

## EMERGENCY DISTANCE EDUCATION DURING THE COVID-19 PANDEMIC: A QUALITATIVE RESEARCH FROM A SPECIAL EDUCATION PERSPECTIVE

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### ABSTRACT

It is a fact that the world was caught unprepared for the Covid-19 outbreak. Especially when the epidemic broke out in many countries, educational activities were suspended for a while, and then distance education was started. Since this process is the result of a sudden transition, it has been seen that it brings with it many difficulties. Among these difficulties, perhaps the most prominent was the situation of students who need special education and special education teachers. In this direction, the aim of the study is to determine the difficulties experienced by students with special needs and special education teachers in this process. This research was carried out within the framework of the qualitative method. Within the scope of the research, 20 special education teachers were reached, and their opinions were taken with a semi-structured interview form. The responses received were divided into codes and categories, which were analyzed by content analysis, one of the qualitative analysis methods. According to the findings, special education teachers stated that they had the most difficulty in communicating with their students while negating the distance education process. Accessibility problem was also stated as an important problem and the problems caused by low parental technology literacy were emphasized. Although special education teachers find positive justifications for ensuring that education somehow continues in the distance education process, they make several valuable suggestions for structuring the system more inclusive and for all potential users. Platforms for students who need special education in the distance education process can be designed to support topics such as content, interaction, socialization. The family can take a more active role in this process as a stakeholder. For this, family members can be motivated with the necessary prior information and demands full of expectations.

**Keywords:** Covid-19, emergency distance education, qualitative research, special education.

## INTRODUCTION

It is expected that services or processes that are questionable to provide, even in ordinary times, will be more difficult in extraordinary circumstances. However, the differences of individuals who will receive these services are not unknown. Therefore, a system should be designed with all potential users in mind (Dinc, 2017). In this sense, meeting the needs of potential participants should be one of the most basic objectives. In addition, according to the World Health Organization (WHO) data, there are more than 1 billion individuals defined as “disabled” in the world, and unfortunately this number is increasing gradually (WHO, 2021). This makes it imperative to make a potential system or transition adaptable for everyone. On the other hand, this is a situation that can be supported pedagogically. Increasing the accessibility standards of the participants is a situation that can be associated with student achievement itself (Roberts & Crittenden, 2009) and serves the equal opportunity and pedagogical purposes of education. In the 21st century, we witness that education changes with the support of technology, gains new forms and educational processes are moved to online environments (Yilmaz and Celik, 2020). At this point, although technology supports education, the level of accessibility of online systems is not as high as the accessibility of face-to-face education (Sokolik, 2018). While the limitation of access to education and training activities carried out in online environments is the subject of research, even in situations where the normal flow of life takes place, even in situations that we can define as normal life; The epidemic period in the world has deepened the negativity of this situation. Due to the Covid-19 epidemic, face-to-face education was suspended in Turkiye as well as in the rest of the world. With the decision taken by the Ministry of National Education in Turkiye, educational activities were carried out remotely through some channels of the Turkish Radio and Television Corporation (TRT). In addition, students were able to follow their lessons asynchronously through the Education Information Network (EBA). However, since this situation was not efficient, the students’ own teachers taught the lessons synchronously through distance education. Since this process requires some technological equipment, it has been a disadvantage for many students who have access to face-to-face education. Besides students who are disadvantaged due to hardware deficiencies, all potential users are far from inclusive, as the resulting system is the result of an emergency action plan. In fact, students with disabilities are among the most disadvantaged groups in this process. While the process deepened the disadvantage of students with disabilities (Lee, 2020), remote activities also made the actions of special education teachers more difficult. In this study, the difficulties and problems faced by special education teachers and students during the pandemic process were discussed. It is expected that the study will guide students with special education needs and special education teachers in the planning of distance education and in the design of a distance education system.

## DISTANCE EDUCATION DURING PANDEMIC PERIOD

The Covid-19 outbreak in the world has been effective in education, as in all areas of life, and caused significant changes. At this point, Turkiye has taken some measures. In March 2019, the Ministry of National Education (MEB) decided to suspend formal education within the scope of the Covid-19 struggle. In addition, in order to ensure continuity of education, the emergency distance education period has started. Therefore, the need to change education models has arisen (Eroglu & Kalayci, 2020).

With the decision taken by the Ministry of National Education in our country during the pandemic process, educational activities were first carried out remotely through some channels of the Radio and Television Corporation (TRT). In addition, students were able to follow their own lessons asynchronously through the Education Information Network (EBA). Developed by the Ministry of National Education in the country and created as an online education environment within the scope of the Fatih Project, EBA (Education Information Network) enables students to access all course contents via the internet (Kurtdele Fidan, Erbasan & Kolsuz, 2016). In this context, lessons were given at primary, secondary and high school levels from the EBA online education platform, which was actively implemented during the pandemic period. EBA has been accessed via internet addresses and Turkish Radio Television Corporation (TRT) channels. As a result, in the Covid-19 period, the distance education process was carried out through EBA and TRT EBA channels accessed on the internet.

With the Covid-19 process, the educational perspective and interpretation of education have changed (Bozkurt & Sharma, 2020). When the studies on the distance education process during the pandemic period are examined, it is seen that they deal with distance education with its positive and negative aspects (Karaca & Kelam 2020; Fidan, 2020; Basaran, Dogan, Karaoglu & Sahin, 2020). In this process, factors such as being the best solution, the lessons passed efficiently, the visuality of the lessons, the easy access of the resources, being economical, and learning at your own pace were evaluated as the positive aspects of the distance education carried out during the pandemic process. Factors such as technical problems, quick forgetting, limited interaction, problems experienced during the pandemic process, high number of students, low motivation were also evaluated as negative aspects of distance education carried out during the pandemic process (Inci Kuzu, 2020; Sarioglan, Altas & Sen, 2020; Genc, Engin & Yardim, 2020; Keskin & Kaya, 2020).

In addition to the negative aspects of distance education, there are cases where socialization with distance education is prevented, applied lessons are not effective enough, and the necessary support cannot be provided for students who cannot achieve self-learning (Kaya, 2002). In this context, special education services, which are provided in a difficult way even in the classroom for individuals who need special education, have become even more difficult with the distance education made mandatory by the pandemic process (Mengi & Alpdogan, 2020). The COVID-19 outbreak has revealed some of the challenges faced by students, such as equality issues. However, it can be said that this situation is more pronounced for disabled students (Kaden, 2020).

## **DISTANCE EDUCATION PROCESS IN SPECIAL EDUCATION**

Independent survival of the individual is the main purpose of special education services. Recently, the need to benefit from technology has been mentioned to achieve this primary purpose (Cavkaytar, 2012). This situation should be evaluated holistically, not only in the form of the use of tools and equipment in the field of special education, but also by taking into account the characteristics of individuals with special needs (Coklar, Ergenekon, & Odabasi, 2019). During the pandemic period, some obstacles such as the distance education process and the inequality of opportunity for individuals with special needs have emerged (Sullivan, Hillaire, Larke & Reich, 2020). Some of these include facing various challenges such as migrating to an online learning environment during the COVID-19 pandemic, as well as equality issues for students, providing online teaching and providing special education services as outlined in student individual education plans (Smith, 2020). In fact, revealing the difficulties and obstacles in this forced transition process more clearly through qualitative studies can serve as a reference for the elimination of the problems. In this regard, it is highly likely that any unprepared emergency will further deepen the deprivation of persons with disabilities.

When the literature on the subject is examined, it is seen that the studies have gained an upward momentum in the last year due to the fact that the pandemic covers the last one-year period. Kurt & Kurtoglu Erden (2020) examined the impact of the pandemic on individuals with special needs, the services provided to these individuals, their families and special education teachers. The impact of the pandemic on individuals with special needs, the services provided to individuals with special needs during the pandemic, the reflections of the pandemic on the families of individuals with special needs, and the reflection of the pandemic on the society were emphasized. teachers of individuals with special needs. The results of the research show that the distance education process has an unexpected effect on all components. This situation is interpreted as a negative situation by the researchers. In addition, Hamilton, Kaufman, and Diliberti (2020) found that 42% of teachers had difficulty getting enough support and guidance to work with students with disabilities. As a result of these challenges, educators have expressed concern that students with disabilities may experience lack of progress due to a lack of much-needed special education services. In fact, all indicators show that there is a need for a study that will clearly express the difficulties experienced in this regard. Considering the fact that the emergency transition with the epidemic still risks our lives, it is an important task for researchers to use our experiences as those living with the epidemic to provide optimum conditions and accessibility for everyone.

## PURPOSE OF THE RESEARCH

This research aims to examine the opinions of special education teachers on how the distance education processes of students with special needs take place during the pandemic period. For this purpose, answers were sought for the following sub-problems:

1. How are special education activities carried out in the distance education process?
2. What are the benefits / limitations of the distance education process in special education?
3. What are the suggestions for improving the distance education process in special education?

## METHOD

In this section information on the study group of the research, the research model, data collection and analysis of the data were presented.

### Research Model

This research was carried out within the framework of the qualitative method. A semi-structured interview form was used to determine the opinions of special education teachers on how the distance education processes of students with special needs take place during the pandemic period. It includes features such as expressing oneself to the person interviewed and obtaining in-depth information about the question (Buyukozturk, Cakmak, Akgun, Karadeniz, & Demirel, 2018).

### Participants

The study group was determined as special education teachers working in schools affiliated to the Ministry of National Education in line with the purpose of the research. In this direction, 20 special education teachers working in the relevant schools and managing the process remotely were reached and the necessary contribution was made for the realization of the study. The provinces where the special education teachers participating in the research work are: Ankara, Izmir, Kars, Istanbul and Trabzon. In order to protect participant confidentiality while presenting the research data, the participating teachers were coded as P1, P2, P3 ... P20 in accordance with the order of the data obtained from the interviews. Other information about the participants is presented in Table 1.

**Table 1.** Information about the working group

Participant	Gender	Professional experience (year)	Educational diagnosis(s) received by the students he/she works with
P1	Female	0-5	Dyslexia
P2	Female	5-10	Hearing impairment
P3	Male	5-10	Down syndrome
P4	Male	10-15	Mild intellectual disability
P5	Female	15-20	Dyslexia
P6	Male	10-15	Visual disability
P7	Female	5-10	Autism spectrum disorder, hearing impairment
P8	Male	10-15	Autism spectrum disorder
P9	Female	10-15	Autism spectrum disorder
P10	Male	10-15	Down syndrome
P11	Male	5-10	Visual disability
P12	Female	5-10	Dyslexia

P13	Female	5-10	Autism spectrum disorder
P14	Female	10-15	Hearing impairment
P15	Male	10-15	Down syndrome
P16	Female	5-10	Autism spectrum disorder
P17	Male	5-10	Dyslexia
P18	Female	5-10	Mild intellectual disability
P19	Male	5-10	Down syndrome
P20	Female	10-15	Hearing impairment

## Data Collection and Analysis

A “Semi-Structured Interview Form” was used to determine the opinions of special education teachers about how the distance education processes of students with special needs are carried out during the pandemic period. Semi-structured interview technique is preferred because it provides rich data and is flexible (Yildirim & Simsek, 2008). In the process of forming interview questions, first of all, the relevant literature was scanned and preliminary preparation was made for the study. Then, 10 interview questions suitable for the research were written, expert opinions were taken, and the questions were rearranged. Before the interview, the participants were clearly and unequivocally explained about the purpose of the research and how the study would be carried out. After the questions were created by the researchers by examining the literature, they were checked, and opinions were received from 2 experts working in the field of special education and 2 experts working in the field of distance education. In line with the opinions of the experts, the questioning styles were clarified and the sentences were finalized by adding some examples. Since it was the pandemic period, the interviews were conducted with an online interview form, not face-to-face. 20 special education teachers were interviewed.

In the analysis of the data, “content analysis”, one of the qualitative analysis methods, was used. Through content analysis, data is tried to be defined and facts that may be hidden in the data are tried to be revealed. Basically, the process is to bring together similar data within the framework of certain concepts and themes and to interpret them in a way that the reader can understand. Qualitative research data is analyzed in four stages. The first stage is the coding of the data, the second stage is the discovery of the themes, the third stage is the arrangement of the codes and themes, and the fourth stage is the identification and interpretation of the findings (Yildirim & Simsek, 2018). During the coding phase, the data were carefully read by the researcher and codes were created based on the concepts considered important within the scope of the purpose and questions of the research. In addition, consensus was taken into account in the coding of the data. Separate coding was done by the researchers and the themes were determined based on consensus after coding. After the themes were determined, the codes determined were grouped under separate themes by the researchers. Afterwards, the Reliability =  $\text{Consensus} / (\text{Consensus} + \text{Disagreement}) \times 100$  formula (Miles & Huberman, 2019) was used and a consensus of 91% was achieved. The codes with disagreement were discussed by the researchers and found under the themes. In addition, some opinions of special education teachers are presented with the abbreviation “P” in the findings section. In order to reflect the views of the participants, direct quotations were included and different opinions, explanatoriness, relevance to the subject, diversity and extreme examples were taken into account in the selection of quotations (Unver, Talu-Bumen, & Basbay, 2010).

## The Scale

It was stated that a semi-structured interview form was used, which was developed with the help of two field experts and aimed to enable us to gain comprehensive experience in the process. The 10 questions asked to special education teachers in this form are presented below:

1. What do you think about the distance education during Covid-19 pandemic?
2. How did you carry out education-training activities in the distance education service implemented during the Covid-19 pandemic?

3. What problems did you experience in the distance education service applied during Covid-19 pandemic?
4. How did you interact with your students in the distance education service implemented during the Covid-19 pandemic?
5. What did you pay attention to while preparing materials in the distance education service applied during the Covid-19 pandemic process?
6. How did you provide measurement and evaluation in the distance education service implemented during the Covid-19 pandemic?
7. Have you been able to do your classes regularly in the distance education system implemented during the Covid-19 pandemic? Technical glitch, lack of staff, etc. Have you had any difficulties?
8. What are the positive / negative aspects of the distance education service implemented during the Covid-19 pandemic?
9. What are your suggestions for improving the distance education service quality applied during the Covid-19 pandemic?
10. What should be considered in designing a distance education system? What needs should it meet? What should be the features of the system?

## FINDINGS

### How are Special Education Activities Conducted in the Distance Education Process?

In the first sub-problem of the study, “How Are Special Education Activities Conducted During the Distance Education Process?” The answer to the question was sought. Regarding this sub-problem, the opinions of special education teachers as a result of the content analysis; teaching activities in distance education, interaction in distance education, material preparation in distance education, and measurement and evaluation in distance education. Codes were obtained according to the opinions of special education teachers and they are expressed in the relevant tables. The distribution of the opinions was stated in the form of frequency (f) and examples of the opinions of special education teachers were given.

The findings of special education teachers regarding the theme of teaching activities in distance education are presented in Table 2. The theme of teaching activities in distance education; It consists of technology-based distance education tools and teacher-family collaboration sub-themes.

**Table 2.** Opinions of Special Education Teachers on Distance Education Activities

Theme	Sub-Themes	f
Teaching Activities in Distance Education	Technology-Based Distance Education Tools	13
	Teacher-Family Cooperation	10

When Table 2 was examined, it was found that regarding the theme of teaching activities in distance education, special education teachers mostly stated the sub-theme of Technology-Based Distance Education Tools (f=13). It was determined that the views (f=10) on the sub-theme of Teacher-Family Cooperation followed this.

“We continued to run meetings via Zoom. This is how I worked with children diagnosed with dyslexia” (P12, Technology Based Distance Education Tools).

“I am carrying out the activities I plan to do with my 7-year-old student with mild autism by telling his parents. I convey the weekly studies and games to be played to the parents. Parents provide me with feedback by doing what they can” (P9, Teacher-Family Cooperation).

The findings of special education teachers regarding the theme of interaction in distance education are presented in Table 3. Interaction theme in distance education; It consists of sub-themes through technological support and through parents.



**Table 3.** Opinions on Interaction in Distance Education in Special Education

Theme	Sub-Themes	f
Interaction in Distance Education	Via Technological Support	14
	Via Parents	8

When Table 3 was examined, it was found that regarding the interaction theme in distance education, special education teachers mostly expressed their opinions about the technological support sub-theme ( $f = 14$ ). In addition, opinions were expressed regarding the interaction in distance education through parents ( $f = 8$ ).

“We tried to get as much visual and aural feedback as possible in online education” (P14, Via Technological Support).

“I am trying to conduct academic studies by communicating with students with autism spectrum disorder and having communication problems during the distance education process through their families” (P7, via parents).

Findings of special education teachers regarding the theme of material preparation activities in distance education are presented in Table 4. The theme of material preparation activities in distance education; It consists of sub-themes that are enriched in technological terms, socio-economic level, pedagogically enriched content, and structured with parent support, depending on the special needs status.

**Table 4.** Opinions of Special Education Teachers Regarding the Activities of Material Preparation in Distance Education

Theme	Sub-Themes	f
Material Preparation Activities in Distance Education	Pedagogically Enriched Content	9
	According to Special Needs Status	4
	Configured with Parent Support	4
	Technologically enriched	3
	Socioeconomic Level	3

When Table 4 was examined, it was found that regarding the theme of material preparation activities in distance education, special education teachers expressed the most pedagogically enriched sub-theme ( $f=9$ ). In addition, it was determined that the material preparation activities in distance education were carried out with the support of parents ( $f=4$ ), according to the special needs status ( $f=4$ ), technologically enriched ( $f=3$ ) and social-economic level ( $f=3$ ).

“I chose pre-school education materials that they enjoy spending time playing with special educational materials prepared for direct target behavior that I used in the lesson. At the same time, I gave homework by sending the online versions of the textbooks prepared according to the new program published this year. The family got out and worked with the child” (P6, Pedagogically Enriched Content).

“It was explained in simple understandable expressions at home as the parents would also tell.” (P9, Configured with Parent Support).

“Considering the special needs status of the individuals I work with, I chose materials that will provide the most efficient work” (P11, According to Special Needs Status).

“The materials prepared are suitable for the type and degree of the child’s special needs, suitable for the subject to be studied and the objectives aimed to be taught, economical in terms of time and material, having features that the family can easily use, appealing to as many sensory organs as possible, teaching or reinforcing their subjects. or I am careful to use applications from other sites” (P4, Technologically Enriched).

“We are trying to prepare material taking into account the income of parents. Our priority is the materials that will increase the interaction of the student to the lesson that will attract the attention of the student” (P2, Socioeconomic Level).

The findings of special education teachers regarding the theme of measurement and evaluation in the distance education process are presented in Table 5. Measurement and evaluation theme in distance education; It consists of performance, teacher-family cooperation, participation, not provided and observation according to special needs status.

**Table 5.** Opinions of Special Education Teachers on Measurement and Evaluation in The Distance Education Process

Theme	Sub-Themes	f
Measurement and Evaluation in the Distance Education Process	Performance	7
	Teacher-family cooperation	7
	According to Special Needs Status	2
	Participation	2
	not provided	2
	Observation	1

When Table 5 was examined, it was found that regarding the theme of measurement and evaluation in distance education, special education teachers mostly stated their views on performance (f=7) and teacher-family cooperation sub-theme. In addition to these, special education teachers also gave opinions on sub-themes according to special needs (f=2), participation (f=2), not provided (f=2) and observation (f=1).

“We do it in the form of questions and answers for our students who can express themselves. We cannot measure and evaluate for students who cannot speak in distance education”(P8, According to Special Needs Status).

“Since I work with students with Autism Spectrum disorder, I usually do hands-on work. In the studies, I make an assessment by observing whether the child shows the desired behavior or not and applying the necessary techniques ”(P10, Performance).

“Unlike face-to-face education, parents’ knowledge was used about the development of students by receiving parent support”(P2, Teacher-Family Cooperation).

### **What are the Benefits / Limitations of the Distance Education Process in Special Education?**

In the second sub-problem of the study, “What are the benefits / limitations of the distance education process in special education?” The answer to the question was sought. Regarding this sub-problem, the opinions of special education teachers as a result of the content analysis; perceptions of distance education, problems experienced in distance education service, difficulties experienced in distance education service, negative aspects of distance education service and positive aspects of distance education service are gathered under themes. The opinions of special education teachers were coded to be represented by meaningful coding and expressed in the relevant tables. The distribution of the opinions was stated in the form of frequency (f) and examples of the opinions of special education teachers were given.

Findings regarding the theme of special education teachers’ perceptions about distance education in the distance education process are presented in Table 6. The theme of perceptions regarding distance education consists of positive, partially positive and negative sub-themes.

**Table 6.** Special Education Teachers’ Perceptions of Distance Education

Theme	Sub-Themes	f
Perceptions on Distance Education	Negative	12
	Partially Positive	6
	Positive	2



When Table 6 is examined, it was determined that special education teachers mostly expressed negative opinions regarding the theme of perceptions regarding distance education (f=12). In addition, they expressed their views on partially positive (f=6) and positive (f=2) sub-themes. Sample participant views regarding these sub-themes are presented below:

“I think it has a lot of benefit for students. But it is still useful for students not to stay away from the lesson. In distance education, it is tried to teach, not education” (P1, Positive).

“Although maximum efficiency cannot be achieved, I see every contribution that can be made on behalf of education and training activities positively in the period we are going through a compulsory process. I can say that the system should be developed a little more and more support should be provided to teachers, families and students” (P5, Partially Positive).

“I do not think it is a beneficial education process for special education students. Most of my students do not have the speaking skills. In this distance education process, great responsibility was left to the family. We teachers had to give responsibility to the family” (P8, Negative).

Findings related to the theme of special education teachers’ problems experienced in distance education service are presented in Table 7. The theme of the problems experienced in distance education service consists of communication, interaction, access, insufficient parent support, focus and usability sub-themes.

**Table 7.** Special Education Teachers’ Opinions on Problems Experienced in Distance Education Service

Theme	Sub-Themes	f
Problems in distance education service	Communication	15
	Access	6
	Insufficient Parent Support	4
	Focus	3
	Availability	2

When Table 7 is examined, it was found that regarding the theme of problems experienced in distance service, special education teachers mostly expressed their opinions about the communication sub-theme (f=15). In addition, it was revealed that they also experienced problems in access (f=6), insufficient parent support (f=4), focus (f=3), usability (f=2). Examples of participant opinions are presented below:

“We had difficulties in understanding the literacy activities of children diagnosed with dyslexia. There were confusion in the b-d, m-n corrections.” (P1, Communication).

“My student is very closed to communication. His expressive language is very weak. I think that I could not get enough efficiency from distance education studies due to these and similar reasons” (P7, Communication).

“While I had trouble concentrating even in face-to-face education with my Down syndrome student, online education became even more difficult. We received support from the family, but it was still an inefficient work” (P19, Focus).

“My students and parents had a lot of difficulty using size and zoom. I had to define the course from size and do it from whatsapp because none of them could enter the size” (P17, Availability).

“The children could not work efficiently with their parents in the home environment, they could not spare the necessary time for the special needs person because the parents also had other children” (P10, Insufficient Parent Support).

Findings related to the theme of special education teachers’ difficulties experienced in distance education service are presented in Table 8. It consists of technical problems, access barriers, family problems, inadequate computer use and no problem experienced.

**Table 8.** Special education teachers' difficulties experienced in distance education

Theme	Sub-themes	f
Problems Experienced in Distance Education	Technical problems	8
	Access barrier	5
	Family-related disruptions	4
	Insufficient computer use	3
	No problem	2

When Table 8 was examined, it was determined that special education teachers mostly expressed their opinions about the sub-theme of technical problems (f=8). In addition, they also gave opinions on the sub-themes of access barrier (f=5), family-related disruptions (f=4), insufficient computer use (f=3), and no problem (f=2). Sample participant views regarding these sub-themes are presented below:

“Most of the time, I have technical difficulties such as infrastructure problems. In such cases, I pay attention to use different online programs” (P17, Technical Problems).

“Yes, there were disconnections” (P2, Access Barrier).

“The education level of the family of the student with Down syndrome is also low. When financial difficulties were added, uninterrupted and regular education became impossible” (P15, Family Related).

“I had great difficulty in getting disabled people to participate fully. At the same time, this process has become quite difficult with people who do not know how to use new educational materials” (P10, Insufficient Computer Use).

Findings regarding the theme of special education teachers' perceived positive aspects of distance education are presented in Table 9. Positive aspects of distance education service; education sustainability, increased technology literacy and no positive aspect.

**Table 9.** Special education teachers' perceived positive aspects of distance education

Theme	Sub-themes	f
Perceived positive aspects of distance education	Sustainability	5
	No positive aspect	4
	Increasing student-family communication	1
	Increasing technology literacy	1

When Table 9 was examined, it was found that they mostly expressed their opinions regarding the theme of perceived positive aspects of distance education (f=5) with sustainability. In addition, they gave opinions on the sub-themes of increasing technology literacy, increasing student-family communication and no positive aspect. Sample participant views regarding these sub-themes are presented below:

“The beneficial aspect is that if the training cannot be done face to face, it has become an alternative for teaching the lessons” (P2, Sustainability).

“I see the positive effects on issues such as increasing the communication time of the student and the family, and making it more comfortable to gain daily life skills outside the school.” (P20, Student-family communication).

“The good thing is that families and children have learned to use technology” (P11, Technology literacy).

Findings regarding the theme of special education teachers' perceived negative aspects of distance education are presented in Table 10. Negative aspects of distance education service; It consists of sub-themes that distance education increases limitation and inequality for disabled people.

**Table 10.** Special education teachers' perceived negative aspects of distance education

Theme	Sub-themes	f
Perceived negative aspects of distance education	Limitation of distance education for the special needs	16
	Increasing inequality	1

When Table 10 was examined, it was found that regarding the theme of perceived negative aspects of distance education, they mostly expressed their views on the sub-theme of limitation of distance education for the special needs (f=16). In addition, an opinion was expressed regarding the sub-theme of increasing inequality (f=1). Sample participant views regarding these sub-themes are presented below:

“For our students, there can be nothing positive. These children have short-term attention skills and are used to one-to-one education with behavioral problems” (P8, Limitation of Distance Education for the Special Needs).

“Increased the inequality between children” (P4, Increasing Inequality).

### **What are the Suggestions for Improving the Distance Education Process in Special Education?**

In the third sub-problem of the study, “What are the suggestions for improving the distance education process in special education?” The answer to the question was sought. Regarding this sub-problem, the opinions of special education teachers as a result of the content analysis; Suggestions for improving the quality of distance education services and issues to be considered in designing a distance education system are collected under themes. According to the opinions of special education teachers, the codes were obtained and expressed in the relevant tables. The distribution of the opinions was stated in the form of frequency (f) and examples of the opinions of special education teachers were given.

Findings regarding the theme of special education teachers' suggestions for improving the quality of distance education service are presented in Table 11. Suggestions for improving the quality of distance education services; It consists of the sub-themes of developing special distance education applications according to the disability group, developing technological infrastructure, developing technological infrastructure, increasing technology literacy, increasing accessibility, not applying distance education for disabled individuals, no opinion and individualized applications.

**Table 11.** Special education teachers' suggestions for improving the quality of distance education service

Theme	Sub-themes	f
Suggestions for improving the quality of distance education service	Developing special distance education applications according to the special needs group	5
	Developing technological infrastructure	4
	Increasing technology literacy	3
	Increasing accessibility	3
	Not applying distance education for special needs individuals	3
	No opinion	2
	Individualized applications	1

When Table 11 is examined, it is determined that they mostly expressed their opinions regarding the theme of suggestions for improving the quality of distance education service, regarding the sub-theme of developing

special distance education applications according to the special needs group (f=5). In addition, developing technological infrastructure (f=4), increasing technology literacy (f=3), increasing accessibility (f=3), not applying distance education for special needs individuals (f=3), no opinion (f=2) and individualized applications (f=1) also expressed their views on their sub-themes. Sample participant views regarding these sub-themes are presented below:

“The system should be arranged for special education students. It should be supported visually rather than just verbally. Sign language translation should be done for our hearing impaired students” (P7, Developing special distance education applications according to the special needs group).

“It may be that the students are taught one by one and they are counted as the number of lessons, because when a few people are in front of the camera, there are difficulties in listening to each other, listening to each other and due to the level difference.” (P10, Individualized applications).

“I can suggest increasing the technical capacities related to infrastructure, providing diversity for the activities that can be applied remotely, providing special privileges for students with special needs to get involved in society and socialize” (P9, Development of technological infrastructure).

“This process has to be completely eliminated. I think there is no other solution” (P1, distance education is not applied for special needs individuals)

Findings regarding the issues that special education teachers should pay attention to in designing the distance education system are presented in Table 12. Issues to be considered in the design of the distance education system; It consists of content enrichment, Individualized training, Usability, Technological infrastructure and Accessibility sub-themes according to the handicap status.

**Table 12.** The opinions of special education teachers on the issues should considered in designing the distance education system

Theme	Sub-themes	f
The opinions of special education teachers on the designing the distance education system	Enrichment of content	6
	Individualized training	6
	According to special needs status	4
	Usability	3
	Technological infrastructure	3
	Accessibility	3
	In-service training	1
	Comprehensiveness	1

When Table 12 is examined, it was determined that special education teachers mostly expressed their views on the theme of enrichment of content (f=6) and individualized training (f=6) regarding the theme of issues to be considered in designing a distance education system. In addition to these, according to special needs status (f=4), usability (f=3), technological infrastructure (f=3), accessibility (f=3), in-service training (f=1) and comprehensiveness (f=1). They also expressed their opinion on the matter. Sample participant views regarding these sub-themes are presented below:

“I think it is useless to concentrate on distance education especially for students with mental problems who need special education. In addition, deprivation can be eliminated with a sustainable technological infrastructure for orthopedically disabled people. Individualized flexible education processes should be created rather than populist and wholesale education plans” (P19, individualized training).

“Designed with special education students in mind. It should not be like the system used by a normal student. It should be supported with visual symbols” (P17, Enriching the content).

“First of all, everyone should be informed about new educational materials. It should be made in the most efficient way” (P2, In-service training).

## DISCUSSIONS AND CONCLUSION

In this study, the difficulties experienced by students with special education needs and special education teachers with the transition to a distance education process with the effect of the pandemic were investigated. In this direction, an interview form was prepared in order to get the opinions of special education teachers and this form was delivered to the relevant persons electronically. Scientific light has been shed on the process by analyzing the collected data.

According to the results of the study, it can be said that the experiences of the teachers participating in the process are far from a positive situation. Because 12 participants evaluated the process negatively; 6 participants were partially positive and 2 participants were positive. This can be attributed to the emergency transition to unstructured distance education. In addition, the fact that special education students need more attention and contact may be another factor in the emergence of this result. This result is consistent with the outcomes of the study conducted by Pressley and Ha (2021), in which the self-efficacy and performance of teachers involved in online education were measured.

In addition, the necessity of technology and the full support of the family in this process is another important issue. Participating special education teachers stated that they carried out educational activities by taking advantage of technological opportunities and parent cooperation in this process. While 13 of the participants stated that they used technology-based tools such as EBA, Zoom and WhatsApp in this process; 10 opinions expressed that the process is managed in cooperation with parents by strengthening the communication network with parents. Cao and Li (2020) pointed out in their study that the transition to emergency distance education causes serious problems for families; stated that the responsibilities of family members increased during this period. In addition, Stenhoff, Pennington & Tapp (2020) emphasized the importance of families' participation in distance education in their study during the coronavirus period. It is seen that the most common difficulty in this process is communication. The communication problems experienced generally came from the participants working with the hearing impaired group students. In addition, participants working with students with speech impairments also expressed similar views.

In addition, the lack of interaction, such as the inability of the students to give the desired reactions on the screen, and the difficulties in the negotiation process, were frequently emphasized. Mengi and Alpdogan (2020) also stated that as a result of the opinions they received from special education teachers during the distance education process, the limited interaction and the short-term attention were due to the fact that the materials and assistive technologies used were not suitable for students with special needs. Therefore, in this study, the participants emphasize that the interaction cannot be achieved; Failure to use appropriate materials, assistive technology and interaction tools may have caused it.

Access is another challenge in this regard. The lack of internet infrastructure or technological deprivation of families are the most basic factors that make it difficult for students to access. Studies in the literature also point to technological and instrumental accessibility in this period. Mukuka, Shumba, and Mulenga (2021) emphasized in their study that they encountered insufficient accessibility during the epidemic period.

In addition, insufficient parent support is among the difficulties experienced in this process. The fact that parents, especially families with more than one child, cannot provide sufficient support to teachers stands out as a factor that makes the process difficult. Similarly, students' on-screen focus problems and usability levels of the technologies used are also the situations that make the process difficult. In a study, Tsibidaki (2021) stated that the responsibilities of parents increased extraordinarily during the epidemic and that parents showed much more anxiety symptoms compared to normal times.

When looking at the source of the interaction realized in this process, it is seen that technology plays an important role again. Technological applications and video conversations are the most common methods used to make the process interactive during this period. Again, the family factor comes to the fore here, and we see that communication and support with parents are used to ensure interaction. A study by Smidt and Jokonya (2021) affirmed the importance of using technology in the epidemic period.

One of the subjects where the opinions of the participants varied the most was the subject of measurement and evaluation. In the process, different measurement and evaluation methods were preferred, and the most frequently used measurement method was performance evaluation. It can be said that teacher-family and family-technology cooperation is also at the forefront in assessment and evaluation. In fact, it can be said that

technology and family are the cornerstones of this process. It can be claimed that the process is carried out with technology and family support in almost every subject. It can also be said that there are statements that do not measure and evaluate and are based on observation and participation. Also, Navas, Amor, Crespo, Wolowiec & Verdugo (2021) reported results in agreement with this inference in their study.

In another issue where the difficulties experienced in the process are examined, the participants stated that the most problems are caused by technical failures such as disconnections and the inadequacy of the vehicle used. This situation is followed by the lack of infrastructure and access difficulties due to financial difficulties. Problems arising from the social structure of the family, such as parents' not paying attention to the process and family problems, are among the difficulties of the process. As a matter of fact, as a result of the study conducted by Svalina and Ivic (2020) on students with special needs during the pandemic period, they found that the social conditions experienced by the child had a significant effect on learning methods supports the result of the study. In addition, families' low technology literacy and their inability to use the tools used in the process posed a separate problem. In order to solve this problem, according to Narvekar (2020), there should be a single type of instruction regarding how to provide education in the virtual education environment. Two participants reported that they did not experience any problems in the distance education process.

As a result of the examination of the positive and negative aspects of the process, it was found that the negative opinions that found the process mostly negative were dominant. It was observed that the limitations of distance education for special needs people were emphasized the most; it has been declared that distance education causes inequality of opportunity for students with disabilities. On the other hand, there is also a positive opinion stating that distance education ensures the sustainability of education, encourages disabled students to use technology, and gives them technology literacy. On how to increase the service quality of the process for persons with disabilities, the opinion of specialized implementation proposals regarding the special needs groups is dominant. There are also suggestions such as improving the technological infrastructure, providing low-cost internet services when necessary, organizing trainings to increase technology literacy. It is also remarkable that there are opinions stating that distance education will not be an education method for people with special needs.. As a result of the examination of the issues that need to be considered in the design of distance education applications for persons with special needs, the majority of opinions express that the content must be enriched, the system must allow individual training and support education according to the disability. In addition, usability, technological infrastructure and accessibility are among the variables declared in this regard. If the distance education process is made suitable for all special needs groups in the context of the mentioned suggestions, this process will be easy for them and they will be able to access resources easily. In this way, it can bring positive situations such as more active participation of students (Kalac, Telli & Eronal, 2020).

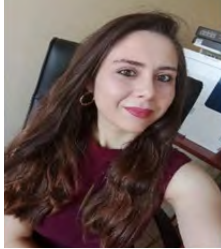
According to the findings of the research, it was deemed appropriate to emphasize the following recommendations:

- In order to improve perceptions about distance education, studies on distance education and its effectiveness can be increased.
- In the distance education process, more work can be carried out on separate and specialized technology-based applications for disabled individuals.
- The family can take a more active role in this process as a stakeholder. For this, family members can be motivated with the necessary prior information and demands full of expectations.
- Various situations can be employed for measurement and evaluation in the distance education process. Steps such as participation criteria can be taken to facilitate the process, especially for individuals with special needs who are already very tired in this process.
- In this process, it has been experienced once again how important the technological infrastructure is. In this sense, improving the technological infrastructure of cities can mean ensuring sustainability. In addition, lowering all connection and technological infrastructure costs to be offered can help to remove the accessibility barrier of the process.
- In this process, various studies can be carried out to increase the technology literacy of parents.
- Various scientific studies can be carried out to further develop teacher-family, family-student and teacher-student relations.



- In this process, individualized training preparations can be made for individuals with special education needs who show a better performance than their counterparts, even if they are in the same group.
- Platforms for students who need special education in the distance education process can be designed to support topics such as content, interaction, socialization. In addition, the usability of these platforms can be adjusted for students with special needs.

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## REFERENCES

- Basaran, M., Dogan, E., Karaoglu, E., & Sahin, E. (2020). Koronavirus (Covid-19) Pandemi surecinin getirisi olan uzaktan egitimin etkililigi uzerine bir calisma. *Academia Egitim Arastirmalari Dergisi*, 5 (2), 368-397.
- Bozkurt, A., & Sharma, R. C. (2020), Emergency remote teaching in a time of global crisis due to corona virus pandemic. *Asian Journal of Distance Education*, 15(1), 1-6.
- Buyukozturk, S., Cakmak, E. K., Akgun, O. E., Karadeniz, S., & Demirel, F. (2018). *Egitimde bilimsel arastirma yontemleri* (25. baski). Ankara: Pegem Akademi.
- Cavkaytar, A. (2012). Ozel Egitimde Gereksinimi Olan Ogrenciler ve Ozel Egitim. I. Diken (Ed.), *Ozel egitime gereksinim duyan cocuklar ve ozel egitim*. Ankara: Pegem Akademi.
- Cohen, L., Manion, L., Morrison, K., & Morrison, K. R. B. (2007). *Content analysis and grounded theory. Research methods in education*. New York: Simultaneously Pub.
- Coklar, A., Ergenekon, Y., & Odabasi, H. F. (2019). Ozel Egitimde Teknoloji. F. Odabasi (Ed.), *Ozel egitim ve egitim teknolojisi*. Ankara: Pegem Akademi.
- Dinc, E. (2017). Web-based education and accessibility. *International Journal of Technology in Education and Science (IJTES)*, 1(1), 29-35.
- Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and youth services review*, 118, 105440.
- Eroglu, F., & Kalayci, N. (2020). Universitelerdeki zorunlu ortak derslerden yabanci dil dersinin uzaktan egitim uygulamasinin degerlendirilmesi. *Turk Egitim Bilimleri Dergisi*, 18(1), 236-265.
- Fidan, M. (2020). Covid-19 belirsizliginde egitim: ilkokulda zorunlu uzaktan egitime iliskin ogretmen gorusleri. *Usak Universitesi Egitim Arastirmalari Dergisi*, 6(2), 24-43.
- Genc, S. Z., Engin, G., & Yardim, T. (2020). Pandemi (Covid-19) surecindeki uzaktan egitim uygulamalarina iliskin lisansustu ogrenci gorusleri, *Ataturk Universitesi Kazim Karabekir Egitim Fakultesi Dergisi*. 41, 134-158.
- Hamilton, LS, Kaufman, JH ve Diliberti, M. (2020). Bir pandemi boyunca ogretmek ve liderlik etmek: Amerikan egitimci panellerinden temel bulgular bahar 2020 COVID-19 anketleri. RAND.
- Inci Kuzu, C. (2020). Covid-19 pandemisi surecinde uygulanan ilkokul uzaktan egitim programi (eba tv) ile ilgili veli gorusleri. *Milli Egitim Dergisi*, 49(1). 505-527.
- Kaden, U. (2020). COVID-19 School closure-related changes to the professional life of a K–12 teacher. *Education Sciences*, 10(6), 165.
- Kalac, M. O., Telli, G., & Eronal, Y. (2020). *Covid-19 mucadelesi kapsaminda uzaktan egitim surecinde engelli ogrencilerin durumu sorunlar ve cozum onerileri*. Manisa: MCBU Rektörlük Basimevi
- Karaca, S., & Kelam, D. (2020). COVID-19 golgesinde uzaktan egitim hizmet kalitesinin incelenmesi. *Sivas Interdisipliner Turizm Arastirmalari Dergisi*, (5), 7-18.
- Keskin, M, Ozer Kaya, D. (2020). COVID-19 surecinde ogrencilerin web tabanlı uzaktan egitime yonelik geri bildirimlerinin degerlendirilmesi. *Izmir Katip Celebi Universitesi Saglik Bilimleri Fakultesi Dergisi*, 5(2), 59-67.
- Kurt, A., & Kurtoglu Erden, M. (2020). Koronavirus hastaligi 2019 surecinde ozel gereksinimli bireyler. *Milli Egitim Dergisi*, (49) 1. 1105-1119.
- Kurtdede Fidan, N., Erbasan, O., & Kolsuz, S. (2016). Sinif ogretmenlerinin Egitim Bilisim Agi'ndan (EBA) yararlanmaya iliskin gorusleri, *Journal of International Social Research*, 9(45), 626-637.
- LEE, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health*, 4(6), 421.

- Mengi, A., & Alpdogan, Y. (2020). Covid-19 salgini surecinde ozel egitim ogrencilerinin uzaktan egitim sureclerine iliskin ogretmen goruslerinin incelenmesi. *Milli Egitim Dergisi*, 49(1), 413-437.
- Miles, M. B. ve Huberman, A. M. (2019). Genisletilmis bir kaynak: Nitel veri analizi. (Ceviri Ed.:S. Akbaba-Altun & A. Ersoy). Ankara: Pegem Akademi Yayinlari.
- Mukuka, A., Shumba, O., & Mulenga, H. M. (2021). Students' experiences with remote learning during the COVID-19 school closure: implications for mathematics education. *Heliyon*, 7(7), e07523.
- Narvekar, H. (2020). Educational concerns of children with disabilities during COVID-19 pandemic. *Indian Journal of Psychiatry*. 62(5), 603-604.
- Navas, P., Amor, A. M., Crespo, M., Wolowiec, Z., & Verdugo, M. A. (2021). Supports for people with intellectual and developmental disabilities during the COVID-19 pandemic from their own perspective. *Research in Developmental Disabilities*, 108, 103813.
- Pressley, T., & Ha, C. (2021). Teaching during a pandemic: united states teachers' self-efficacy during covid-19. *Teaching and Teacher Education*, 106, 103465.
- Roberts, J., & Crittenden, L. (2009). Accessible distance education 101. *Research in Higher Education Journal*, 4(1). 1-12.
- Sarioglan, A. B., Altas, R., & Sen, R. (2020). Uzaktan egitim surecinde fen bilimleri dersinde deney yapmaya iliskin ogretmen goruslerinin arastirilmesi. *Milli Egitim Dergisi*, 49(1), 371-394.
- Smith, A. (2020). Challenges and opportunities for teaching students with disabilities during the covid-19 pandemic. *International Journal of Multidisciplinary Perspectives in Higher Education*, 5(1), 167-173.
- Smidt, H. J., & Jokonya, O. (2021). The challenge of privacy and security when using technology to track people in times of COVID-19 pandemic. *Procedia Computer Science*, 181, 1018-1026.
- Sokolik, M. (2018). The Nexus of Accessibility and Pedagogy: What Every Online Instructional Designer Should Know. *TESL-EJ*, 21(4).
- Stenhoff, D. M., Pennington, R.C. & Tapp, M.C. (2020). Distance education support for students with autism spectrum disorder and complex needs during covid-19 and school closures. *Rural Special Education Quarterly*, 39(4), 211-219.
- Sullivan, F., Hillaire, G., Larke, L., & Reich, J. (2020). Using teacher moments during the COVID-19 pivot. *Journal of Technology and Teacher Education*, 28(2), 303-313.
- Svalina, V., & Ivic, V. (2020). Case study of a student with disabilities in a vocational school during the period of online virtual classes due to covid-19. *World Journal of Education*. 10(4). 115-123.
- Sahin, M. C. (2005). *Internet tabanlı uzaktan eğitimin etkililiği: Bir meta-analiz çalışması*. Yayınlanmamış Yüksek Lisans Tezi, Cukurova Üniversitesi, Adana.
- Tsibidaki, A. (2021). Anxiety, meaning in life, self-efficacy and resilience in families with one or more members with special educational needs and disability during COVID-19 pandemic in Greece. *Research in Developmental Disabilities*, 109, 103830.
- Unver, G., Talu-Bumen, N. ve Basbay, M. (2010). Ortaogretim alan ogretmenligi tezsiz yuksek lisans derslerine ogretim elemani bakisi: Ege Universitesi ornegi. *Egitim ve Bilim Dergisi*, 155(35), 63- 77.
- WHO (2021). *World report on disability*. Retrieved September 4, 2021 from <https://www.who.int/publications/i/item/9789241564182>.
- Yilmaz, M., Celik, E. (2020). Program gorsellestirme araciyla gerceklestirilen dijital oyuikleme etkinliklerinin yaratıcı problem cozme ve bilgisayar tutumuna etkisi. *Bayburt Egitim Fakultesi Dergisi*, 15(30), 458-481.