

Experiences of University Students on Distance Education During the Pandemic: A Phenomenological Research

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Abstract

With the COVID-19 pandemic affecting the whole world, almost every country had to close educational institutions at various levels and has compulsorily switched to distance education. In this process, some countries and schools were caught unprepared for distance education, while others with advanced infrastructure and technological facilities adapted more easily. This sudden shift in the education process and the ongoing advancement of internet technologies have impacted and altered the design and implementation of distance education curricula, influencing students' experiences and perceptions of distance education. Students' perceptions and experiences are considered crucial elements affecting the efficiency of distance education. This study aims to describe how university students experienced the distance education process during the COVID-19 period, using a phenomenological design to structure the research. The study group consists of 12 undergraduate students from 4 different faculties of a university, selected using maximum variation and criterion sampling methods. Data were collected through a semi-structured interview form in the spring semester of the 2021–2022 academic year and analyzed through phenomenological analysis. As a result of the research, it was observed that although the participants' experiences with distance education during the pandemic included some positive individual and educational aspects, they encountered various difficulties in technical features, course structure and processing, instructor and student characteristics, and individual and family dimensions. It was also concluded that the participants' experiences with distance education during the pandemic were affected by several individual and educational factors, leading to changes in their daily academic lives. The study identified areas for improvement in distance education, particularly concerning exams and course management, and offered several suggestions for enhancement.

Keywords: Online learning, pandemic-era distance education, phenomenology, student experiences, university students

Introduction

Distance education, a long-established phenomenon, first emerged in the early 18th century as correspondence study in order to offer education to students who were willing to receive education far away from where the school was located, and it has progressed and become widespread with rapid advancements in the field of technology (Kentnor, 2015). Especially in the last two decades, there has been a marked growth in distance education all over the world (Crisp, 2018). The learning environment organized through distance education allows for the sharing of various resources and gives students several means of communication. Moreover, the growing importance of lifelong learning has led to the construction of more robust distance learning environments to provide easy access to and management of knowledge (Angelaki et al., 2021). Distance education offers a critical learning opportunity thanks to its easy accessibility and fast communication (Carlsen et al., 2016). Distance education facilitates access to education for many young people and adults who do not have the opportunity to benefit from face-to-face education and who will not have the opportunity to participate in higher education, especially in rural areas (Manuel et al.,

2021). The fact that distance education has become a main method of education worldwide requires some changes in the education system. Therefore, this process is facilitated by the openness of students and teachers to new experiences to adapt to changing needs (Carrington & Robinson, 2009).

Definition and Characteristics of Distance Education

Distance education is defined as “teaching and planned learning in which instruction takes place in assorted arrangements, requiring communication through technology as well as special institutional organization” (Moore & Kearsley, 2011, p. 2). According to another definition, distance education is a technology-based, self-directed, autonomous learning experience that connects students with resources and instructors outside of a formal institution. Distance education can also be defined as an instructor-led learning experience that utilizes technology to extend the distance of synchronous course experiences (Johnston, 2020). The aims of open and distance education include increasing access to education, meeting and supporting student needs, designing individualized teaching materials and utilizing multimedia tools, lowering education costs, and promoting the quality of teaching materials

and the education system (Melton, 2002). Distance education refers to the use of a wide range of electronic media as well as information and communication technologies to achieve educational goals (Muljana & Luo, 2019). Trends in the field of distance education emphasize a learning process that prioritizes student interaction, student-centered strategies, and the environment (Carlsen et al., 2016). Students' readiness for distance education is reflected in their perceptions of online versus face-to-face classes. This readiness encompasses areas such as student qualifications, time management, and technical and communication competencies (Martin et al., 2020).

The implementation methods of distance education vary. It can be delivered through synchronous, asynchronous, and blended learning models (Angelaki et al., 2021; Kumar Basak et al., 2018; Shachar & Neumann, 2003). Synchronous learning is online or distance education with courses that take place live in real-time with a specific syllabus and session times. These courses can be conducted via video conferencing, teleconferencing, live chat, etc., and recorded in a way that allows access later. In asynchronous learning, which is carried out according to the student's individual schedule, an instructor or a program provides students with materials, lecture videos, assignments for completion, and exams for evaluation. Hybrid learning (blended learning), another implementation method, combines face-to-face learning with online learning and gives opportunities for a seamless transition from the classroom environment to e-learning (Crawford & Jenkins, 2017).

In addition to the growth and expansion of distance education through several applications, the COVID-19 pandemic forced nearly every country to close educational institutions at various levels and shift to distance education. During this time, some countries were unprepared for the transition, while others had advanced distance education infrastructure and technological facilities, making adaptation easier. For this reason, researchers have conducted numerous studies on how the process has evolved, offering suggestions for more effective distance education and identifying its advantages and disadvantages. Therefore, there was a noteworthy increase in research on distance education during this period. During the COVID-19 pandemic, studies on student perspectives regarding distance education were carried out worldwide (Adnan & Anwar, 2020; Altwaijry et al., 2021; Angelaki et al., 2021; Fidalgo et al., 2020; Manuel et al., 2021; Ozfidan et al., 2021). Furthermore, there are studies on the perspectives of teachers, school administrators, and academics (Mikušková & Verešová, 2020; Sari & Nayır, 2020; Turk et al., 2021). Although some schools have returned to face-to-face education as part of normalization measures, many institutions, particularly higher education institutions, have permanently adopted a hybrid learning method, which combines face-to-face and distance education, as part of their education systems.

Almeida et al. (2013) identify the main characteristics of distance education as the physical distance between teacher and student, a student-directed learning process, communication through various technological tools, and the modifiability of the content. Song et al. (2004) list the factors determining the effectiveness of distance education as instructional design, time management, technology experience, comfort level, socialization opportunities, and specific goals. Similarly, items affecting student satisfaction and experience during the pandemic include instructional design, the role of the instructor, the interaction between teachers and students, the collaborative learning environment, and the quality of feedback received from teachers (Ozfidan et al., 2021). The main advantages of distance education, especially for young and adult learners, are its flexibility, accessibility, affordability, and lifelong learning opportunities (Musingafi et al., 2015). Distance education facilitates the reuse of educational materials

and enables greater participation by students. Moreover, since it does not require physical classrooms, it reduces costs associated with course distribution, educators' salaries, and travel, lowering overall expenses (Angelaki et al., 2021; Sadeghi, 2019). One of the most significant advantages of distance education is that learning can occur anywhere and anytime that fits the student's schedule (Johnson & Barr, 2021; Radovan, 2019). It helps balance student abilities and mitigates feelings of disconnection (Jin et al., 2019). In an online environment, diversity among students is less pronounced, which minimizes prejudices and provides all students with more equal opportunities and experiences (Cam et al., 2016).

The learning environment should be organized to allow flexibility so that teachers can apply several teaching strategies to meet students' learning needs (Howland & Moore, 2002). The course structure should align with the flexible nature of distance education (Bezuidenhout, 2018; McClannon et al., 2018). Moore (1993) argues that the success of distance education curricula depends on how well instructors adjust communication and course structure to meet student needs. Effective communication between students and instructors, along with rapid feedback and guidance, are crucial components of distance education curricula, especially during the pandemic (Schrenk et al., 2021). However, a critical drawback of online courses during the pandemic has been the lack of interaction between teachers and students (Er Türküresin, 2020; Khan et al., 2021). The fact that students are less active compared to face-to-face classes is one of the factors that exacerbate this limitation in online learning (Ally, 2019). Encouraging activity and active participation can boost students' academic success (Cai & Wang, 2020). The distance learning environment can also lead to problems such as psychological, social, and emotional disconnection from peers and instructors as well as a sense of isolation (Berry, 2019). Shohel (2012) characterizes the barriers to distance education as the lack of motivation among teachers and the absence of training. Instructors often feel unprepared for the sudden transition to distance education during the pandemic, while students are concerned about their course grades and credits amidst this unprepared process (Cai & Wang, 2020). According to Valentine (2002), the obstacles in distance education are issues with the quality of education, hidden costs, misuse of technology, and teacher and student attitudes that fail to adapt to the teaching methods required by distance education. These challenges persist even under current conditions. Additionally, instructors face troubles such as the long time required to prepare educational content, the necessity for frequent updates to the material and its limited duration of application, and the possibility of students using materials obtained from each other or from the internet (Lee & Huang, 2018).

The COVID-19 pandemic has caused rapid and radical changes in education systems, and ongoing advancements in internet technologies are continually transforming the design and implementation of distance education curricula. These changes are reflected in students' experiences and perceptions of distance education. As internet technologies become more easily accessible and widespread, it is increasingly important to identify the points that contribute to students' success in distance education and the hardships they face in this process (Hofmann, 2002). Therefore, there is a need for studies examining students' perspectives on the ever-changing distance education environments (Song et al., 2004). Such research is expected to provide valuable insights for educators and decision-makers to develop distance education curricula that are adaptable to unexpected situations like pandemics, shape educational policies, and enhance the effectiveness of the distance education process. This study aims to explore university students' perceptions of their distance education experiences during the pandemic. The findings are anticipated to establish a framework for improving the efficiency of the learning process in distance education. Specifically, this study seeks

to describe how university students experienced the distance education process during the COVID-19 period through transcendental phenomenology and to uncover the essence of these experiences. To achieve this, the study sought answers to the following questions:

- How did the participants experience distance education during the pandemic?
- What factors affected the participants' learning experiences with distance education implemented during the pandemic?
- How have pandemic-era distance education experiences affected participants?
- What are the participants' suggestions for the development of distance education?
- What is the common meaning of distance learning experiences for participants?

Methods

Research Design

In this study, transcendental phenomenology was utilized to reveal the essence of university students' experiences with distance education during the COVID-19 period. In phenomenological research, data are collected to describe the fundamental structure of participants' experiences and the meanings they attribute to these experiences (Merriam, 2009). Transcendental phenomenology was chosen as it emphasizes understanding how individuals make sense of their experiences and aim to express these experiences as they are (Moustakas, 1994).

Study Group

In a phenomenological study, participants should have meaningful experiences with the same phenomenon. At the university where the study group was based, distance education was implemented across all faculties as part of an emergency transition due to the pandemic. During this period, most courses were conducted online, with synchronous sessions for the majority and some (elective courses) performed asynchronously. Students were given the flexibility to watch recordings of the courses they could not attend. Maximum variation sampling and criterion sampling methods were employed to determine the study group. The criterion was that participants had studied entirely through distance education for at least two semesters, resulting in a sample primarily composed of senior students. Faculties within the same university were preferred owing to their similar distance education models. Including students from several faculties using the same model helped address the limitation that a single faculty's model might not reflect general experiences or might have unique obstacles. Therefore, the study consisted of 3 students from each of 4 different faculties, each with distinct course contents and structures. Information about the study group is presented in Table 1.

Data Collection Tool

In the study, data were collected through semi-structured interviews. The interview technique is a primary data collection tool in phenomenological research, enabling interaction, flexibility, and in-depth analysis (Creswell, 2013). When preparing the interview form, the scope of the concerns to be addressed in the research was defined through a literature review. Questions such as "What experiences have you had with the phenomenon?" and "Which environment or situations have affected your experiences with the phenomenon?" contribute to the description of the experiences and understanding of the common experiences of the participants (Creswell, 2013). Based on the participants' experiences, open-ended questions were prepared to allow them to define the phenomenon of distance education, explain its limitations and strengths, and present their suggestions for its development. The interview form contained questions such as: "What does distance education mean to you?", "What are your experiences in the distance education process?", "What situations/people/events have affected your

Table 1.
Information About Participants

Code	Age	Faculty	Department	Classroom	Distance Education Experience
Tuba	23	Education	Guidance and Psychological Counseling	4	3 semesters
Merve	22	Education	Preschool Teaching	4	3 semesters
Cetin	22	Education	Turkish Language Teaching	4	3 semesters
Batu	22	Economics	Economics and Finance	4	3 semesters
Gözde	22	Economics	Finance	4	3 semesters
Elif	22	Economics	Finance	4	3 semesters
Serkan	20	Arts and Science	Archaeology	2	2 semesters
Eda	22	Arts and Science	Turkish Language and Literature	4	3 semesters
Zuhal	22	Arts and Science	Turkish Language and Literature	4	3 semesters
Ali	24	School of Physical Education and Sports	Sport Management	4	3 semesters
Müge	21	School of Physical Education and Sports	Coaching	4	3 semesters
Veli	20	School of Physical Education and Sports	Coaching	3	3 semesters

experiences with distance education?", and "How does the distance education process impact your education and personal life?". After obtaining feedback from two experts and conducting a pilot interview, the form was finalized for use in the interviews.

Data Collection and Analysis

Within the scope of the research, and following the Aydın Adnan Menderes University Educational Research Ethics Committee (Approval no: 2022/06-I, Dated: 08.04.2022), interviews lasting 30 to 50 min were conducted with the participants in April 2022. Prior to the interviews, the purpose and scope of the research were explained to the participants, and they were asked to sign an informed consent form indicating their voluntary participation. The interviews were conducted face-to-face and recorded using a voice recorder. The data were transcribed verbatim, with anonymity ensured by altering participants' names and removing information that could directly identify them. Phenomenological analysis was employed to analyze the data, following the steps outlined by Moustakas (1994). According to Moustakas (1994), phenomenological analysis begins with bracketing (Epoche), which involves suspending pre-existing beliefs about the objects of study to focus on their essence and real characteristics. Therefore, as the first step, the data analysis began with the researcher setting aside personal experiences and biases about distance education. In the next step, phenomenological reduction, each experience is examined and defined within its integrity. For phenomenological reduction, the researcher started by reading the transcripts and listing each statement related to the experiences. Meaning units (codes) were then formed by grouping similar expressions. These meaning units were organized into main and sub-themes, leading to textural identification. In the imaginal triangulation step, structural descriptions were created regarding the environment or context that influenced how participants experienced the phenomenon. Finally, a composite description capturing the essence of the experience was produced.

Throughout the research process, the researcher was responsible for developing the data collection tool, conducting semi-structured interviews, transcribing, and analyzing the data. To ensure validity and reliability, two experts with experience in qualitative research and phenomenological studies, and who are specialists in educational sciences, were consulted during the formation of the data collection tool. During the data collection, experiences related to the phenomenon were bracketed, and field notes were maintained. Both during and after data analysis, an expert evaluation was conducted, and adjustments were made to codes that did not fit, ensuring coder consistency. All research steps were detailed, and findings were supported with direct quotations. The transcriptions and analysis results were reviewed for confirmation by two participants (Creswell, 2003).

Findings

Within the scope of the research, the aim was to reveal how university students experience distance education. According to the findings from the first sub-problem of the research, the participants’ distance education experiences were categorized into two main themes: (a) advantages of distance education and (b) challenges encountered in the distance education process. For the second sub-problem, (c) factors affecting the learning process in distance education were identified. The third sub-problem addressed (d) the effects of distance education, and the fourth sub-problem focused on (e) suggestions for the development of distance education. Analysis of the structure revealed by the final sub-problem showed that distance education experiences were grouped under five main themes, with 13 distinct sub-themes emerging under these themes.

Advantages of Distance Education

Based on the research findings, participants described the advantages of distance education from both individual and educational perspectives. The codes and themes related to these advantages are presented in Table 2.

Participants stated that distance education offered advantages both personally and educationally. On the individual side, the participants stated that they experienced economic relief and supported their families financially due to the reduction in educational expenses and the opportunity to work while studying. Two participants shared their perspectives:

“Distance education is advantageous as it allows students to work. Many of our friends worked and supported their families. For instance, I had a friend who worked online on a website while studying at the same time.” (Eda)

“During a tough financial period, it provided economic relief by eliminating costs related to transportation, food, and bus fare.” (Serkan)

Participants highlighted that distance education created a sense of comfort and confidence, led to a more organized life, allowed for more effective use of time, and alleviated physical fatigue. Tuba shared how distance education created a sense of comfort and confidence, as well as more personal time:

“It allowed me to spend more time for myself... Being at home, in a safe environment, helped reduce my sleep paralysis... When I came back home, I realized there is no place like family. I started doing sports at home and practicing yoga, which was really beneficial for me.” (Tuba)

The statements of two participants who mentioned that distance education alleviate physical fatigue are as follows:

“For example, the positive aspects is that there’s no physical fatigue. The computer is turned on, notes are read, there are exams, but in face-to-face classes, you get tired and confused. It causes both mental and physical exhaustion.” (Çetin)

“It was better since I work at the same time. It was very tiring to work, leave work late, and then go to class in the morning.” (Batu)

The flexibility of time and space, as well as the ability to watch lectures afterwards, was mentioned by all participants as one of the educational advantages of distance education. They expressed these aspects as facilitating experiences. Sample statements on this topic are as follows:

“The best thing about distance education is that you can watch the lecture again at exam time or any other time. Since we can rewatch it, we don’t need to take lecture notes.” (Merve)

“The ability to watch the replay is advantageous for reviewing before the exam. If I’m preparing an assignment and missed something, I can turn it on and listen to it minute by minute as much as I want. It stays in my mind and I can write it down directly, so it is advantageous in that way.” (Serkan)

“I was able to turn it on and listen to it whenever I wanted, day or night, whenever I could...” (Batu)

“We can’t write down what the teacher said in the moment, but when we watch the video later, we can pause and take notes, or we can slow it down, this was a plus.” (Gözde)

During distance education, the participants emphasized that their absenteeism diminished and their academic averages increased due to the fact that exams were often conducted through homework. They found this to have a positive impact on their educational lives. Many participants appreciated the understanding nature of their instructors and the quick communication, even at a distance, which facilitated their distance education experience. Sample statements on the subject are:

“They guide us adequately about exams and assignments, suggesting good sites for articles we can use for homework. They provide us valuable guidance on how to benefit these sites, both via e-mail and in online classes.” (Serkan)

“Our professors were more understanding because it was a strange experience for all of us.” (Tuba)

Some participants also noted that distance education enables the learning of different programs. Eda shared the following thoughts:

“We learned various programs in distance education. We learned video conferencing. The university had its own distance

Table 2.
Advantages of Distance Education

Theme	Sub- theme	Codes
Advantages	Individual	Economic relief
		A sense of comfort and confidence
		Transition to a regular life
		Effective use of time
		Alleviation in physical fatigue
		Flexibility in time and space
	Educational	Ability to revisit lectures
		Diminished absenteeism
		Improvement in academic performance
		Enhanced understanding and communication with teaching staff
		Knowledge of various programs

education portal and we learned to work it. There were applications on our phones, we connected to the lessons from there, we learned to apply them. The lessons were efficient.”

Challenges in the Distance Education Process

According to the research findings, the participants explained the challenges experienced in the distance education process as being related to technical issues, course content, instructors, students, and individual and family factors. The codes and themes related to these difficulties are presented in Table 3.

Participants stated that distance education is a challenging experience for reasons such as technical features, course structure and functioning, instructor and student characteristics, and individual and family factors. Regarding technical features, all participants mentioned internet connection and infrastructure complications. Tuba said:

“When we think broadly, not everyone may have internet access. Even if they live in a dormitory and have their own internet, they may not be able to use it. Just because I have the opportunity doesn’t mean others do; you have to consider that.”

Concerning the technical errors and deficiencies highlighted as challenging elements, some participants mentioned that the system frequently locked due to updates, that they were marked absent despite attending the course, and that there were obstacles such as being unable to upload assignments and occasional invalidation of exams. Some participants shared their opinions on these matters as follows:

“A friend of mine failed last semester because of the system. Even though the video was watched, the system didn’t register it.” (Müge)

“I took the exam, but there were five or six questions left when the system crashed and shut down suddenly. However, it didn’t crash for the whole class. I had to retake the exam. Technological problems can arise in distance education.” (Çetin)

“I got to the third question and the connection broke. I tried to log in again, but only five minutes were left, and I couldn’t return to my other work. The portal is constantly updating itself. When we tried to log in, we couldn’t get in at all; the message ‘Updating’ kept appearing. This can last for two days.” (Zuhal)

Some participants also emphasized that the computer-oriented nature of the distance education system caused troubles for those who lacked proper equipment and had to attend classes on their phones. Merve shared the following thoughts:

“For example, I have no signal on my phone. The other day, I was attending a class, and when I logged in, it rejected me. It was owing to my phone.”

Regarding the structure and functioning of the course, participants stated that effective learning did not occur in some distance education courses as they did not engage multiple senses. Çetin’s comments on the subject are as follows:

“In education, you focus on the four senses, you need to see with your eyes, hear with your ears, etc. We only see it visually or hear it verbally. Both are usually not possible, they remain incomplete. I think it does not achieve the desired efficiency.”

Most participants stated that the effectiveness of distance education varies depending on the course structure and that it leads to a lack of experience in practice-oriented courses. Sample statements on the subject are as follows:

“The distressed ones were the practical lessons. For instance, I passed the swimming class without knowing how to swim; all I did was prepare slides, and I passed the course. I know the theory of swimming, but I don’t actually know how to swim. I know basketball, so I didn’t feel lacking because I already know it, but I passed badminton, tennis, and swimming without practicing.” (Veli)

“Normally you learn by practicing, but in this case, they tried to teach us by just explaining or making us watch. I took a tennis class, but I haven’t picked up a racket yet. Theoretically, I know how to hold a racket, but I haven’t actually held one yet.” (Ali)

Challenges such as accessing course materials and the limited variety of teaching methods were also mentioned. Merve expressed the following:

“There is a class called folk dances that simply can’t happen, and drama, for example. I may not have materials for drama right now. These aren’t things that can be done by explaining them. Some practical courses are not suitable for distance education. You can do painting remotely, but it requires technique. The teacher says they need to demonstrate it, but I don’t have the equipment here, and they can’t show large objects, canvases, etc.”

Regarding the characteristics of instructors and students, most participants stated that there was a lack of communication and interaction

Table 3.
Challenges in the Distance Education Process

Theme	Sub-theme	Codes
Challenges	Technical specifications	Internet connectivity and infrastructure issues
		Technical errors and omissions
		Insufficient computer-aided systems and technical equipment
	Course structure and process	Ineffective learning experiences
		Variability in effectiveness based on course structure
		Lack of experience with practical courses
		Difficulty accessing course materials
	Instructor and student	Limitations in teaching methods
		Insufficient communication and interaction
		Inadequate cooperation and task delegation
Instructor’s lack of knowledge and experience		
Individual	Differences in teaching style	
	Inequality of opportunity	
	Lack of motivation and enthusiasm	
	Struggles with adaptation	
	Stress and reluctance	
Family	Lack of knowledge and experience	
	Financial troubles	
	Family perspectives and rules	
	Impact of family issues on education	
	Balancing family relationships with the educational process	

between some instructors and students during the distance education process. Two participants shared the following statements:

“In terms of communication, some lecturers would explain and leave, while others would ask questions, engage us in discussions, and even ask us to turn on our cameras and share our contact information.” (Gözde)

“Most of them didn't have a phone number; only our advisor did. If we had something urgent and sent an e-mail, they might respond two days later; sometimes not at all.” (Elif)

Tuba stated that there was no cooperation and fair distribution of tasks in group assignments due to the lack of communication and interaction in the classroom.

“If it were face-to-face, it might be easier to communicate with friends and complete homework since there were group assignments, and we had further trouble with those. Some students don't have internet access, or it gets disrupted, or other concerns arise, making it hard to get together.”

The lack of knowledge and experience of instructors and students was also cited as a challenging aspect of distance education. Çetin's statements on the subject are as follows:

“It is flexible, but I think it is important to know how to operate it. There are a lot of distance education tools, and the people who utilize them have embraced that flexibility. However, when some instructors are merely in the mode of opening the lesson and teaching, the students adopt the same mode and don't gain much efficiency. It actually varies from person to person.”

Most participants stated that variations in the process depending on the instructor, department, or university, as well as the inability to distinguish between hardworking and less diligent students, along with unequal access to resources, lead to inequality and injustice among students. Eda highlighted the inequality caused by these factors:

“I thought that since it is generally applied in Turkey, the conditions should be the same everywhere, but each university is different, leading to inequality. Inequality is a negative feature.”

Merve expressed the unfairness arising from the inability to distinguish between the deserving and the undeserving with the following statements:

“I think it's laziness and also unfair. I was studying a lot, but you don't get the recognition for your efforts. Others receive the same grade without working hard, which was very upsetting ... It's about not being able to distinguish between those who deserve it and those who don't. However, I never felt that way about one of my teachers. We were asked to keep our cameras on, everyone participated in the class, and points were awarded accordingly to those who did not participate.”

Due to individual reasons, participants expressed problems such as a lack of motivation and excitement during the lessons and struggles with adaptation. Some participants' opinions on the subject are as follows:

“I didn't participate much in the lessons, I didn't talk, I didn't listen, and I was usually asleep ... Most of the valuable information is missing now, and I notice its absence in the lessons.” (Veli)

“They explain the lesson, but it's not like in face-to-face education. You can only pay attention for about 15 minutes; after that, you get distracted and start focusing on other things.” (Elif)

Participants expressed that the fear of experiencing technical problems caused further stress during exams and induced reluctance to attend classes. Sample statements are:

“I was so stressed during the exam. There was a complication with my computer, and I worried that the internet might go down. A student who didn't have internet access operated the phone for the exam, but the question wouldn't always appear there.” (Merve)

“My biggest fear is accidentally leaving the microphone on and saying something inappropriate. A friend did that once; the microphone was on, and when the words were heard, the friend immediately left the system.” (Ali)

Müge emphasized that the lack of knowledge and experience in distance education led to troubles.

“There are a lot of distance education tools, but since we didn't know any of them, I only recently learned about them. I asked how to benefit them as I had never used them, and I learned by experimenting.”

One participant mentioned that economic circumstances made the distance education process complicated and sometimes caused trouble with course participation.

The perspectives and rules of families, the impact of family issues on distance education, and the difficulty of balancing family responsibilities with the education process were highlighted as components related to family traits. The opinions of two participants are as follows:

“Actually, I had a room, but because I lived with my family, there were a lot of interruptions. On the other hand, I'm always lying down, and no one believes that I'm actually in class.” (Ali)

“Not everyone's family is that understanding, of course. Some parents want their son or daughter to listen to their lessons in their own room, but not everyone even has a separate room. For example, I used to share a room with siblings who had their own live classes. Everyone is at home, and not everyone is an only child. Not every household has internet access.” (Eda)

Talking about the impact of family issues on the education process, Tuba expressed the following:

“Being at home brings varied obstacles with family members, both big and small. Negative events at home can affect you, but when you're at university in a different city, you're somewhat insulated from these issues. Without these concerns, it's easier to concentrate on your studies.”

Factors Affecting the Learning Process in Distance Education

Based on the research findings, participants explained the factors affecting the learning process in distance education from both individual and educational perspectives. The codes and themes related to these factors are presented in Table 4.

Participants indicated that several individual and educational elements influenced their learning experiences in distance education. Among the individual factors, the quality of the internet connection, the technical features of equipment such as phones, cameras, and microphones, and the availability of a personal computer, internet access, and a private room were the most emphasized. Sample statements on the subject are:

“Some people experienced internet disconnections; some of our friends had a lot of troubles with that. There are those who

Table 4.
Factors Affecting the Learning Process in Distance Education

Theme	Sub-theme	Codes
Influencing Factors	Individual	Internet connectivity and infrastructure quality
		Technical equipment quality
		Having a personal room and computer
		Family structure and characteristics
		Characteristics of the location
		Employment status
		Gender roles
	Educational	Characteristics of the field
		Course structure and features
		Features of assignments
		Instructor's knowledge level and attitude

have microphone complication, internet outages, or don't have a computer and have to operate their phones. Are they supposed to follow the lecture, the documents, or the lecturer? It's a disadvantage for friends who have to follow the lecture on their phones." (Serkan)

"There were times when the power went out and when my connection was lost. When my connection dropped, I lost my answers during the exam. I reconnected using my phone and retook the exam, but the fear, excitement, and process of readjusting were challenging." (Gözde)

Müge, who emphasized the importance of having a personal computer, stated:

"My advantage is that I have a lot of technological equipment. Some of my friends couldn't even take the exam because they didn't have any, so nothing was too hard for me."

Factors related to family structure, such as the number of siblings in the family and their ages, were mentioned by all participants as notable components affecting the learning process in distance education. The opinions of three participants on this topic are as follows:

"The internet connection affected whether I could attend class. My sibling and I used to attend class at the same time. Sometimes, when the internet connection failed, mine had to be benefited, and permission was granted since their needs were prioritized. We eventually had to buy an extra computer to avoid these conflicts." (Müge)

"Even siblings can have an impact, regardless of their age. For instance, my sibling was also receiving online education and studying at university. We would log in at the same time." (Zuhal)

"We know a family with five children, and all of them go to school. How is it possible for them to attend class? Even if the class times are different, don't parents ever have to answer the phone or deal with other matters?" (Eda)

Many participants noted that family traits, like the family's perspective on education or health status, also impact the learning process in distance education. One participant shared the following thoughts:

"While in class, it's possible for family members to forget about the lesson and come into the room. There is also a young child who occasionally enters. It has happened many times that while speaking on the microphone, interruptions occur from family members." (Gözde)

Participants also identified location attributes as factors impacting the learning process in distance education. Sample statements include:

"Internet outages are remarkable barriers; for example it happened during my exam. There were people living in villages, who didn't have internet or computers at home. I think it was more difficult for them, not just for us. The situation varies depending on the settlement, home environment, and location of the house..." (Elif)

"Even the sound of a chicken outside affects me. I hear or see them afterwards; for instance, I live in a village. Of course, the settlement affects it, whether it's rural or urban. The sound of cows, chickens, or roosters coming from outside can be distracting... Sometimes, I laugh to myself thinking that the rooster drowned out my voice." (Zuhal)

Batu, who noted that having a job affects the learning process in distance education, shared this perspective:

"I was working, so it obviously affected my experience. I always attended the classes at night as I could never join the synchronous ones; I would watch them later due to my work schedule."

Some participants who noted that gender roles influence the learning process in distance education shared the following statements:

"You always get up in the morning, make breakfast, and take care of things at home. I stay at home, but the family home and the student home are different. I know I've held a broom for five minutes and then been in class." (Gözde)

"We set up the computer in the back while cooking and cleaning. Young children would cry behind the door to come in. When their caregivers went out, I took care of them." (Elif)

"My entire distance education process was like this: get up in the morning, have breakfast, wash the dishes, and tidy the house. The lessons were taught live, but we could watch the replays in the evenings, which I really appreciated." (Zuhal)

"Inevitably, online education happens. It's often said, 'Let's handle this task, let's set the table'. Some people are not expected to do much. Some do, but the majority don't." (Tuba)

Related to education, some participants noted that the structure and features of the field, courses, and assignments impact the learning process in distance education. Besides, they emphasized that the knowledge level and attitude of the instructor also influence the learning experience. Elif shared thoughts on the course structure and instructor characteristics with the following words:

"In a numerical lesson, the teacher should give numerical examples, but the teacher just read from the book. Normally, the material should be written on the board, but instead, it was reflected from the book, which made it hard for us to understand."

Batu noted that the features of the field of study impact the learning process in distance education.

"For our department, distance education can be effective because we often use paper and pencil and attend theoretical courses. However, it's less effective for applied departments and courses that require practical application."

Batu also emphasized that the attitude of the instructors impacted the process as follows:

“In the first semester, they were more understanding. By the second semester, they started insisting that we attend and complete the assignments, becoming more harsh. Their understanding diminished.”

Impacts of Distance Education

According to the research findings, participants described the effects of distance education on both daily and educational life. The codes and themes related to these effects are presented in Table 5.

Participants defined the distance education process as an experience that caused changes in their daily and educational lives. In terms of their daily lives, all participants noted that family relationships were affected by the distance education process. While most participants reported that their relationships with their families were strengthened, one participant mentioned that family arguments became more frequent during the distance education process, leading them to prefer face-to-face education. Eda described the change in family relationships as follows:

“We spent a lot of time together. Although I had disagreements with my family before, I didn’t face many troubles during this period. It was productive; we were together all the time. I had my siblings read books, we listened to music, and engaged in numerous activities. Overall, it was productive for me in that respect.”

Some participants noted that the distance education process shifted their priorities. Merve commented on this as follows:

“If you have a face-to-face course, it’s a face-to-face course, but several things can happen in distance education. Since you have the chance to watch it later, you might end up postponing some things.”

Participants also mentioned changes in their friendship dynamics during distance education, leading to shifts in their socialization levels and circles. Çetin observed that socialization opportunities decreased, which might affect communication skills:

“For example, we’re supposed to give a presentation, but there’s no interaction, and we can’t take an active role or feel the excitement of face-to-face courses. There’s no communication with people... Sometimes even a five-minute chat can feel good and be desirable. Even having a conversation related to the course can be beneficial. In online education, you don’t have that opportunity... Over time, this lack of interaction really impacts people’s communication skills. You struggle to find the right words.”

Similarly, Müge described a decline in interpersonal interaction and escalated reluctance as follows:

“I can spend time alone without getting bored. My friends call me now, but I don’t want to go out; I prefer staying at home. Once you get used to comfort, you don’t want to be around many people.”

Tuba mentioned that the reduction in interpersonal interaction allowed more time for self-reflection and self-awareness, saying:

“I was able to be alone with myself and had the chance to reconnect with my self-awareness, which I had previously neglected. Online training helped me to focus on myself.”

Eda noted a rise in social media and technology addiction during the period of distance education.

“There has been a surge in social media addiction, with widespread constant usage. We were even taking an exam of a teacher who was constantly looking at the phone.”

Regarding the changes in their educational lives, most participants mentioned that distance education led to a lack of foundational knowledge and skills in their field. Çetin, one of the participants who highlighted deficiencies, especially at the application level, described the situation as follows:

“University life left most people hanging. They couldn’t gain experience, and some couldn’t even go to school for internship practices. It negatively affected their competence.”

Some participants noted that the homework-oriented nature of the courses and exams in the distance education process led to a change in the quality of the assignments, with a rise in theoretical tasks. Zuhaf expressed a weakness in their willingness to learn and participate in the course, stating:

“They’re very used to it, there is no studying, reading, or engaging in any activities. They no longer put in the effort to study, thinking they can somehow find the information online and still pass.”

Some participants observed more academic procrastination and a decline in effort and diligence. Çetin highlighted this matter with the following words:

“Education is expanding in terms of numbers, but the quality has dramatically declined. When people achieve something without putting in effort, they think, ‘I already have this, so why should I try?’”

Suggestions for the Development of Distance Education

Based on the research findings, participants highlighted aspects of distance education that need enrichment, particularly in the areas of exams and courses, and offered suggestions accordingly. The codes and themes related to these suggestions are presented in Table 6.

Participants offered their suggestions for improving exams and courses in the distance education process. Regarding exams, participants suggested implementing control mechanisms such as camera monitoring and student ID verification, along with appropriate sanctions, and enhancing precautions in exams. Sample statements on ensuring exam security are:

“The security should be upgraded beyond the standards serviced in exams like E-YDS, and measures should be taken to prevent injustices.” (Müge)

Theme	Sub-theme	Codes
Impacts	Daily life	Changes in family relationships
		Change in priorities
		Change in friendships
		Inadequate communication skills
		Decreased interpersonal interaction and increased reluctance
		Time for yourself
		Increased self-awareness
Education	Education	Social media and technology addiction
		Lack of foundational knowledge and skills
		Change in assignments
		Weakened willingness to learn and participate in class
		Excessive academic procrastination
		Reduced effort and diligence

Table 6.
Suggestions for the Development of Distance Education

Theme	Sub-theme	Codes
Suggestions	Exams	Monitoring and control mechanisms
		Creating questions suitable for the system
		Preparing detailed instructions
		Allowing sufficient time
	Lessons	Removing time restrictions
		Incorporating participation-oriented activities
		Providing free internet access
		Provision course materials
		Appeal of the system by engaging
		Enhancing the knowledge of instructors and students
		Expanding communication opportunities and feedback
		Raising awareness among families

“They could generate a system to upgrade security, such as having several questions and test times for each student. It’s essential to establish an engaging environment where we feel comfortable. Diverse activities should be incorporated, and resources like books and e-books should be made available.”
 (Zuhail)

Regarding question structures in exams, participants suggested using short question stems, interpretation-based questions, detailed instructions, and allowing sufficient time. Ali expressed:

“To prevent misuse, all lecturers should ask questions that are based on interpretation and designed to assess understanding of the subject.”

Merve noted the need for clear and detailed directives in line with distance education requirements:

“Some questions were very lengthy, which made them time-consuming to read. For instance, one teacher didn’t specify the number of questions, so we assumed there were 20, but there were actually 25. Exam information should be detailed so we know exactly what to expect.”

Regarding the aspects of courses that could be augmented, participants suggested removing time restrictions and incorporating practical, participation-oriented activities. Eda emphasized the necessity for free internet access for all students and the provision of relevant course materials:

“In order for distance education to be effective, students need access to materials. For instance, as a student of Turkish Language and Literature, when the instructor asks me to read certain books, I need to have access to those books.”

Zuhail suggested enhancing the appeal of the distance education system with engaging elements.

“They could make the distance education portal more interesting by incorporating games, brainteasers, and other activities...”

Suggestions for improving distance education include elevating the knowledge of instructors and students, expanding communication opportunities with instructors, enhancing orientation and guidance services, and raising awareness among students and families. Gözde expressed:

“Professors should be more knowledgeable about distance education tools and not just lecture and leave.”

When analyzing the research findings, it is evident that distance education holds various meanings for the participants. Internet connectivity, technical aspects, and lack of equipment are identified as both challenges and influential factors in distance education. While distance education presents individual and educational advantages, it also presents specific effects. Consequently, distance education is understood in a multidimensional way by participants, reflecting diverse experiences. Based on these findings, textual, structural, and composite definitions were created to capture the commonalities in participant experiences regarding distance education.

Common Meaning of Participant Experiences

Although participants acknowledged some positive aspects of distance education, their experiences were predominantly focused on difficulties and setbacks. Being unprepared for the sudden transition to distance education, infrastructure and hardware deficiencies, and inadequate communication highlight areas needing advancement. Participants’ perceptions and experiences are influenced by a range of elements, such as technological tools and internet access, residential and family conditions, their field of study, course and assignment structures, and instructor characteristics. The essence of the participants’ experiences reveals that university students encounter a dynamic and multifaceted distance education experience. Distance education presents both facilitating and challenging aspects, influenced by individual and environmental components, and affects students in several positive and negative ways. Participant experiences indicate that distance education has areas for advancement in the learning-teaching process and measurement and evaluation. Remarkable suggestions for advancement were also offered. The composite model of participants’ experiences related to distance education is illustrated in Figure 1.

Conclusion and Discussion

The result identified several individual advantages of distance education, including economic relief, comfort and confidence, a regular life, effective time management, and alleviated physical fatigue. Distance education offers a comfortable learning environment, a key factor distinguishing it from traditional face-to-face education (Harris et al., 2014; Yolcu, 2020). Moreover, distance education reduces transportation issues and associated expenses, providing economic benefits (Traxler, 2018; Umek et al., 2015). Educational advantages of distance education noted in the study include flexibility in time and space, the ability to revisit course materials, diminished absenteeism, boosted academic performance, stronger lecturer communication, and access to various programs. The flexibility of distance education and the option to review course materials are frequently highlighted as significant benefits in the literature (Altun Ekiz, 2020; Arat & Bakan, 2011; Bozkurt, 2020; Er Türküresin, 2020; Harris et al., 2014; Özdogan & Berkant, 2020; Yolcu, 2020). Furthermore, distance education contributes to the development of competencies in information and communication technologies (Jarvis, 2010; Manuel et al., 2021).

According to the research results, the challenging factors in distance education were categorized into infrastructure and connection obstacles, systemic errors and deficiencies, and complications related to computer-oriented systems. Studies have highlighted that students frequently encounter connection barriers during distance education (Can, 2020; Er Türküresin, 2020; Karatepe et al., 2020; Yolcu, 2020). Similarly, Gömleksiz and Pullu (2020) identified issues like disconnections, the inability to access archived materials, and inadequacies in audio and video systems. The research also revealed difficulties related to ineffective learning due to course structure and functioning, as well as a lack of experience with applied courses. Many studies have noted a decline in the efficiency and effectiveness of courses during distance education compared to face-to-face learning (Adnan & Anwar, 2020; Karatepe et al., 2020; Zan & Zan, 2020), and have indicated

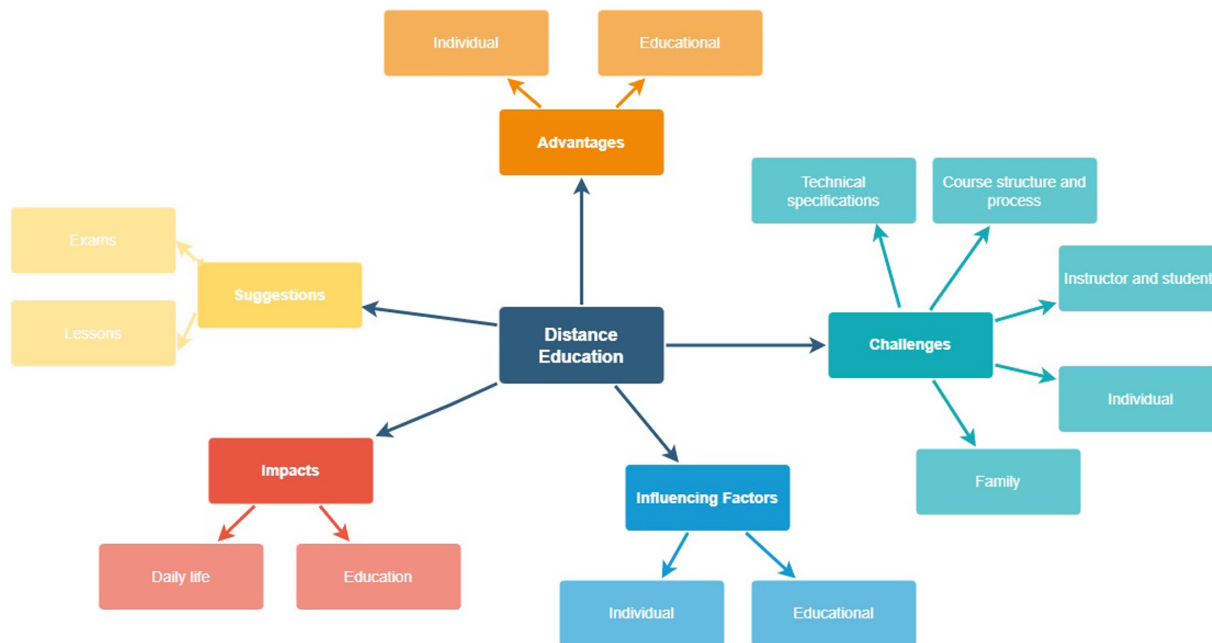


Figure 1. Composite Model of Distance Education Experiences.

that applied courses are particularly unsuitable for distance education formats (Altun Ekiz, 2020; Düzgün & Sulak, 2020). Lack of communication and interaction, an aspect related to instructor and student characteristics, is frequently highlighted in studies on distance education drawbacks (Adnan & Adwar, 2020; Altun Ekiz, 2020; Altwaijry et al., 2021; Lall & Singh, 2020; Musingafi et al., 2015; Yolcu, 2020). Besides, the absence of standardized legal frameworks for distance education in higher education results in varied and often ineffective practices across universities (Illarionova et al., 2021). Numerous studies also emphasize that distance education introduces infrastructure and technological equipment needs, which can exacerbate inequalities and diminish equal opportunities for disadvantaged students (Bozkurt, 2020; Bozkurt & Sharma, 2020; Demir & Özdaş, 2020; Zan & Zan, 2020). Research findings indicate that individual characteristics, such as lack of motivation and adaptation, are serious weaknesses in distance education. Lack of motivation is a well-documented issue in distance learning (Altwaijry, 2021; Karakuş et al., 2020). Additionally, the absence of mutual communication and interaction between students and instructors leads to weakened interest in lessons and heightened distraction (Demir & Özdaş, 2020; Karakuş et al., 2020). The research also revealed that certain family traits contribute to obstacles in the distance education process. Inadequate home conditions and the family's economic status can hinder students' active participation in lessons (Demir & Özdaş, 2020; Zan & Zan, 2020).

Other findings of the study reveal that the learning process in distance education is influenced by several individual and educational components. Key individual items include internet access, infrastructure and technical equipment, and having a personal room and computer. Continuous and high-quality internet access is crucial for shaping students' perceptions of distance education (Arık, 2021; Er Türküresin, 2020). Students using smartphones for internet access often face limitations, as many online resources are not fully accessible on mobile devices (Adnan & Adwar, 2020). Overall, reliable internet access, adequate computer resources, and robust technological infrastructure play significant roles in the effectiveness of the distance education process (Demir & Özdaş, 2020). Family structure, place of residence, employment status, and gender roles are other individual elements affecting learning in distance education. The socioeconomic status and cultural characteristics of families can profoundly impact children's education

(Işık & Bahat, 2021). Students from rural areas or disadvantaged families often face obstacles due to limited access to fast, reliable internet and technology (Daimary, 2020). Manuel et al. (2021) emphasized gender inequality and gender-based division of labor can also negatively impact students' performance, attendance, and motivation in distance education. Educational factors influencing the learning process in distance education include the features of the field, course, and assignments, as well as the knowledge level and attitude of the instructor. Murphy and Cifuentes (2001) highlighted the importance of balancing course structure with student-instructor interaction to promote student success. The perceived distance between students and their teachers can be lessened through higher interaction, engaging course content, and fostering learner autonomy (Moore & Kearsley, 2011).

The study concluded that distance education impacts both daily life and educational experiences. In daily life, distance education has led to changes in family relationships, priorities, and friendships. It has also been associated with problems such as lower communication skills, decreased interpersonal interaction, and a reluctance to dedicate time to oneself. Drawbacks like lack of a shared physical environment, loneliness, distractions, and communication barriers can negatively affect basic language skills (Elcil & Şahiner, 2014). In educational life, distance education has resulted in inadequacies in basic knowledge and skills, changes in assignment structures, decreased motivation to learn and attend classes, excessive academic procrastination, and reduced effort and diligence. Can (2020) states that many students, teachers, and instructors experience trouble in effectively utilizing information technologies and the internet for educational purposes. Some studies also indicate that students feel uncomfortable using their cameras and microphones during online courses (Bedenlier et al., 2021; Zan & Zan, 2020). Nieuwoudt (2020) found no significant difference in course success between attending synchronous lectures and watching recorded lectures. This finding may help explain the decrease in motivation and effort among students.

The research findings indicate that distance education has areas needing progress concerning exams and courses. Recommendations comprise maximizing supervision and control mechanisms for exams, aligning question structures and exam guidelines with the requirements of distance education, and providing adequate time

for completion. During the evaluation process, students prefer clear expectations and useful examples to guide their understanding and performance (Dennen et al., 2007; Kara & Can, 2019; Young, 2006). Can (2012) suggests that to evaluate student success in distance education effectively, security measures should be upgraded, and several types of questions that align with the course structure and assess high-level skills should be developed. Additionally, removing time limits for courses and implementing practices that encourage active participation are recommended for improving the distance education system. Some studies also note that students have expressed dissatisfaction with insufficient online discussion time (Risner & Kumar, 2016; Schroeder et al., 2016). Nevertheless, distance education fosters students' subjective involvement in their learning processes and promotes student-centered learning (Manuel et al., 2021). The study reveals that students favor engaging and motivating learning environments that facilitate practice (Holzweiss et al., 2014; Schroeder et al., 2016), discussion, and critical thinking (Kara & Can, 2019). It also concluded that enhancing the level of knowledge, communication opportunities, and feedback for both instructors and students is crucial, as is raising awareness among families. Many studies underscore the importance of students' desire for greater communication with instructors and advisors (Altwaijry et al., 2021; Cain et al., 2003; Kara & Can, 2019) and highlight the demand for quality feedback in distance education (Arık, 2021; Gaytan & McEwen, 2007; Harris et al., 2014; Pan & Shao, 2020). To boost the level of knowledge among instructors, students, and families, it is suggested to design more training courses for all stakeholders and to better integrate technology into the distance education process. This approach aims to improve the effective use of existing resources (Altwaijry et al., 2021).

Limitations of the Study and Recommendations

This study was conducted with university students from various faculties and departments at a university in Türkiye. To broaden the scope, future research could explore distance education experiences in multiple cities or countries and encompass a range of educational levels such as associate, undergraduate, or graduate students. While this study utilized semi-structured interviews for data collection, more in-depth and longitudinal research could be conducted through participant observations. A significant limitation of the study is the exclusion of instructors' perspectives, which are a crucial component of the distance education process. It is recommended that future studies incorporate input from all stakeholders involved in distance education. Moreover, this research focuses on distance education experiences from the urgent transition during the COVID-19 pandemic. Future studies could explore distance or hybrid education programs that are continuously implemented and examine asynchronous courses. Recommendations for practitioners include addressing the challenges encountered in the distance education process, ensuring equal infrastructure and technology access for all individuals, expanding the knowledge and competence of students, instructors, and families regarding distance education, and organizing an effective online learning environment.

Availability of Data and Materials: The data that support the findings of this study are available on request from the corresponding author.

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Informed Consent: Written informed consent was obtained from participants who participated in this study.

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References

- Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45–51. [CrossRef]
- Ally, M. (2019). Competency profile of the digital and online instructor in future education. *International Review of Research in Open and Distributed Learning*, 20(2), 302–318. [CrossRef]
- Almeida, O. C. S., Abbad, G., Meneses, P. P. M., & Zerbini, T. (2013). Evasão em cursos a distância: Fatores influenciadores [Dropout in distance education courses: influencing factors]. *Revista Brasileira de Orientação Profissional*, 14(1), 19–33.
- Altun Ekiz, M. (2020). Beden Eğitimi ve Spor Yüksekokulu öğrencilerinin karantina dönemindeki uzaktan eğitim ile ilgili görüşleri (nitel bir araştırma) [The views of Physical Education and Sports School students about distance education in the quarantine period (a qualitative research)]. *Journal of Sport and Recreation Research*, 2(Special Issue 1), 1–13.
- Altwaijry, N., Ibrahim, A., Binsuwaidan, R., Alnajjar, L. I., Alsouk, B. A., & Almutairi, R. (2021). Distance education during COVID-19 pandemic: A college of pharmacy experience. *Risk Management and Healthcare Policy*, 14, 2099–2110. [CrossRef]
- Angelaki, M. E., Karvounidis, T., & Douligeris, C. (2021). Pupils' perceptions and suggestions for the improvement of distance education in Greece. *International Journal of Education and Information Technologies*, 14, 205–213. [CrossRef]
- Arat, T., & Bakan, Ö. (2011). Uzaktan eğitim ve uygulamaları [Distance education and applications]. *Selcuk University Vocational School of Social Sciences Journal*, 14(1–2), 363–374.
- Arık, S. (2021). Distance education learning environments during COVID-19 pandemic from student perspectives: a study in Turkish higher education. *Journal of Pedagogical Research*, 5(2), 103–118. [CrossRef]
- Bedenlier, S., Wunder, I., Gläser-Zikuda, M., Kammerl, R., Kopp, B., Ziegler, A., & Händel, M. (2021). "Generation invisible". Higher education students. *International Journal of Educational Research Open*, 2, 100068. [CrossRef]
- Berry, S. (2019). Faculty perspectives on online learning: The instructor's role in creating community. *Online Learning*, 23(4), 181–191. [CrossRef]
- Bezuidenhout, A. (2018). Analysing the importance-competence gap of distance educators with the increased utilisation of online learning strategies in a developing world context. *International Review of Research in Open and Distributed Learning*, 19(3), 263–281. [CrossRef]
- Bozkurt, A. (2020). Koronavirüs (COVID-19) pandemisi sırasında ilköğretim öğrencilerinin uzaktan eğitime yönelik imge ve algıları: Bir metafor analizi [Images and perceptions of primary school students towards distance education during the coronavirus (COVID-19) pandemic: A metaphor analysis]. *Uşak University Journal of Educational Research*, 6(2), 1–23. [CrossRef]
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to coronavirus pandemic. *Asian Journal of Distance Education*, 15(1), i–vi.
- Cai, R., & Wang, Q. (2020). A six-step online teaching method based on protocol-guided learning during the COVID-19 epidemic: A case study of the first middle school teaching practice in Changyuan City, Henan Province, China. *Insight Educational Front*, 5(1), 469–480. [CrossRef]
- Cain, D. L., Marrara, C., Pitre, P. E., & Armour, S. (2003). Support services that matter: An exploration of the experiences and needs of graduate students in a distance learning environment. *International Journal of E-Learning and Distance Education*, 18(1), 42–56.
- Cam, S. S., Yazar, G., Toraman, C., & Erdamar, G. K. (2016). The effects of gender on the attitudes towards the computer assisted instruction: A meta-analysis. *Journal of Education and Training Studies*, 4(5), 250–261. [CrossRef]
- Can, E. (2012). Açık ve uzaktan eğitimde akreditasyon yeterlilik düzeyinin incelenmesi [Review of the qualification level of accreditation in open and distance education] [Doctoral Dissertation]. Istanbul: Marmara University Institute of Educational Sciences.
- Can, E. (2020). Coronavirüs (COVID-19) pandemisi ve pedagojik yansımaları: Türkiye'de açık ve uzaktan eğitim uygulamaları [Coronavirus (COVID-19) pandemic and pedagogical reflections: Open and distance education practices in Turkey]. *Journal of Open Education Applications and Research*, 6(2), 11–53.

- Carlsen, A., Holmberg, C., Neghina, C., & Owusu-Boampong, A. (2016). Closing the gap: Opportunity for distance education to benefit adult learners in higher education. United Nations Educational, Scientific and Cultural Organization. <https://uil.unesco.org/adult-education/distance-education/closing-gap-opportunities-distance-education-benefit-adult>
- Carrington, V., & Robinson, M. (2009). Digital literacies: Social learning and classroom practices. *UKLA/SAGE*.
- Crawford, R., & Jenkins, L. (2017). Blended learning and team teaching: Adapting pedagogy in response to the changing digital tertiary environment. *Australasian Journal of Educational Technology*, 33(2), 51–72. [CrossRef]
- Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.
- Creswell, J. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed). Sage.
- Crisp, B. R. (2018). From distance to online education: Two decades of remaining responsive by one university social work programme. *Social Work Education*, 37(6), 718–730. [CrossRef]
- Daimary, P. (2020). E-learning in schools during COVID-19 pandemic in rural areas. *International Journal of Management*, 11(10), 659–664.
- Demir, F., & Özdaş, F. (2020). COVID-19 sürecinde uzaktan eğitime ilişkin öğretmen görüşlerinin incelenmesi [Examining teachers' opinions related to distance education in the COVID-19 process]. *Milli Eğitim Dergisi*, 49(1), 273–292. [CrossRef]
- Dennen, V. P., Aubteen Darabi, A. A., & Smith, L. J. (2007). Instructor-learner interaction in online courses: The relative perceived importance of particular instructor actions on performance and satisfaction. *Distance Education*, 28(1), 65–79. [CrossRef]
- Düzgün, S., & Sulak, S. E. (2020). Öğretmen adaylarının COVID-19 pandemisi sürecinde uzaktan eğitim uygulamalarına ilişkin görüşleri [Pre-service teachers' views on distance education practices during the COVID-19 pandemic process]. *Milli Eğitim Dergisi*, 49(1), 619–633. [CrossRef]
- Ballová Mikušková, E., & Verešova, M. (2020). Distance education during COVID-19: The perspective of Slovak teachers. *Problems of Education in the 21st Century*, 78(6), 884–906. [CrossRef]
- Elcil, Ş., & Şahiner, D. (2014). Uzaktan eğitimde iletişimsel engeller [Communicative barriers in distance education]. *Journal of Social and Human Sciences*, 6(1), 21–33.
- Er Türküresin, H. (2020). COVID-19 pandemi döneminde yürütülen uzaktan eğitim uygulamalarının öğretmen adaylarının görüşleri bağlamında incelenmesi [Examination of distance education practices conducted during the COVID-19 pandemic regarding the views of preservice teachers]. *Milli Eğitim Dergisi*, 49(1), 597–618. [CrossRef]
- Fidalgo, P., Thormann, J., Kulyk, O., & Lencastre, J. A. (2020). Students' perceptions on distance education: A multinational study. *International Journal of Educational Technology in Higher Education*, 17(1), 1–18. [CrossRef]
- Gaytan, J., & McEwen, B. C. (2007). Effective online instructional and assessment strategies. *American Journal of Distance Education*, 21(3), 117–132. [CrossRef]
- Gömlüksiz, M. N., & Pullu, E. K. (2020). Meslek yüksekokulu öğrencilerinin uzaktan eğitime ilişkin görüşleri [Vocational college's students' perceptions of distance education]. *Turkish Studies*, 15(6), 477–502. [CrossRef]
- Harris, P., Hardy, S., Agunloye, O., & Hearrington, D. (2014). Perceptions of online versus face-to-face learning of educational leadership graduate students. *European Journal of Educational Sciences*, 01(4), 30–37. [CrossRef]
- Hofmann, D. W. (2002). Internet-based distance learning in higher education. *Tech Directions*, 62(1), 28–32.
- Holzweiss, P. C., Joyner, S. A., Fuller, M. B., Henderson, S., & Young, R. (2014). Online graduate students' perceptions of best learning experiences. *Distance Education*, 35(3), 311–323. [CrossRef]
- Howland, J. L., & Moore, J. L. (2002). Student perceptions as distance learners in Internet-based courses. *Distance Education*, 23(2), 183–195. [CrossRef]
- Illarionova, L. P., Karzhanova, N. V., Ishmuradova, A. M., Nazarenko, S. V., Korzhuev, A. V., & Ryzanovya, E. L. (2021). Student attitude to distance education: Pros and cons. *Cypriot Journal of Educational Sciences*, 16(3), 1319–1327. [CrossRef]
- İşık, M., & Bahat, İ. (2021). Teknoloji bağlamında eğitimde fırsat eşitsizliği: Eğitime erişime yönelik sorunlar ve çözüm önerileri [Inequality of opportunity in the context of technology]. *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 7(2), 498–517. [CrossRef]
- Jarvis, P. (2010). *Adult education and lifelong learning: Theory and practice* (4th ed). Routledge.
- Jin, B., Kim, J., & Baumgartner, L. M. (2019). Informal learning of older adults in using mobile devices: A review of the literature. *Adult Education Quarterly*, 69(2), 120–141. [CrossRef]
- Johnson, J. E., & Barr, N. B. (2021). Moving hands-on mechanical engineering experiences online: Course redesigns and student perspectives. *Online Learning*, 25(1), 209–219. [CrossRef]
- Johnston, J. P. (2020). Creating better definitions of distance education. *Online Journal of Distance Learning Administration*, 23(2).
- Kara, M., & Can, G. (2019). Master's students' perceptions and expectations of good tutors and advisors in distance education. *International Review of Research in Open and Distributed Learning*, 20(2), 162–179. [CrossRef]
- Karakuş, N., Ucuzsatar, N., Karacaoğlu, M. Ö., Esendemir, N., & Bayraktar, D. (2020). Türkçe öğretmeni adaylarının uzaktan eğitime yönelik görüşleri [Turkish teacher candidates' views on distance education]. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 19, 220–241. [CrossRef]
- Karatepe, F., Küçükgençay, N., & Peker, B. (2020). Öğretmen adayları senkron uzaktan eğitime nasıl bakıyor? Bir anket çalışması [What are the perspectives of teacher candidates on synchronous distance education? A survey study]. *Journal of Social and Humanities Sciences Research*, 7(53), 1262–1274.
- Kentnor, H. E. (2015). Distance education and the evolution of online learning in the United States. *Curric Teach Dialogue*, 17(2), 21–30.
- Khan, M. A., Kamal, T., Illiyan, A., & Asif, M. (2021). School students' perception and challenges towards online classes during COVID-19 pandemic in india: An econometric analysis. *Sustainability*, 13(9), 4786. [CrossRef]
- Kumar Basak, S., Wotto, M., & Bélanger, P. (2018). E-learning, m-learning and d-learning: Conceptual definition and comparative analysis. *E-Learning and Digital Media*, 15(4), 191–216. [CrossRef]
- Lall, S., & Singh, N. (2020). COVID-19: Unmasking the new face of education. *International Journal of Research in Pharmaceutical Sciences*, 11(SPL1), 48–53. [CrossRef]
- Lee, S. J., & Huang, K. (2018). Online interactions and social presence in online learning. *Journal of Interactive Learning Research*, 29(1), 113–128.
- Manuel, A. A. M., Buque, D., & Quive, R. (2021). Students' perceptions on distance education: A case study in Mozambique. *Problems of Education in the 21st Century*, 79(2), 229–240. [CrossRef]
- Martin, F., Stamper, B., & Flowers, C. (2020). Examining student perception of readiness for online learning: Importance and confidence. *Online Learning*, 24(2), 38–58. [CrossRef]
- McClannon, T. W., Cheney, A. W., Bolt, L. L., & Terry, K. P. (2018). Predicting sense of presence and sense of community in immersive online learning environments. *Online Learning*, 22(4), 141–159. [CrossRef]
- Melton, R. F. (2002). *Planning and developing open and distance learning: A quality assurance approach*. Routledge.
- Merriam, S. B. (2009). *Qualitative research. A guide to design and implementation*. John Wiley-Sons.
- Moore, M. G. (1993). Theory of transactional distance. Theoretical principles of distance education. *American Journal of Distance Education*, 1(1), 22–38. [CrossRef]
- Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning* (3rd ed). Wadsworth Publishing.
- Moustakas, C. (1994). *Phenomenological research methods*. Sage.
- Murphy, K. L., & Cifuentes, L. (2001). Using Web tools, collaborating, and learning online. *Distance Education*, 22(2), 285–305. [CrossRef]
- Musingafi, M., Mapuranga, B., Chizanza, K., & Zebron, S. (2015). Challenges for open and distance learning (ODL) students: Experiences from students of the Zimbabwe Open University. *Journal of Education and Practice*, 6(18), 59–66.
- Nieuwoudt, J. E. (2020). Investigating synchronous and asynchronous class attendance as predictors of academic success in online education. *Australasian Journal of Educational Technology*, 36(3), 15–25. [CrossRef]
- Özdoğan, A. Ç., & Berkant, H. G. (2020). COVID-19 pandemi dönemindeki uzaktan eğitime ilişkin paydaş görüşlerinin incelenmesi [The examination of stakeholders' opinions on distance education during the COVID-19 epidemic]. *Milli Eğitim Dergisi*, 49(1), 13–43. [CrossRef]
- Ozfidan, B., Ismail, H., & Fayez, O. (2021). Student perspectives of online teaching and learning during the COVID-19 pandemic. *Online Learning*, 25(4), 461–485. [CrossRef]
- Pan, X., & Shao, H. (2020). Teacher online feedback and learning motivation: Learning engagement as a mediator. *Social Behavior and Personality: An International Journal*, 48(6), 1–10. [CrossRef]

- Radovan, M. (2019). Should I stay, or should I go? Revisiting student retention models in distance education. *Turkish Online Journal of Distance Education*, 20(3), 29–40. [\[CrossRef\]](#)
- Risner, M., & Kumar, S. (2016). Graduate student perceptions of a globally networked course. *Journal of Applied Research in Higher Education*, 8(3), 287–301. [\[CrossRef\]](#)
- Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. *International Journal of Research in English Education*, 4(1), 80–88. [\[CrossRef\]](#)
- Muljana, P. S., & Luo, T. (2019). Factors contributing to student retention in online learning and recommended strategies for improvement: A systematic literature review. *Journal of Information Technology Education: Research*, 18, 19–57. [\[CrossRef\]](#)
- Sarı, T., & Nayır, F. (2020). Challenges in distance education during the (COVID-19) pandemic period. *Qualitative Research in Education*, 9(3), 328–360. [\[CrossRef\]](#)
- Schrenk, N., Alves, K., Schrenk, B., & Van Dam, D. (2021). Reflecting on best practices for online learning in a post-COVID-19 world. *Online Learning*, 25(4), 486–504. [\[CrossRef\]](#)
- Schroeder, S., Baker, M., Terras, K., Mahar, P., & Chiasson, K. (2016). Desired and experienced levels of connectivity to an asynchronous, online, distance degree program. *Online Learning*, 20(3), 244–263. [\[CrossRef\]](#)
- Shachar, M., & Neumann, Y. (2003). Differences between traditional and distance education academic performances: A meta-analytic approach. *International Review of Research in Open and Distributed Learning*, 4(2). [\[CrossRef\]](#)
- Shohel, M. M. C. (2012). Open and distance learning for teachers' professional development: The English in Action (EIA) Model for the Global South. In J. L. Moore & A. Benson (Eds.). *International perspectives of distance learning in higher education* (pp. 93–108). IntechOpen. [\[CrossRef\]](#)
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7(1), 59–70. [\[CrossRef\]](#)
- Traxler, J. (2018). Distance learning-predictions and possibilities. *Education Sciences*, 8(1), 35. [\[CrossRef\]](#)
- Turk, M., Müftüoğlu, A. C., & Toraman, S. (2021). Teaching presence in online courses: Similar perceptions but different experiences from multiple instructor perspectives. *Online Learning*, 25(4), 156–177. [\[CrossRef\]](#)
- Umek, L., Keržič, D., Aristovnik, A., & Tomažević, N. (2015). Analysis of selected aspects of students' performance and satisfaction in a Moodle-based e-learning system environment. *Eurasia Journal of Mathematics, Science and Technology Education*, 11(6), 1495–1505. [\[CrossRef\]](#)
- Valentine, D. (2002). Distance learning: Promises, problems, and possibilities. *Online Journal of Distance Learning Administration*, 5(3), 1–11.
- Yolcu, H. H. (2020). Koronavirüs (COVID-19) pandemi sürecinde sınıf öğretmenleri adaylarının uzaktan eğitim deneyimleri [Preservice elementary teachers' distance education experiences at the time of coronavirus (COVID-19) pandemic]. *Journal of Open Education Applications and Research*, 6(4), 237–250.
- Young, S. (2006). Student views of effective online teaching in higher education. *American Journal of Distance Education*, 20(2), 65–77. [\[CrossRef\]](#)
- Zan, N., & Zan, B. U. (2020). Koronavirüs ile acil durumda eğitim: Türkiye'nin farklı bölgelerinden uzaktan eğitim sistemine dahil olan Edebiyat Fakültesi öğrencilerine genel bakış [Education in emergency at coronavirus: Overview of Faculty of Letters students included to distance education system from different regions of Turkey]. *Turkish Studies*, 15(4), 1367–1394. [\[CrossRef\]](#)