yin (2011), it is based on five basic parameters: a) meaning of human life under normal conditions, b) research participants' opinions, c) conditions under which the research participants live, d) views that are likely to help explain human behaviors, and e) various sources to prove something. Data was gathered using qualitative methods such as observation, interviews, focus groups, biographical narratives, evidence collection and analysis.

Grounded theory is an interpretive, constructivist method that allows researchers to combine their point of view with data derived from interviews and observations (Strauss & Corbin, 1990). The research data could be analyzed using

three different types of design based on grounded theory (systematic, emerging and constructivist design) (Hutchinson, 1998). We used a systematic design in the current research.

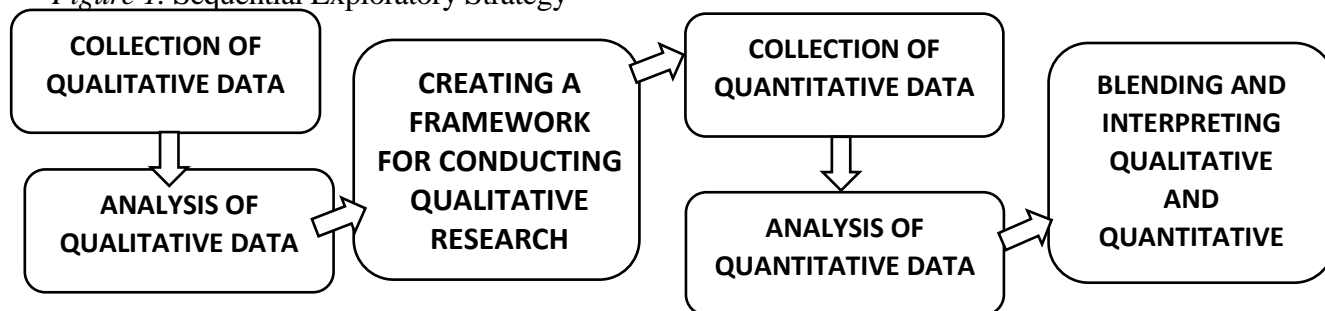
Although grounded theory is typically used to analyze qualitative data. Johnson (2008) claims that it can also be used to analyze quantitative data. So we quantified the qualitative data and qualitatively quantified the quantitative data to achieve an overall analysis of the mixed data. This effort entailed reading, coding, presenting, and interpreting qualitative data from words or images into numbers. Furthermore, quantitative data were correlated with data from interviews and observations.

We followed the following stages of grounded theory: open coding, categorization of the data into initial themes retrieved from the participants' words, axial coding, selective coding, grouping of themes into key themes and subthemes, and construction of descriptions and theoretical insights of studies studied.

The methodology of the present research led us to choose the "sequential exploratory strategy" model, which gives priority to qualitative research, then integrating both methods. The research goes through the stages of data collection and analysis sequentially.

The "sequential exploratory strategy" model is primarily used to explain interpersonal relationships. It is used when the researcher wants to expand on the findings of a mixed research or collect data for quantitative. In this context, the researcher goes through three stages: data collection, qualitative data analysis, and using the analysis to develop an instrument for a sample population. Furthermore, this model is appropriate for use in the field of educational research (Creswell, 2014). Figure 1 depicts the "sequential exploratory strategy" in greater detail:

Figure 1. Sequential Exploratory Strategy



It is also worth noting that we used grounded theory (Strauss & Corbin, 1990) for qualitative data analysis, an interpretive, constructivist method that allows participants to present their point of view and then combine it with the point of view of researchers (Hutchinson, 1998). We chose systematic design, one of three types of design proposed by grounded theory (systematic, emerging, and constructivist design), which consists of three stages: coding, nominal open coding, axial coding, and selective coding (Creswell, 2014).

Materials

As qualitative tools in this research, semi-structured interviews were used, which included general predetermined questions, participatory remote observations (teachers participated, who also functioned as researchers) and focus groups, which aim in the interaction between participants by during the group interview.

The questionnaire was used as a quantitative tool. The researchers devised and employed a three-part questionnaire, which is as follows: Part A is about demographic characteristics, Part B is about distance education in practice, and Part D is about improving distance education service. Parts B and contain closed-ended questions with responses based on the Likert scale, which provides a choice of five basic alternatives (1=Strongly Disagree, 2=Disagree, 3=Neither Agree / Neither Disagree, 4=Agree, 5=Completely agree).

Participants

Two secondary schools in Cyprus participated in the research process. One was in Limassol and the other one was in Paphos. A total of 132 secondary school students, including 61 students with learning difficulties and 71 students with immigrant history, 52 secondary school teachers, and 49 secondary school parents (28 parents of students with learning difficulties and 71 parents of students with immigrant history), took part in the specific study. The sample utilized to conduct the qualitative part of the research was randomly selected. All of the 132 students filled out the questionnaire. In contrast, sample selection in qualitative research was purposeful. Participants are selected who can best inform the research questions and enhance understanding of marginalization. All of the 52 secondary school teachers, and 49 secondary school parents and also 68 of the 132 students took part in interviews, focus groups and observations.

Procedures

Prior to the start of the research process 12 specific teachers had noted that a portion of students tended to be marginalized throughout online courses. For this reason, the researchers suggested to the teachers to record their observations regarding the specific subject.

Subsequently, the participants were informed about the research's findings by the researchers. They were also explained that the questionnaire would take roughly 10 minutes to complete, each interview would take 10 minutes, and finally that the focus groups would take about 20 minutes. The questionnaire was completed electronically using Google Forms by the participants. The interviews and focus groups were done using both the camera and microphone on the Microsoft Teams online platform. After obtaining written agreement from the participants, the data from the focus groups and interviews were recorded. The results were disclosed to the participants before being published.

At this point we must note how Microsoft Teams aided us, as face-to-face communication was almost impossible during the pandemic. However, the face-

to-face interview cannot be replaced by participating in a research through the use of a camera. In particular, the use of Microsoft Teams might not have contributed to the thorough analysis of the non-verbal communication and in general the body language of the participants (the screen size was quite small), which would probably have revealed more information regarding the opinions of the participants.

It is also worth noting that a portion of the participants did not want the camera to remain on throughout the interviews and focus groups, something which did not allow us to study the participants' reactions in detail.

The results of the research are characterized by a high degree of validity and reliability, given that the qualitative data were collected using audio recordings as well as careful note-taking. The researcher had the opportunity to collect data based on the verbal and non-verbal behavior of the participants. In addition, all participants as well as the guardians of the students who took part in the research signed the Consent Form for participation in the research". Confidentiality and anonymity were guaranteed, so all the names attributed to the quotes in this paper are pseudonyms. We also used password-protected files (interviews, observations, focus groups, which were carried out through Microsoft Team).

The above procedures were done on purpose to avoid the possibility of having vulnerable groups, since some participants and mainly students possibly felt forced to take part in the research by the school management or the researchers. Additionally, students with an immigrant biography possibly gave their consent to participate in the research because without understanding the exact topic of the research due to their difficulty in language communication, since the consent form was given in only available in two languages, Greek and English.

Results

As previously stated, the current study is led by a follow-up exploratory strategy. As a result, the qualitative methodology was used to begin the study, which looked into the impact of home restrictions imposed by the coronavirus epidemic on Cyprus Secondary School students. At this point, the primary research instruments were observations, focus groups and semi-structured interviews.

The research process was initiated by teachers' observations, who realized that some students were marginalized during distance learning. The following observation could be characterized as representative:

The online lesson had started. Eventually, nearly all pupils engage. The last student to enter the classroom had learning disabilities. I attempted to incorporate him in the educational process, but I was unsuccessful. The next day exactly the same phenomenon was observed. So, I decided to message the student and ask for a personal online meeting. My student told me that he didn't want to join the online course because despite his best efforts, he didn't understand the course content. He told me specifically: "I got used to attend a face to face lesson, watching his movements, talking to us in a friendly way... I can't concentrate like that. No one turns on the camera. You just see a black screen and sometimes some slides. There is no communication with either students or teachers. The lesson is very boring and I

don't understand anything". Despite my personal conversation with the student, nothing changed. After a few days, the kid informed me that he will not engage in the lesson until we return to our classroom. (teacher 1).

Analyzing the preceding observation, we discovered that this particular student, who was having learning issues, was unable to concentrate throughout the online lessons. Students with learning disabilities appear to be more interested in a session conducted in the actual presence of students and teachers. The physical presence of those involved in the educational process allows all students, but especially students with learning difficulties, to interact with the teacher and their classmates more easily and effectively. Image, movement, and body language appear to improve lesson quality, which is not reached during distance teaching.

The conclusions drawn from this observation are reinforced by another observation, which is related to the distance education of students with an immigrant background. A Greek teacher narrates:

My class contains three Syrian pupils. I was apprehensive during the first distance class because I didn't know how to help them understand the subject. During face to face lessons I used to translate some words into English and explain in simpler words or using movements but I realized they didn't understand the lesson. During the first online course I noticed that they were not participating at all. So, in the following days, I often corrupted the lesson to simplify it and also help them understand through my movements or style. In a few days, however, a student reacted because, as he claimed, in this way we could not cover our teaching material. The kid also expressed frustration since he, like many others, was preparing to take university entrance tests and did not feel adequately prepared. I've ceased stopping the lesson for clarifications since then. Following this, I found that the three students did not even register for the online course.

The researchers suggest that students with learning difficulties and immigrant backgrounds may be stigmatized during online lessons based on these specific representative observations. This assumption prompted us to look into the matter further utilizing qualitative study data.

The following are representative extracts from a focus group that looked into the general feelings of students, teachers, and parents, as well as the overall consequences of the pandemic's predicament. The following are specific statements made by the students who took part in the study:

The truth is that the coronavirus crisis has caused us a trouble. Since we are high school students this year, the last two years have been the most crucial of our lives. Despite the fact that we did not miss many physical classes this year in particular, we were really felt uncertainty.

According to the student, the pandemic and its consequences in the educational sector, led the students to feelings of uncertainty. This uncertainty is also confirmed by another student, who points out the following:

"It merely came to our attention at the time. They altered every aspect of our existence."
"Assume we couldn't even visit a tutoring center in person. I'm one of those students who struggles in class and requires a lot of assistance to understand what's being taught. I was utterly befuddled."

According to this student, students with learning disabilities find it even more difficult to perform during distance learning.

"Our parents were worried about the whole situation. Consider how they tried for so many years to offer us everything they could, so that we may be educated and study what we wanted. Eventually everything changed the last two years".

But the concerns regarding the problems that have been created in the field of education seem to worry the parents of the students as well.

According to the data acquired from the current focus group, the students who participated in this research believed that their confinement at home has an impact on both their daily life and their learning performance. They emphasized, in particular, that the overriding sense for them during the pandemic was uncertainty about the future.

The teachers' perspectives appear to be similar, as evidenced by the following observations made during the course of focus group:

"During the pandemic, it was extremely difficult for all of our students." Of course, students with learning difficulties and an immigrant background faced too many problems. These students require one-on-one assistance at school on a daily basis. You understand the lack of personalized assistance from a computer or a mobile phone does not function well with distance learning.

Digging deeper into the data we find that the reason why students with learning difficulties are burdened is because during distance learning the quality of distance education delivery is not as high as during live classes.

"During the pandemic, distance education is unquestionably essential. Nothing, however, can substitute in-class sessions. A smile, a grimace, a movement, or a sound might assist a student become more interested in the subject and, as a result, he/she better understand the lesson."

In addition through distance learning, students do not monitor the body language of their teacher and classmates to understand the lesson better.

"Let us not forget that there are students with attention problems who struggle to concentrate under normal conditions. This problem increases when students are not in the classroom but at home where there are numerous distractions."

At the same time, according to the participants' opinions, students' attention is easily distracted when they are not in the classroom environment.

"It merely came to our attention at the time. There are also students who have vision and hearing issues. It is difficult for them to attend and understand the distance class as well as they would if they were physically present in the class".

The problem of understanding the lesson becomes more intense in the case of students who face sensory problems.

"We had the same compassion with students whose parents were immigrants. In order to learn the language better, they need more than just the lesson. They also need everyday interaction with their classmates and teachers."

Analyzing teachers' past perspectives, we discovered that teachers believe that distance learning was a parameter that produced additional complications in the process of inclusion education for those students with learning disabilities and immigrant students. The difficulties in giving efficient tailored aid, which becomes even more difficult due to the lack of human contact, and the establishment of a connection of trust and interaction between teacher and student, but also between students, were the key factors in the formation of this viewpoint. Furthermore, according to the teachers, children with visual, hearing, and focus issues had difficulties attending and understanding the lesson.

According to the impact of the pandemic on secondary school students, the parent group highlighted the following:

"Personally, I believe that a lack of rivalry among students has had a bad impact on students. It is difficult for a child to desire to study and become a better student if he/she is not driven to achieve the level of his/her classmates, does not listen to other children's inquiries, and does not talk to them. He simply relaxes and does not strive..."

According to the parent-participant, another factor that burdens learning performance is reduced competition.

"Yes, I agree... Children become isolated as a result of distance learning teaching. Let us not forget that some of them are already isolated due to problems in learning process or communicating in a foreign language. They are much more isolated from their peers and teachers since they do not interact with them."

However, students who do not know the language of instruction face a greater difficulty.

"Teachers are unable to intervene. Typically, students do not attend distance learning properly. They are distracted or do something else and simply inform the teachers that they are there in order to avoid being absent."

Analyzing the data from the current focus group, we concluded that parents of students with learning difficulties and immigrant histories believed that remote education has a detrimental impact on learning since it does not increase rivalry among students, which normally improves learning outcomes. Furthermore, students with learning difficulties and immigrants may be driven to social isolation as a result of remote learning, which may pose extra challenges in both learning and socialization. Furthermore, both parents and teachers agree that pupils are distracted during distance learning.

Focusing on the elements that may influence the inclusion of students with immigrant backgrounds or learning difficulties, the following participants perspectives, gleaned from interviews with teachers, parents, and students, are worth considering:

"Neither we nor our students were used earlier the remote education. Even after a year, we are still looking for ways to improve our performance. Even the distance learning programs we utilized caused us problems. This is unprecedented for all of us. We all tried until we identified the best technique to convey knowledge and the best manner for students to learn" (teacher)

According to a teacher, despite everyone's continuous efforts, unfortunately the best technique for providing distance education has not yet been identified.

"As parents, we were unable to help our children. We did not have the necessary knowledge" (father)

"Many of us had no idea how to switch on the computer." We had no idea what the lesson was. How can we assist the youngster in this situation? (mother)

Parents felt that they were leaving their children helpless, possibly because they did not have enough computer knowledge.

"I don't have access to a computer. I'm having trouble seeing the lesson on my mobile phone. When you have myopia, you find it difficult to understand what the teacher is demonstrating in the lecture" (student)

"I feel that I cannot interrupt all the time the lesson in order to make a question. When we are in a normal class I can wait to do that during the break. Nevertheless, the physical contact and the face expression can lead the teacher to the conclusion that we have a question." (student)

At this point, the concerns of students with special needs and the difficulty of understanding the lesson come to the surface again simply because they cannot follow the teacher's movements and expressions.

"We had a problem evaluating children who had learning disabilities. Everything was completed in a hurried manner. The pupils had to follow our directions and do their homework, which we graded. Eventually, there was hardly no personalisation for these kids. We couldn't approach them like we could during the normal lesson in class. As a result, we didn't get to know the kids very well, and we may never have recognized their true struggles." (teacher)

"During the lessons of the distance supporting teaching I felt that I could not be so supportive for the students. I had difficulties in checking their progress. I told them to take a picture of their notebook and email it to me, but they didn't always do so" (teacher).

"When we had supporting distance learning, the kids usually wanted to talk to me about their worries and have an online discussion. It was their chance to talk, because they were too embarrassed to express themselves in front of the entire class." (teacher).

Participants list as a difficulty in distance learning the fact that they cannot personalize the teaching, discuss outside the curriculum, nor evaluate the progress of their students.

The data analysis showed that according to the teachers, the following factors may affect the inclusion of kids with immigrant backgrounds or learning difficulties. First factor is the difficulty of the teachers to use properly the computer programs for distance learning. Second factor is the difficulty of the teachers to discover the educational needs of each student. Last, the focus on the psychological aspect of the support leads to neglecting the educational and learning parts of the teaching. Similarly, parents said that the fact that they do not have the appropriate technological knowledge, nor do they have the necessary technological equipment, to assist their children in matters of distance learning lead to the marginalization. The students also believe that the lack of proper technological equipment is a

source of marginalization, and they stated that the lack of visual contact with the teacher creates problems in following the lecture.

According to the theory of sequential exploratory strategy, when the collection and analysis of qualitative data is done, we continue with the collection and analysis of quantitative data. Analyzing the data resulting from the analysis of the questionnaire, we come to the following conclusions.

Table 1. Difficulties in Understanding

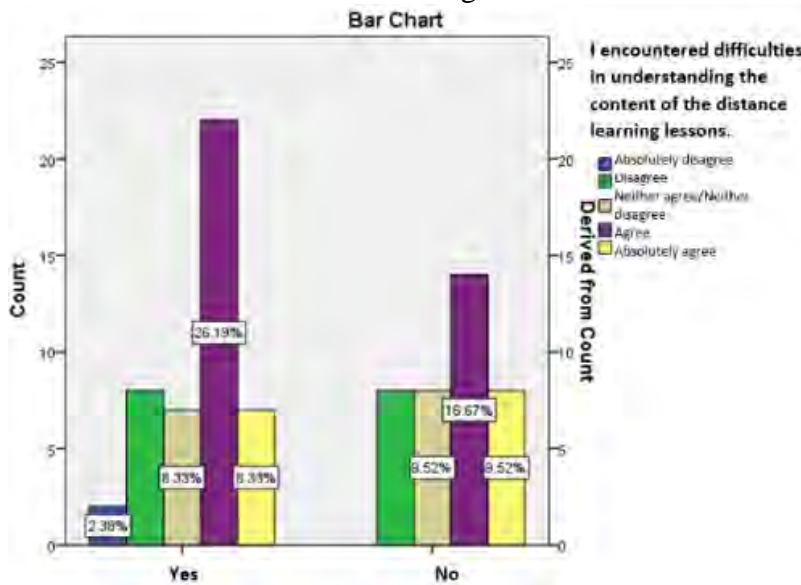
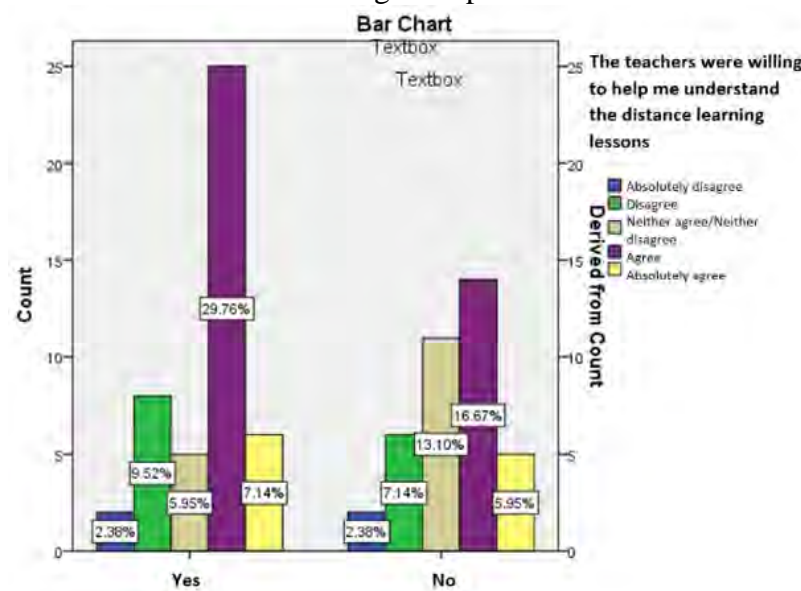


Table 2. Teachers were willing to help Students Understand the Lesson



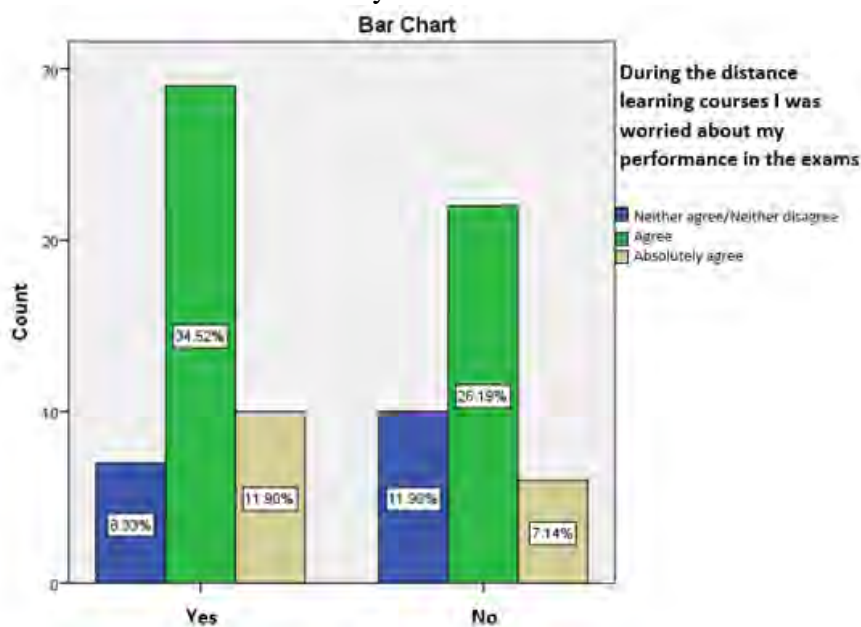
In Table 1, we can see that students with learning difficulties had more difficulty in understanding distance teaching than students who were not categorized as having learning difficulties. This is supported by the 26.9 percent of

children with learning difficulties, while it is completely supported by 8.33 percent. At the same time, a lesser proportion of 16.67 percent of students who were not categorized as having learning difficulties agree with the statement that they have had difficulty understanding distance learning, while 9.52 percent absolutely agree.

According to the students' perspectives, as shown in Table 2, the teachers were willing to assist the students in effectively understanding distance learning. As you can see 29.76 percent of students with learning difficulties agreed with this statement. At the same time, 16.67 percent of students without learning disabilities agree with the above statement.

Combining the findings from the preceding data, we discover that students believe that teachers wish and, at the same time, undertake many steps to assist their students in responding to distance learning. Nonetheless, students continue to confront a number of challenges when it comes to comprehending distant education courses.

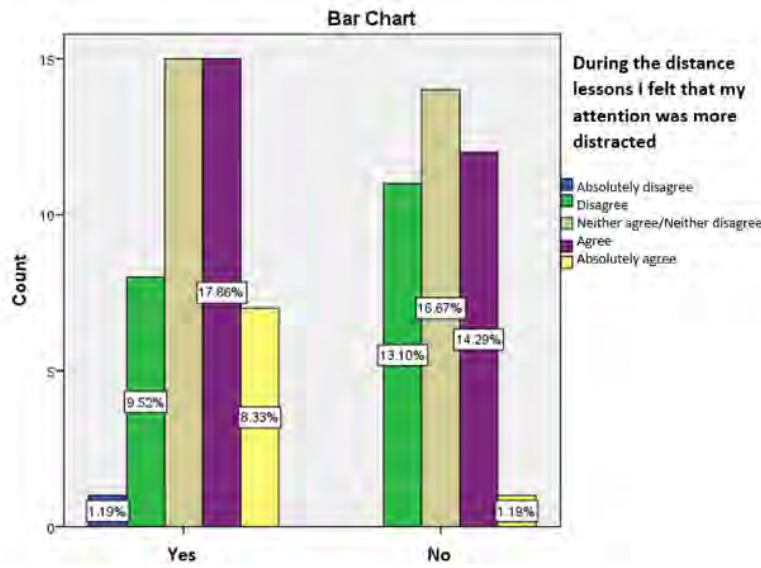
Table 3. I was worried about my Exams



It is also worth noting that an important proportion (34.52 percent agree and 11.90 percent strongly agree) of students with learning disabilities were worried about their performance in final Cypriot exams during the pandemic (Table 3). On the other hand, the proportion of students without learning difficulties who were worried about their performance in the final Cypriot exams, (26.19 percent agree and 7.14 percent completely agree) is much lower.

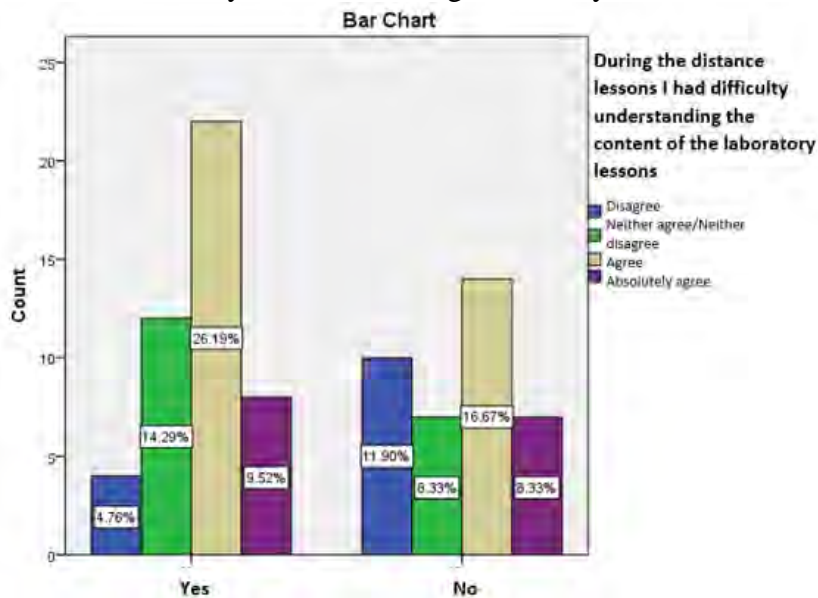
Therefore, it seems that the pandemic and the forced implementation of distance education are having a negative effect on the effort of final year students to succeed in university entrance exams.

Table 4. Distraction during Distance Learning



Furthermore, when we examined the research data, we discovered that students with learning difficulties feel more strongly that their attention is diverted during distance learning than students without learning disabilities (Table 4). We see that 17.86 percent of students with learning disabilities agree and 8.33 percent absolutely agree with this statement. Students without learning difficulties had a split opinion on this, with 14.29 percent agreeing and 1.19 percent strongly agreeing.

Table 5. Difficulty in Understanding Laboratory Lessons



Furthermore, the percentage of students with learning difficulties appears to be rather high, which supports the idea that the material of the laboratory courses was difficult to understand during the remote learning courses (Table 5). According

to our data, 26.19 percent of students with learning difficulties agree with this statement. A considerably smaller percentage of those who do not have learning issues, 16.67 percent, agrees with the aforementioned statement.

In addition, studying the statement "Covid-19 pandemic affected student performance", it was observed in the general population of participating-parents that there is a positive correlation between the questions "They had difficulty understanding the lesson because they did not know the language of instruction well" ($r=0.043$, $p\text{-value}=0.261$), "They could not practice enough at home" ($r=0.000$, $p\text{-value} = 0.310$.), "I did not attend the lesson because I could not concentrate" ($r=0.047$, $p\text{-value}=0.235$), "The lesson was not interesting because they were not close to their classmates" ($r=0.000$, $p\text{-value}=0.198$).

As a result, we conclude that the primary factors that may contribute to lower learning outcomes during distance education are not so much related to instructor quality as they are to student distraction during distance education.

Furthermore, in our research we tried to investigate the participants' perspectives on treatment of the aforementioned problems, as well as their possible prevention. We quoted the following data gathered by interviews.

"Teachers must attend workshops/seminars on how to teach distance learning, how to use distance learning programs, how to assist students with learning difficulties, and how to assist students with immigration biography in distance learning" (parent)

"The Ministry of Education must provide direction to teachers and school principals of how to use the distance learning. The instructions must be very clear and explicit in order for the implementation of distance education to go smoothly." (teacher)

According to the participants, the effective provision of distance education can be improved by organizing seminars for teachers, mainly by the Ministry of Education.

"Teachers must organize all of their lessons in digital form so that they are prepared if they are forced to use distance education owing to the pandemic's new spread." (teacher)

"Certainly, school administrations must be well-organized in order to be able to work effectively with distance learning education. In times of epidemic, they must maintain continual communication with teachers and direct them, not only to ensure that tailored instruction is successful, but also to assist students who are having difficulty understanding the lesson and not being segregated from the other students." (parent)

Through the study of the aforementioned, the opinion emerges that both teachers and school principals must be prepared at all times for the provision of distance education.

"To succeed, the endeavor to effectively implement distance education without marginalizing some students, either because they do not have a computer, do not know how to use it, or are simply embarrassed to talk in distance learning mode, requires the assistance of parents. As a result, extensive collaboration between teachers and parents is required." (parent)

The above point of view leads us to the conclusion that parents understand the difficulties faced by teachers in their attempt to teach remotely without marginalizing a portion of students. They also understand the staff's difficulties and lack of knowledge and skills.

"I believe that what we want as students is the best communication with the teachers. The pandemic causes many issues to us. Many students need to talk to an adult about this. Many students are comfortable to discuss any of their concern with their teachers. Children enjoy using social media. So, I believe that connection between students and their teachers (by using social media) is essential so that some students are not isolated" (student)

Participants also point to the need for extensive collaboration and better communication between urban teachers and students.

"I recommend that courses be changed to make them more accessible to students during any crisis such as COVID-19 pandemic. The greatest answer is to minimize the amount of material so that the students must have more time for actual study." (student)

Also, according to a student, the teaching material should be reduced so that students can absorb it during distance learning,

"When we have distance education, we need the support of expert technicians who will have access to our computers at all times to fix any problems that may arise." We will never be able to know everything. Such assistance is required. (teacher)

The following are some of the participants' proposals for possible solutions to difficulties that have developed throughout the implementation of distance education: 1) teacher training in the use of electronic tools and teaching methods that promote the provision of effective distance learning for students with learning disabilities and immigrant biographies, 2) effective management of teachers and school principals by the Ministry of Education, 3) Curriculum modification and reduction, 4) increased organization and stronger communication between school administrations and teachers, 5) modern support of distance learning by specialized technicians, 6) close cooperation between teachers and parents, 7) pre-digitization of teaching materials, and 8) increased communication between teachers and students with the help of social media.

At this stage, extra emphasis should be placed on teacher education in relation to distance education difficulties. Of course, this is not as easy as it appears. To be effective, teacher training must focus on particular concerns that can be clearly understood by studying the aforementioned research findings. Teacher training could therefore include topics such as the following: training in the use of electronic online teaching programs, in motivating students during online teaching, designing, which enhances the interaction between students with their classmates, but also between students and teachers. However, special emphasis must be placed during training on avoiding marginalization of students with an immigrant background and learning difficulties.

We next examined the quantitative data from the current study, which led us to the conclusion that there is a positive relationship between the belief that

"Teachers can contribute to the inclusion of all students through distance education" and the following statements: "creation groups-e-classrooms on social media "($r=0.043$, $p\text{-value}=0.226$)," cultivating understanding and cooperation among classmates "($r=0.000$, $p\text{-value}=0.480$)," assigning group work "($R=0.047$, $p\text{-value}=0.222$)," creation of electronic activities with different levels (easy, moderate, difficult) ($r=0.000$, $p\text{-value}=0.578$), "allocation of time for free discussion between to students and teachers "($r=0.021$, $p\text{-value}=0.256$). The above statements are at the same time ways in which teachers can improve the quality of the distance education provided.

Finally, there is a strong relationship between the statement "the Ministry of Education can reduce student marginalization during distance education" and the following points of view: "The Ministry of Education should organize an action plan for distance learning before start of the school year"($r=0.019$, $p\text{-value}=0.311$)," The Ministry of Education must organize sample electronic videotaped lessons for each specialty, in order to guide teachers "($r=0.041$, $p\text{-value}=0.228$) and "The Ministry of Education must create sample educational material to which all teachers will have access" ($r=0.000$, $p\text{-value}=0.396$).

As a result, the Ministry of Education may make a good contribution to the endeavor to improve distance teaching by developing an annual plan that would be implemented in the event of a forced shift to distance education. This planning must incorporate teacher guidance in both instructional matters and educational material.

Discussion

The COVID-19 pandemic has had a significant impact on our daily life (Azorin, 2020). Strict controls are in place around the world to prevent the spread of COVID-19 (Harris & Jones, 2020). This reality has had an impact on many sectors of human life, including schools, which are being called upon to restructure their educational roles as well as instructional methods (Zhao, 2020).

We find that the COVID-19 pandemic has considerably differed both educational and daily life, as well as the psychological status of secondary school students, based on the perspectives of participating students with learning difficulties and immigrant backgrounds, teachers, and parents (Kritzer & Smith, 2020).

The present study showed that the current situation was impacted by the difficulties in individual teaching, a result that Lindner, Letzel, Tarini, and Schwab (2021) also support it. Moreover, the limited interaction between the students, but also between teachers and students, was a factor that lead to the aforementioned situation. Additionally, difficulties in concentrating, understanding the Greek language, using electronic means and electronic devices, were some extra factors.

Despite the presence of various aspects that appear to cause problems in the provision of distance education, as well as in the active engagement of students in it, the current research suggests that there may be factors that can help to solve these problems. Participants suggest that the Ministry of Education (Ferri, Grifoni,

& Guzzo, 2020) and school principals (Charalampous et al., 2021) provide teacher training and guidance on distance learning and inclusive education, as well as the adaptation of teaching objects and teaching methods to pandemic conditions, and finally, as well as the emphasis on communication between students and their teachers.

Simultaneously, teachers must be kept up to date on emerging trends in the use of remote education, with the explicit goal of avoiding the marginalization of students with unique learning needs or an immigrant background. Finally, students with learning difficulties or an immigrant background must be sufficiently encouraged by the teachers, but also by the education system in general, so that they have the motivation for adequate learning through distance education (Chinaza, Ijeoma & Mofoluwake, 2021)

Limitations

The main limitation of the present research is related to the research tools on which the research was based. We might have had clearer results if we had used observation as a research tool. Observation would better inform us regarding the attitudes, opinions and reactions of teachers and students during distance learning.

Future Research

At this point, we could suggest some key points where future research could be aimed in order to deepen the subject of this research. Initially, both school principals and representatives of the Ministry of Education could be involved in the research process. These participants could enrich the research with their opinions about the problems that have been created in the educational process, as well as with possible proposals to deal with these problems.

In addition, the research could provide even more information regarding the effect of distance education on the learning of children with learning disabilities if it were enriched with the action research process. In such a case teachers could act as researchers during their own distance teaching. Thus, they could reflect on their own practices and at the same time revise them, extracting important results.

References

- Ayda, N., Bastas, M., Altinay, F., Altinay, Z., & Dagli, G. (2020). Distance Education for Students with Special Needs in Primary Schools in the Period of COVID-19 Epidemic. *Propósitos y Representaciones*, 8(3), 1-8.
- Azorin, C. (2020). Beyond COVID-19 Supernova. Is Another Education Coming? *Journal of Professional Capital and Community*, 1(3), 66-74.
- Butnaru, G. I., Nita, V., Anichiti, A., & Brînza, G. (2021). The Effectiveness of Online Education during COVID-19 Pandemic—A Comparative Analysis between the Perceptions of Academic Students and High School Students from Romania. *Sustainability*, 13, 5311.

- Charalampous, C. (2022). Emotional Intelligence: The Principle's Guide to Creating Inclusive School Environments. *Educational Circle*, 10(2), 147-158.
- Charalampous, C., & Karava, Z. (2022). The Impact of the COVID-19 Pandemic on the Educational Process: A Research Approach to Online Learning for High School Students with Learning Difficulties in Cyprus. *Educational Circle*, 10(2), 147-158.
- Charalampous, C., & Papademetriou, C. (2018). Inclusion or Exclusion? The Role of Special Tutoring and Education District Committees in Special Secondary Education Units in Cyprus. *International Journal of Education and Applied Research*, 8(1), 30-36.
- Charalampous, C., & Papademetriou, C. (2019). Intermediate Inverted Leadership: The Inclusive Leader's Model. *International Journal of Leadership in Education*. 24(3), 349-370.
- Charalampous, C., & Papademetriou, C. (2021). Examining the Institutional Framework for Special Units in Cyprus. *Journal of Pedagogy*, 12(2), 5-29.
- Charalampous, C., Papademetriou, C., Reppa, G., Athanasoula-Reppa, A., & Voulgari, A. (2021). The Impact of COVID-19 on the Educational Process: The Role of the School Principal. *Journal of Education*, 203(3), 1-8.
- Chinaza U., Ijeoma N. E., & Mofoluwake O. U. (2021). Inclusive Education in the Face of a Global Pandemic: Providing Support. *Multicultural Education*, 7(5), 139-146.
- Creswell, J. (2014). *Research Designs: Qualitative, Quantitative and Mixed Methods Approaches*. SAGE Publications.
- Devetak, I., Hajzeri, M., Glažar, S. A., & Vogrinc, J. (2010). The Influence of Different Models on 15-years-old Students' Understanding of the Solid State of Matter. *Acta Chimica Slovenica*, 57, 904-911.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crises. *Journal of Educational Technology*, 49(1), 5-22.
- Doucet, A., Netolicky, D., Timmers, K., & Tuscano, F. J. (2020). *Thinking about pedagogy in an unfolding pandemic (An Independent Report on Approaches to Distance Learning during COVID-19 School Closure)*. Work of Education International and UNESCO.
- European Commission (2019). *Peer Counselling on Integration of Students with a Migrant Background into Schools*. Cyprus: Education and Training.
- Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. *Societies*, 10(4), 86.
- Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). COVID-19 and Remote Learning: Experiences of Parents with Children during the Pandemic, *American Journal of Qualitative Research*, 4(3), 45-65.
- Harris, A., & Jones M. (2020). COVID-19 – School Leadership in Disruptive Times. *School Leadership & Management*, 40(4), 243-247.
- Huang, R. H., Liu, D. J., Zhan, T., Amelina, N., Yang, J. F., & Zhuang, R. X., et al. (2020). *Guidance on Active Learning at Home during Educational Disruption: Promoting Student's Self-Regulation Skills during COVID-19 Outbreak*. Beijing: Smart Learning Institute of Beijing Normal University.
- Hutchinson, S. A. (1998). *Grounded Theory*. In *Qualitative Research in Education: Focus and Methods*, edited by R. R. Sherman & R. B. Webb (pp. 123-140). London, UK: Falmer.
- Jia, L., & Santi, M. (2021). Inclusive Education for Students with Disabilities in the Global COVID-19 Outbreak Emergency: Some Facts and Thoughts from China. *Disability & Society*, 36(7), 1186-1191.

- Johnson, T. (2008). Doing Quantitative Grounded Theory: A Review. *Grounded Theory Review. An International Journal*, 3(7), 1-13.
- Klette, K. (2012). Mixed Method Research in Education: Some Challenges and Possibilities. In *Mixed Methods in Educational Research Report from the March Seminar 2012*, edited by Norwegian Educational Research towards 2020-UTDANNING 2020. The Research Council of Norway.
- Kritzer, K. L., & Smith, C. E. (2020). Educating Deaf and Hard-of-Hearing Students during COVID-19: What Parents Need to Know? *The Hearing Journal*, 73(8), 32.
- Lindner, K., Letzel, V., Tarini G., & Schwab S. (2021). When Home Turns into Quarantine School – New Demands on Students with Special Educational Needs, Their Parents and Teachers During COVID-19 Quarantine. *European Journal of Special Needs Education*, 36(1), 1-4.
- Ministry of Education, Culture, Sports and Youth (MoECSY) (2020). *Utilization of Educational Platforms for Distance Education and Learning*. Circular 13.25.40.66, 12/05/2020, Nicosia.
- Nosek, S. (2023). The Impact of the COVID-19 Pandemic on College Students with Marginalized Identities. *Equity in Education & Society*, 2(1), 78-93.
- Papademetriou, C. (2012). Leadership Impact on Elementary School's Effectiveness and Improvement. Paper presented at the *8th European Conference on Management, Leadership and Governance*. Pafos, Cyprus.
- Perdana R., & Sutarsyah C. (2021). Inclusive School Management: Transforming Learning during the COVID-19 Pandemic. *Review of International Geographical Education (RIGEO)*, 11(5), 4205-4213.
- Petretto, D. R., Masala I., & Masala, C. (2020). Special Educational Needs, Distance Learning, Inclusion and COVID-19. *Educational Sciences*, 10(6).
- Pokhrel, S., & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future*, 8(1) 133-141.
- Rendani Siphon, N. (2012). Mixed methods – Triangulation War: Hodden Challenges to their Conceptual Survival. *Journal of Applied Global Research*, 5(14), 45-55.
- Scarpellini, F., Segre, G., Cartabia, M., Zanetti, M., Campi, R., Clavenna, A., et al. (2021). Distance Learning in Italian Primary and Middle School Children During the COVID-19 Pandemic: A National Survey. *BMC Public Health*, 21(Jun), 1035.
- Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory- Procedures and Techniques*. London, UK: SAGE Publications.
- Symeonidou, S. (2022). Unpacking Ableist Discourses in Cypriot Education Policy During the Pandemic. *European Educational Research Journal*, 1(8), 1-17.
- Toseeb, U., Asbury, K., Code, A., Fox, L., & Deniz, E. (2020). *Supporting Families with Children with Special Educational Needs and Disabilities During COVID-19*. PsyArXiv Preprints. Available at: <https://doi.org/10.31234/osf.io/tm69k>.
- Vlassopoulos, G., Karikas, G. A., Papageorgiou, E., Psaromiligos, G., Giannouli, N., & Karkalousos, P. (2021). Assessment of Greek High School Students towards Distance Learning, during the First Wave of COVID-19 Pandemic. *Creative Education*, 12, 934-949.
- Yin, R. K. (2011). *Qualitative Research from Start to Finish*. The Guilford Press.
- Zhao, Y. (2020). COVID-19 as a Catalyst for Educational Change. *Prospects*, 49(Jun), 29-33.