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Online Learning Experiences of Graduate Students in Türkiye: Could This Be the Footsteps of a Reform?

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With the recent Covid-19 pandemic, the way of teaching has rapidly turned into online learning environments. This situation has brought along various difficulties in the implementation of online teaching. From this point of view, this research focuses on the experiences of graduate students in the online teaching process and the multifaceted effects of this process on them. The research is a case study examining the opinions of 16 graduate students from various state and foundation universities in Türkiye. The maximum diversity sampling method, one of the purposeful sampling methods, was taken as a criterion in the determination of the participants. The data of the study were obtained with a semi-structured interview form developed by the researchers. Thematic analysis technique was used in the analysis of the obtained data. Research results show that online education facilitates access to education, develops students' self-discipline and awareness of taking responsibility; however, it has disadvantages in terms of social and psychological aspects. In addition, it has been concluded that online teaching is not yet ready to be considered as a stand-alone teaching delivery model, and it is more appropriate to use it as an alternative model to traditional face-to-face education. It is thought that the results obtained within the scope of the research will contribute to the improvement and development of online learning experiences of graduate students, as well as being a guide to higher education stakeholders and policymakers.

Introduction

The Covid-19 virus, which emerged in November 2019, was declared a pandemic by the World Health Organization (WHO) in March 2020 (WHO, 2020a). This pandemic process has had profound consequences on diverse social, economic, and cultural life globally (Haleem, Javaid, Vaishya, & Deshmukh, 2020; Üstün & Özçiftçi, 2020). The educational dimension has also been affected by the prevention and temporary closure of face-to-face

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classes due to epidemic measures called "social distance" in educational institutions (Cheema, 2020; Hargreaves & Fullan, 2020; Harris, 2020; Murphy, 2020; Weeden & Cornwell, 2020; Zhao, 2020). UNESCO (2020a) states that due to this epidemic, approximately 1.6 billion students who continue their education worldwide are away from their schools. However, in many countries, educational institutions have tried to ensure the continuity of the learning and teaching process remotely or online as much as they can (Aktan, 2021; Amemado, 2020; Harris, 2020; Murphy, 2020; UNESCO, 2020b). For this reason, higher education institutions have chosen to spread open and/or online education infrastructures that are limited to certain fields throughout the programs or to establish a new online education infrastructure (Çalıkoğlu & Gümüş, 2020). Strielkowski (2020) states that the transition to 4th generation universities, which can be called "distant and digital universities" today, has begun. This new type of university allows lectures to be published on platforms such as Blackboard, Google Meet, Microsoft Teams, Zoom, etc. (Sá & Serpa, 2020; Strielkowski & Wang, 2020).

The change in the way teaching is presented in the Covid-19 process has brought along some difficulties and problems (Beaunoyer, Dupéré, Guitton, 2020; Cheema, 2020; Drokina, 2020; Sá & Serpa, 2020; Talidong & Toquero, 2020). Although online teaching was used in many higher education institutions in different parts of the world during the pre-epidemic period, it gained global prevalence with the epidemic period (Donavant, 2009; Ho, 2020). Accordingly, there are different views on the effectiveness of online teaching (Yuan & Powell, 2013; Zhao, Lei, Yan, Lai, & Tan, 2005). However, given that this situation in the Covid-19 process is "urgent online teaching", it is quite likely that these problems will diversify (Hodges, Moore, Lockee, Trust, & Bond, 2020; Lau, Yang, & Dasgupta, 2020; Perrotta, 2020). Studies have shown that higher education students deal with various negative outcomes such as reluctance to use the online blended learning approach (Baloran, 2020), lack of digital competence (Bhaumik & Priyadarshini, 2020; Chandra et al., 2020; Katz et al., 2021; Sahin & Shelley, 2008), high workload (Aristovnik, Keržič, Ravšelj, Tomaževič, & Umek, 2020), difficulty in managing uncertainty (Kee, 2021), and internet access (Özyürek, Bedge, Yavuz, & Özkan, 2016).

Recent studies state that having digital devices and internet access necessary for online learning is an important problem for students, even in wealthy countries such as the United States and England (Harris & Jones, 2020; OECD, 2020). Therefore, it is necessary to approach this issue with caution, considering that not every individual has the same technological opportunities, and the digital divide may differ significantly, especially based on the regional and socio-economic situation (Harris, 2020; Savaş, 2021). Otherwise, it will mean the normalization of inequalities in access to education (Anderson, 2020; Farhadi, 2019). According to Aristovnik et al. (2020), this situation is much worse in less developed regions and countries of Africa and Asia. Therefore, it is very important to strengthen the education infrastructure in these regions to prevent inequalities at the digital, social, economic, and gender levels. On the other hand, it can be stated that online learning contains a different kind of liberation. The flexibility of online learning can provide wider access for individuals unable to attend traditional full-time face-to-face school due to personal or financial circumstances. In addition, hybrid or mixed methods in higher education institutions can help improve the quality of teaching by moving the content of teaching online or by focusing on active learning in face-to-face teaching (Bowen, 2012). Online learning can also help reduce tuition fees that make higher education inaccessible to many, especially in today's capitalist economy (Murphy, 2020).

Since the emergence of the pandemic, it has been known that increasing anxiety and sudden

changes in the lives of individuals cause various psychological and emotional effects (Carver, 2020; Kee, 2021; Roy et al., 2020; United Nations, 2020; WHO, 2020b). This is especially evident in higher education students who have a more dynamic social life. While students are limited in their social lives (Chang & Satako, 2020) during the pandemic, on the other hand, they have had to switch from face-to-face teaching to online teaching (Talidong & Toquero, 2020). This situation can negatively affect students' learning levels with increased stress unless they can adapt to this new situation (Kee, 2021). All these show that there are various barriers to providing online learning (Aktan, 2021; Alvarez, 2020; Drokina, 2020; Taylor, 2020; Woolley, Sattiraju, & Moritz, 2020). However, facing the novelty, fear, and uncertainty caused by the pandemic can be considered as the starting point of being successful in this (Tesar, 2020).

The challenging conditions created by the pandemic process can be an important opportunity for the development, implementation, and dissemination of digital technologies by restructuring higher education institutions (Azorin, 2020; Lederman, 2020; Sá & Serpa, 2020; UNESCO, 2020b; Zhao, 2020). Moreover, online learning can be an alternative or support to face-to-face education, as well as becoming an important component of face-to-face education (Yamamoto & Altun, 2020). At this point, it is necessary to use the effects of this crisis in line with the development (e.g., the spread of alternative assessment-evaluation models, and the development of instructors' technology use skills) (Al-Shalout et al., 2021; Harris, 2020; Lau et al., 2020). As a result, online learning, which has become widespread with the Covid-19 process, can be considered as an achievement on the way to the new normal rather than an emergency response (Murphy, 2020; Samoilovich, 2020; Sener, 2010). Therefore, higher education institutions need to carry out all kinds of change plans regarding their teaching activities with the motivation of supporting learning and responding to the ever-varying student needs based on the current scientific knowledge on the subject (Çalıkoğlu & Gümüş, 2020; Deniz, 2022; Netolicky, 2020). On the other hand, the number of studies examining the online learning experiences of graduate students in depth during this pandemic is very limited (Kee, 2021). However, the experiences of postgraduate students' opinions are important both in terms of evaluating the current process regarding the online learning process and determining the problems and deficiencies experienced. From this point of view, this research aimed to address the experiences of graduate students holistically during the Covid-19 epidemic in Türkiye. It is foreseen that the research results can provide insight to the stakeholders and policymakers in higher education to the point of improving the experiences of graduate students.

What Happened in Turkish Higher Education during the Covid-19 process?

In Türkiye, schools were closed for three weeks as of March 16, 2020 (CHE, 2020a). Due to the rapid increase in the number of cases, the Council of Higher Education [CHE] (2020b) decided on 18 March 2020 to continue the theoretical courses given in higher education institutions online. On March 23, 2020, the online teaching process in universities started with the opportunity and infrastructure of online learning (CHE, 2020c). On the same date, the preparations within the scope of the "CHE Courses Project" were completed, and the digital course contents produced by universities were made available to students of 111 universities on the web interface called CHE Courses Platform (Higher Education Institutions Courses) (CHE, 2020d). On March 26, 2020, CHE (2020e) decided to switch to the only online teaching method. Since this date, universities have sought to continue all courses with this method. With the new decision taken by CHE on April 1, 2020, students at all education levels are allowed to freeze their registrations in the spring semester of the 2019-2020

academic year if they request it (CHE, 2020f). In the 2020-2021 academic year, CHE (2021) decided that 40% of the courses or any course could be done online. Thus, blended (hybrid) teaching activities were started in higher education institutions.

Although the experience of higher education institutions' online teaching in Türkiye is not very old, there are distance education research and application centers in many universities today (CHE, 2020b). Although limited, distance or online education programs are also implemented in these universities (CHE, 2020a). In universities that do not have any infrastructure in this regard, the courses are left entirely to the responsibility of the instructors. Instructors have generally made an effort to continue their courses through various digital platforms (especially Zoom and Microsoft Teams). On the other hand, the Ministry of National Education in Türkiye, through its various digital platforms and television broadcasts (EBA), has adapted to online education more quickly during the pandemic process. However, during the pandemic process, problems such as the adequacy of teaching staff, digital tools, and technical infrastructure in higher education institutions have come to the fore (Karadağ & Yücel, 2020). CHE allows some of the courses and course contents in the formal program to be carried out with the online teaching method, with various legislative sources (CHE, 2014). At this point, it can be stated that higher education institutions in Türkiye are not sufficiently prepared for the online learning process and cannot adapt to this process quickly, despite the relevant legislation.

The Covid-19 pandemic process has made it a necessity for higher education institutions to invest in this field to minimize the loss of learning to learn and actively use online teaching for students and lecturers (Adnan & Adwar, 2020; Crawford et al., 2020; Toquero, 2021; Yamamoto & Altun, 2020). It is thought that after this epidemic, online education is likely to turn into one of the basic components of higher education, rather than a secondary alternative or a mission to contribute to face-to-face education (Yamamoto & Altun, 2020). From this perspective, more flexible and innovative digital teaching methods will presumably develop in the near future (Crawford et al., 2020; Karadağ & Yücel, 2020). In light of these developments and the transformation in higher education, it is considered extremely important to strengthen the infrastructure of the online education system in Türkiye, to ensure equal opportunities among students in accessing this education, and to develop a quality curriculum suitable for online learning (Can, 2020). In this context, the current research aims to contribute to revealing the current situation and expectations in line with the opinions of graduate students regarding online teaching in Türkiye during the Covid-19 process. In this context, the research questions were formed as follows:

(1) How is the readiness of graduate students for online learning?
(2) How are the contributions of the online teaching process according to the graduate students?
(3) What are the problems that graduate students experience in the online teaching process?
(4) What are the suggestions of graduate students regarding the online teaching process?

Method

Research Design

This research is a case study focusing on the experiences of 16 graduate students in various state and foundation universities in Türkiye regarding the online learning process. The

case study, which is thought to reflect the nature of the research in the most accurate way, is an ideal research tool for in-depth examination and analysis of a limited phenomenon, situation, or system with questions of how and why, and to obtain the rich information needed (Merriam, 2007; Merriam & Tisdell, 2016). In this context, the research is limited to the online learning experiences of graduate students who are still attending courses or writing their theses and dissertations. The study aims to present the readiness in this process, the contributions of the process, the problems they experience, and the solutions to these problems.

Research Context

This research was carried out with students who continue their graduate education at universities in Istanbul, Ankara, and Bursa in Türkiye, in the 2021-2022 academic year. Various factors were effective in the selection of these cities and the universities located in these cities. The first is that these three cities where the research was conducted have a cosmopolitan socio-cultural structure that receives intense immigration within the country. Accordingly, the participants of the study have diverse backgrounds and experiences, although they continue their graduate education in the specified cities. Therefore, this situation provides the opportunity to reach a more comprehensive conclusion about the current research topic. Secondly, universities located in these provinces constitute approximately 38% of the total number of universities in Türkiye. In addition, the fact that a significant part of the universities where the participants are enrolled in the research are research universities and the variety of programs for graduate education is relatively high reinforces this situation.

The Role of Researchers

This research was designed with the motivation to understand how graduate students are affected by the online education process. According to Merriam (2009), it functions as a tool to understand the advantages and disadvantages of the online learning experience for graduate students because, in qualitative research, the researcher herself/himself is a measurement tool. In this context, the researchers conducted interviews with the interview form they created in accordance with literature reviews, pilot interviews with individuals who had experienced the process, and expert opinions. It is thought that they represent and interpret the data obtained from these interviews more strongly as individuals who have also experienced the same experience.

Participants

In the determination of the participants of the research, the maximum variation sampling, which is one of the purposive sampling methods, was used. The maximum variation sampling was preferred so that the maximum diversity of the participants could be ensured and thus, the possibility of reflecting different perspectives of the obtained data could be increased (Creswell, 2013). In this context, the study group of the research consists of 16 students who continue their graduate education at various universities in the 2021-2022 academic year. Although some of the current participants were involved in the thesis/dissertation process when the research data were collected, they still had had experiences with the online education process carried out during the Covid-19 pandemic. Participants were coded with P1…P16 to ensure the anonymity of the participants. Demographic information of the participants is given in Table 1.

Table 1. Demographic Information for Participants

P	UT	Institute	EL	Program	Period	Gender	Age	MS
P1	State	Social Sciences	Master	Public Law	Thesis	Female	25	Single
P2	State	Educational Sciences	Doctorate	Educational Administ.	Thesis	Female	42	Married
P3	State	Science	Doctorate	Civil Engineering	Course	Male	35	Married
P4	State	Science	Doctorate	Electronic Computer Education	Thesis	Male	40	Single
P5	State	Science	Doctorate	Computer Engineering	Thesis	Female	33	Single
P6	State	Science	Doctorate	Civil Engineering	Course	Male	32	Married
P7	State	Science	Doctorate	Civil Engineering	Course	Male	35	Married
P8	Foundation	Graduate Programs	Master	Migration Studies	Thesis	Female	27	Single
P9	State	Educational Sciences	Master	Curriculum and Instruction	Thesis	Female	29	Single
P10	State	Educational Sciences	Master	Educational Administ.	Thesis	Female	35	Single
P11	Foundation	Social Sciences	Doctorate	Politics and International Relations	Course	Female	29	Married
P12	State	Social Sciences	Master	Economics	Thesis	Female	24	Single
P13	Foundation	Graduate Education	Master	Private Law	Course	Male	28	Married
P14	State	Health Sciences	Doctorate	Histology Embryology	Course	Female	30	Single
P15	State	Social Sciences	Master	Curriculum and Instruction	Course	Male	28	Married
P16	State	Social Sciences	Master	Turkish Education	Course	Male	27	Married

P: Participants EL: Education Level
UT: University Type MS: Marital Status

As seen in Table 1, the research was conducted with graduate students of different genders, ages, education levels, and education programs in order to ensure maximum diversity. Attention was paid to the fact that there was an equal distribution in the graduate and doctorate levels and gender of the participants in the research. On the other hand, the ages of the participants vary between 27 and 42, and the course/thesis periods and state/foundation university types differ.

Data Collection Tool

In qualitative research, the interview technique is the primary data collection strategy, and obtaining good data with interviews depends on well-chosen open-ended questions (Merriam & Tisdell, 2016). In this context, a semi-structured interview form was developed for data collection in the research. In the development process of the form, related literature (e.g., Alvarez, 2020; Bhaumik & Priyadarshini, 2020; Crawford et al., 2020; Donitsa-Schmit & Ramot, 2020; Drokina, 2020; Katz, Jordan, & Ogyanova, 2021; Kee, 2021; Toquero,

2021); Zawacki-Richter, 2021; Zhou et al., 2020) was scanned, and a draft interview form was created in order to conduct preliminary interviews with graduate students in line with the literature. The draft interview form was restructured with the feedback received after the pilot interview with three graduate students. The interview form, which was shaped by the practice in the field, was given its final form by taking the opinions of five experts working in higher education.

In its final form, the interview form consisted of two parts. In the first part, questions about the personal information of the participant were included, while in the second part, questions about the online learning experiences of graduate students during the Covid-19 process were included. In line with the pilot practices in the field and expert opinions, the second part consists of questions classified under the themes of (i) Access/Infrastructure/Readiness, (ii) Applicability, (iii) Problems/Challenges Encountered, and (iv) Suggestions. Detailed information on the subject was obtained by asking questions at the end in cases that were not understood during the interview or in order to further elaborate the views expressed.

Data Collection

The data of the research were collected from students who continued their graduate education with online learning in the 2021-2022 academic year. The data collection process was carried out within a certain plan. This planning is as follows;

- The students to be interviewed were informed about the content of the research, and the interview method and time for the interview were determined.
- Interviews were conducted face-to-face or through various methods such as internet programs (Zoom, Google meet, etc.), and audio/video recordings were taken during the interview with the permission of the participants. Thus, data loss was tried to be minimized.
- At the end of the interview, the participants were asked whether they wanted information about the results of the research, and it was stated that they would be informed about the subject by obtaining the contact information of the participants.

In this context, the interviews with the participants lasted an average of 45 minutes. The audio data obtained from the interviews were decoded, arranged, and converted into text by the researchers.

Data Analysis

The data obtained from this research were analyzed by the thematic data analysis method. In the research, in which the thematic analysis method is taken as a criterion, the researcher determines the dominant themes for the basic questions asked about the related problem (Braun & Clarke, 2006). Although the method of determining the themes is inductive in some cases, the themes were determined with the deductive method in this study. Four themes were determined in line with the relevant literature and pilot interviews, and data were collected under these determined themes. These themes are (i) Access/Infrastructure/Readiness, (ii) Applicability, (iii) Issues/Challenges Encountered, and (iv) Suggestions. In the thematic data analysis method, the themes can be changed or differentiated according to the content of the data collected under the themes and the situations in which the patterns are concentrated. This is one of the benefits of the thematic data analysis method (Braun & Clarke, 2006). In this context, four themes predicted according to the frequency of the patterns formed when the collected data were coded were

revised as (i) readiness for online teaching, (ii) contributions of the online teaching process, (iii) problems experienced in the online teaching process, and (iv) suggestions for the online teaching process. In the study, each participant's opinion was analyzed under four predicted themes. Relevant opinions of the participants were analyzed under each theme, and sub-themes, codes, and sub-codes were formed with the support of the literature, taking into account the frequency of the patterns. The themes, sub-themes, codes, and sub-codes created as a result of the analysis of the data were re-examined by the researchers at different times, and the sub-theme and some codes were combined to provide semantic integrity.

Results

This part of the research summarizes the four main themes and includes direct participant quotes to strengthen the narrative.

Theme 1. Readiness for Online Teaching

In this theme, the views of postgraduate students on readiness for online teaching are presented. The views of the participants regarding the three sub-themes that make up the theme of readiness for online teaching are presented in Table 2.

Table 2. Readiness for Online Teaching

Theme-1: Readiness for Online Teaching		
Sub-Theme-1: Technological Readiness	Sub-Theme-2: Content Readiness	Sub-Theme-3: Pedagogical Readiness
● Technological infrastructure of universities ● Technological tools (computer, tablet, webcam, etc.) ● Instructors' competence in using technology ● Students' competence in using technology	● Access to digital resources ● Diversity of digital resources	● Pre-preparation of the instructors for the course ● Adaptation to the learning environment ● Suitable working environment

The results show that the theme of *readiness for online teaching* consists of three sub-themes: technological, content, and pedagogical. Firstly, participant views on the sub-theme of *technological readiness* include *technological infrastructure of universities*, *technological tools* (computer, tablet, webcam, and alike), *instructors' competence in using technology*, and *students' competence in using technology*. According to the participants views, technological readiness has critical importance in the online teaching process. At this point, it was stated that with the online teaching decision taken after the emergence of the Covid-19 pandemic, universities in Türkiye responded quickly to the process with their technological infrastructure or through alternative applications (Teams, Zoom, Blackboard, etc.). According to the participants, one of the important factors affecting this process is technological tools. The participants stated that both the instructors and they experienced problems from time to time due to the lack or malfunction of technological tools during the online teaching process. One participant (P15) said, "*I was surprised and saddened by the fact that our instructors at the level of Professor, Associate Professor were so far from technology. An instructor who had a sound problem during the 2 semesters I took classes could not solve this problem because he could not get a headset…*" exemplifies this situation. On the other hand, P3 expressed a special situation with his comment, "Older instructors were tough to adapt to the process. They could not even adapt. On the other hand, young academics were already very familiar with the process and adapted easily." Another important point is the technology use

competence of both the instructors and the students. The participants stated that they experienced some difficulties and disruptions, especially due to the lack of sufficient experience of many instructors and graduate students regarding the online teaching process.

Second, the *content readiness* sub-theme includes *access to digital resources* and *diversity of digital resources*. Participants stated that they generally do not have a problem accessing digital resources with the applications used in the online teaching process and the presence of off-campus access. On the other hand, they stated that the variety of digital resources offered by the university or used by the instructors is limited since online teaching is a new process.

Third, the pedagogical readiness sub-theme consists of the pre-preparation of the instructors for the course, adaptation to the learning environment, and a suitable working environment. At the point of the pre-preparation of the instructors for the course, the participants emphasized that the instructors did not make any special preparations for the online teaching process. Accordingly, instructors frequently continued to use teaching methods and materials (presentations, written lecture notes, etc.) in face-to-face teaching in the online teaching process. However, the participants stated that the sudden transition from face-to-face teaching practice to virtual classrooms poses a challenge for both themselves and their instructors in adapting to this new learning environment. Finally, the participants drew attention to the importance of the existence of a suitable working environment for the online teaching process at home or in the office environment.

Theme 2. Contributions of the Online Teaching Process

In this theme, graduate students' views on the contributions of the online teaching process are presented. The views of the participants regarding the two sub-themes that make up the theme of the contribution of the online teaching process are presented in Table 3.

Table 3. Contributions of the Online Teaching Process

Theme-2: Contributions of the Online Teaching Process	
Sub-Theme-1: Facilitating Access to Education	Sub-Theme-2: Personal Development
● Saving time ● Access to different resources ● Re-access to course content ● Elimination of transportation costs	● Developing time management and planning skills ● Developing technology use skills

The results show that the theme of *contributions of the online teaching process* consists of two sub-themes: facilitating access to education and personal development. Firstly, participant views on the sub-theme of *facilitating access to education* consist of *saving time, access to different resources, re-access to course content,* and *elimination of transportation costs*. At the point of saving time, the participants stated that the travel time to the university is quite high, especially in big cities such as Istanbul and Ankara, and emphasized that the online teaching process allows them to save this time. Similarly, P6 and P11 stated that they have many responsibilities at work and home and that the online teaching process is very useful in terms of using their time effectively. On the other hand, the participants stated that they could easily access different resources, course records, and contents at the same time on the platforms used in the online teaching process and the computer environment, and this is a factor that supports the teaching process. Finally, the participants evaluated the online teaching process as an important contribution, especially for students coming from outside the city, to save them from transportation costs. One participant (P8) explained his views on this

issue as follows:

> "We are minimizing things like money in a serious way when it comes to our time, travel, and expense. Accordingly, if you don't have a car, going anywhere in big cities is a very serious problem. It is a great experience to be able to join the class and access the things you will learn with one click."

Secondly, participant views on the sub-theme of *personal development* include *developing time management and planning skills* and *developing technology use skills.* The participants think that the online teaching process allows them to develop themselves in the context of technology use. One participant (P5) explained this process: "It was inexperience. We even learned where the keys were by asking, and we couldn't do it quickly at first. Then, when we got used to the platform, our work accelerated. At first, I couldn't even do the registration process…". On the other hand, the participants stated that the online teaching process, which was put into practice after the Covid-19 process, encouraged self-discipline and planning. One participant (P1) described this process as follows:

> "(…) a unique experience that teaches students to discipline themselves. It is because it is easy for people to adapt to the schedule given by others but very difficult for them to discipline themselves. I'm at this age, and I'm still having a hard time. It's so hard for me to make a schedule and stick to it… However, I also set a goal. Finally, I realized that I had to learn that I had to follow that program, that I had to succeed. If students can learn to discipline themselves this way in the process, it will be an incredible achievement for them for the rest of their lives."

Theme 3. Problems Experienced in the Online Teaching Process

In this theme, the opinions of graduate students about the problems they experience in the online teaching process are presented. The views of the participants regarding the six sub-themes that make up the theme of the problems experienced in the online teaching process are presented in Table 4.

Table 4. Problems Experienced in the Online Teaching Process

Theme-4: Problems Experienced in the Online Teaching Process					
Sub-Theme-1: Technical Competence and Access	Sub-Theme-2: Preparation and Planning	Sub-Theme-3: Practical	Sub-Theme-4: Personal	Sub-Theme-5: Psychological	Sub-Theme-6: Communication and Support
• Electricity and internet cuts • Inability to access printed resources • Inability of instructors to use technology • Lack of technological equipment	• Reduction of course hours * Insufficient preparation of the instructors for the course	• Lack of peer interaction and learning • Inability to carry out practical applications • Lessons' not being interactive •Continuous/Block course processing • Superficial treatment of lessons • Difficulties in ensuring classroom control	• Inability to work in a disciplined and planned manner • Physical disorders • Learning difficulties and inadequacies • Inability to adapt to the online classroom perception • Inability to attend and participate in the course	• Depression • Low motivation • Reluctance • Low concentration • Distraction • Stress • Anxiety • Oppression • Panic • Frustration • Uncertainty • Excitement	• Inability to communicate • Not providing sufficient information • Not getting enough support

The results show that the theme of *problems experienced in the online teaching process* consists of six sub-themes: technical competence and access, personal, preparation and planning, psychological, practical, communication, and academic support. Firstly, participant views on *technical competence and access* sub-theme include electricity and internet cuts, lack of technological equipment, inability to access printed resources, and inability of instructors to use technology. Participants stated that they experienced connection problems due to the increase in electricity and especially internet usage during the curfew periods during the pandemic process from time to time. Similarly, they had difficulties in accessing printed resources in this process due to the long-term closure of libraries. On the other hand, according to the opinions of the participants, the instructors generally followed the course through the presentation in the online learning process due to inability of instructors to use technology. Participants stated that this situation limited the scope and depth of the courses. At a different point, the participants stated that they or their instructors faced various problems mostly due to the lack of equipment such as microphones and cameras. One participant (P12) explained the difficulties he experienced in this process as follows:

> "You don't feel competent when you can't attend the class. You know, there is something you know, but you can't say it. You will draw attention to a different point or suggest something. You think you can continue this. However, when you can't do that, it becomes a burden on your shoulders. At least, that's how it was for me. I know, I can't show that I know. I was angry with myself when I couldn't do these things. Since I am not a self-confident person, it was very difficult for me to open the microphone and say 'sir'. It really was at least I could tell if I had a camera."

Secondly, participant views on the sub-theme of *preparation and planning* include reduction of course hours and insufficient preparation of the instructors for the course. At this point, according to the opinions of the participants, some of the weekly course hours of the courses in the online teaching process were allocated to the work of the instructors within the scope of preparation for the course (preparing material, sharing notes, and others.) and the hours of the practical courses were reduced. Contrary to this situation, the participants stated that the instructors did not prepare enough for the lesson.

Third, participant views on the application sub-theme include lack of peer interaction and learning, non-interactivity pertaining to the lessons, inability to make practical applications, teaching of uninterrupted/block lessons, superficial teaching of the lessons, and difficulties in providing classroom control. Participants think that the absence of physical presence in the campus and classroom environment during the online learning process limits their ability to communicate, help and support each other. Similarly, the participants stated that their participation in the lesson was limited as a reflection of not communicating face-to-face and the online classroom practice. In addition, the inability to make practical applications as a limitation of online teaching platforms was also seen as a problem by the participants. One participant (P6) explained his views on the situation of theoretical and practical applications in online learning as follows:

> "I think we have a chance to provide university education to everyone, completely independent of time and place. However, this only applies to some professions. For example, the first and second years of engineering are full of experimental work. Here you can do formal and other parts theoretical parts online... On the other hand, online learning may be a little weak in professions where engineering, medicine, and applied sciences are. However, for these, elective courses or additional courses can be made online."

On the other hand, he stated that the instructors usually do not take a break by teaching the lessons as a block lesson, and this negatively affects their focus on the lesson. Another point emphasized by the participants is that the courses are handled superficially because the online courses are not given enough attention by the instructors. Finally, the participants pointed out that the instructors had difficulties in maintaining classroom control, especially because the student cameras were turned off.

Fourth, the participant views on the *personal* sub-theme include inability to work in a disciplined and planned manner, physical disorders, learning difficulties and inadequacies, inability to adapt to the online classroom perception, and inability to attend and participate in the course. Participants stated that they could not spare time for themselves and discipline themselves because they were always at home, unlike their routine life cycles during the pandemic. Participants also drew attention to the fact that they spend long hours in front of the computer due to both remote work and online teaching and that this creates various physical disorders (back and neck pain, etc.) for them. At the point of learning difficulties and inadequacies and inability to adapt to the online classroom perception, the participants stated that online teaching is a new process for them and they have difficulty in getting used to this created classroom and course understanding, which causes them to feel inadequate. On the other hand, the participants emphasized that they sometimes have difficulties in attendance and participation in the course during the online teaching process due to the excess of their work and other responsibilities.

Fifth, the participant's views on the *psychological* sub-theme consist of depression, low motivation, reluctance, low concentration, distraction, stress, anxiety, oppression, panic, frustration, uncertainty, and excitement. At this point, the participants stated that the uncertainty arising from the pandemic process, the new learning environment, and the experiences it brought with it caused quite different psychological problems for them. One participant (P14) explained his experiences in this process as follows:

> "It was really hard for me to attend the class. It was because I'm afraid, I'm worried. I do not know what to say. When this anxiety started to increase, I couldn't think too much. What do I do if the teacher asks me a question and I cannot answer? So I felt like I was on the alert all the time. During this process, when I did not feel well, I did not attend the classes in case the teacher asked me questions and I could not answer. I remember very well just for this reason; I did not attend classes for 2 weeks. However, I have fulfilled all my duties, and I am ready for my lesson. Maybe this behavior was due to the psychological process I was in at that time. But this was an event that I encountered during the online teaching process. I have never had such an experience before."

Sixth, participant views on *communication and academic support* sub-theme consist of inability to communicate, not providing sufficient information, and not getting enough support. The participants stated that they had difficulty communicating with university staff and instructors when they needed them during the online teaching process. Similarly, the participants emphasized that universities did not provide enough information during the transition to the online teaching process. In addition, the participants stated that they could not receive sufficient support from both university staff and instructors during the online teaching process due to various reasons (alternate working, flexible working, quarantine practices, and so on.).

Theme 4. Suggestions for the Online Teaching Process

In this theme, the opinions of graduate students regarding the online teaching process were presented. The views of the participants regarding the five sub-themes that make up the theme of suggestions for the online teaching process are presented in Table 5.

Table 5. Suggestions for the Online Teaching Process

Theme-4: Suggestions for the Online Teaching Process				
Sub-Theme-1: Planning	Sub-Theme-2: Implementation	Sub-Theme-3: Infrastructure Development	Sub-Theme-4: Communication and Support	Sub-Theme-5: Control
● Alternative use of online teaching option ● Providing flexibility in lesson planning ● Limitation of course quotas ● Shortening of course durations	●Processing the lessons in accordance with the plans ● Making lessons interactive	● Providing necessary technological tools to students in need ● Strengthening the technological infrastructure ● Diversifying digital resources	● Strengthening communication and cooperation ● Providing academic and psychological support to students ● Giving digital literacy education	● Establishment of a monitoring and evaluation system ● Ensuring exam security

The results show that the theme of *suggestions for the online teaching process* consists of five sub-themes: planning, implementation, infrastructure development, communication and support, and control. First of all, participant views on the planning sub-theme are categorized as an alternative use of online teaching option, providing flexibility in lesson planning, limitation of course quotas, and shortening of course durations. The participants consider that the pandemic process and its effects are still ongoing, so the online teaching option should continue to be offered as an alternative in graduate education. Some participants consider that it will be very beneficial to continue graduate education with a completely online or hybrid model, even if the pandemic conditions disappear. Moreover, it is stated that this will increase the interest and participation in graduate education. One participant (P11) explained his views on this issue as follows:

> "I think online teaching will really be a part of our lives from now on. Universities need to rapidly transition to hybrid teaching, some of which will be face-to-face and some online. Of course, online teaching may not be applicable for departments such as medicine and engineering that require laboratory studies. However, various virtual environments can be developed for them in the online environment. In fact, many things can be done."

The participants stated that universities require the implementation of course hours between certain days and hours of the week in the online learning process and stated that autonomy should be given to the instructors and students in this regard. On the other hand, some of the participants evaluated that limiting course quotas in the online learning process would be a factor that would increase the effectiveness of the courses. Finally, the participants emphasized the difficulty of focusing on online teaching without taking a long break at the computer and emphasized that it would be beneficial to take more breaks by shortening the course duration.

Secondly, participant views on the sub-theme of *implementation* include processing the lessons in accordance with the plans and making the lessons interactive. At this point, the participants stated that the lessons should be carried out more interactively and in accordance with the plans presented by the instructors beforehand.

Third, participants' views on the theme of *infrastructure development* consist of providing necessary technological tools to students in need, strengthening the technological infrastructure, diversifying digital resources, and providing digital literacy education. The participants stated that providing the technological tools necessary for the online education process to the students in need would be an important step in ensuring equality of opportunity and opportunity in education. In addition, according to the participants, strengthening the technological infrastructure of universities and diversifying their digital resources will directly contribute to the quality of the online learning process.

Fourth, participants' views on the *communication and support* sub-theme consist of strengthening communication and cooperation and providing academic and psychological support to students, and giving digital literacy education. Participants stated that universities should provide regular information on the online teaching process and provide guidance to strengthen communication and cooperation between instructors and students. In addition, it was emphasized that instructors (especially thesis advisors) should give more importance to communication and cooperation with students in this process. On the other hand, graduate education, which is a difficult process by its nature, has become a more challenging process, especially by combining with the pandemic conditions and online learning process, according to the participants. In this direction, it was stated that the university administration and teaching staff should create a system and understanding that will provide academic and psychological support to graduate students. One participant stated: (P5), "The teachers can try to be with the students a little more. Not everyone can always focus on their studies in the same way. We are still not going through a normal process. I think teachers should not forget this." Apart from these, it was emphasized that providing digital literacy training for both faculty and students is critical for the development of the online teaching process. One participant (P2) explained his views on this issue as follows:

> "Actually, everyone should be given digital literacy training. It is because basic education programs should be known by everyone. This is more necessary for professors who teach regularly at the university. At the same time, students need to learn how to reach teachers from such platforms. It is because we noticed that sometimes some of our friends do not know how to ask for a voice on online platforms."

Fifth, the participants' views on the *control* sub-theme consist of establishment of a monitoring and evaluation system and ensuring exam security. Participants stated that a monitoring and evaluation system could not be established in universities due to an urgent transition to the online teaching process. It has been emphasized that there is a need to establish a system where students can both monitor their absences online and evaluate their work, such as homework, projects, and presentations. In addition, the participants evaluated that it would be more appropriate to take additional measures to ensure the safety of online exams or to conduct exams face-to-face in the online teaching process.

Discussion and Conclusion

This research aims to uncover the online learning experiences of graduate students during the Covid-19 process and to address the current situation and expectations in universities in the digitalization of education. The limited number of studies examining the online learning experiences of postgraduate students in depth has led us to consider the research in this context. In this section, the limitations of the research are explained, the main results are interpreted and discussed, and suggestions for practice, policy, and research are

presented to system stakeholders, policymakers, and researchers to improve the system in the digitalization journey of higher education.

The results obtained from the opinions of the graduate students were classified under four themes: readiness for online teaching, contributions of the online teaching process, problems experienced in the online learning process, and suggestions for the online teaching process. Three sub-themes and nine codes were formed under the theme of readiness for online teaching: technological, content, and pedagogical readiness. In the context of the technological readiness sub-theme, it has been concluded that universities in Türkiye adapt very quickly to the digitalization processes, and their infrastructure is ready, and it has been seen that this result is in parallel with some research (Alper, 2020; Can, 2020; Dikmen & Bahçeci, 2020). On the other hand, it has been determined that the proficiency of the instructors in using technology is weak, and the students and the older instructors adapt to the process more difficult due to the lack of technological experience. According to Sulisworo et al. (2020), in this chaos that the world is experiencing, it is quite natural that both the instructors and the students are not ready for the sudden transition from face-to-face education to online education. However, it is expected that the instructors will make extra efforts to use technology competently and to design the content richer in terms of technological methods to increase the quality of education (Donitsa-Schmidt & Ramot, 2020).

In the content readiness sub-theme, it was concluded that although there was no problem in accessing digital resources during the online education process, the resources accessed were limited. This finding contradicts the research on digital inequality with Covid-19 in the literature (Beaunoyer, Dupéré, Guitton, 2020; Chandra, Chang, Day, & Fazlullah, 2020; Harris & Jones, 2020; Katz et al., 2021; Roberts & Hernandez, 2019; Vera & Bresnahan, 2017). The literature points out that even in many wealthy countries such as the USA and the UK, digital insufficiency is experienced, and socioeconomic diversity is at the root of this. On the other hand, Bhaumik and Priyadarshini (2020) concluded their research that the digital access of students is high, while the digital skills of both students and teachers are low, their digital skills should be strengthened, and the digital content offered should be diversified. In the pedagogical readiness sub-theme, the participants emphasized that the instructors should enrich the teaching methods and methods for online learning and develop their skills. Zawacki-Richter (2021) states that this digital transformation in education requires a serious effort, and although the technical infrastructure of universities is rapidly transforming, the instructors' skills in presenting the digital teaching method content that students need will improve over time.

Two sub-themes and six codes, namely facilitating access to education and personal development, were formed under the theme of contributions of the online teaching process. The fact that digital education is independent of time and place facilitates access to education. This is in the same line with the finding that digital education reduces time and training costs, as it provides the opportunity to receive education anywhere and anytime (Bakhov et al., 2021; Drokina, 2020; Koutsouba, Koutsouba, & Gkiosos, 2022; Wei, Su, & Yin, 2022). Similarly, Annetta (2004) stated in their study that online teaching provides more cost-benefit and flexible learning advantages compared to traditional teaching. These views are similar to the benefits of the research, which provides richer content with instant access and support to various resources during the lesson and the benefits of watching the lesson over and over again by recording the lesson in a technological environment. Bakhov et al. (2021) also argue that the opportunity for students to watch complex topics over and over provides students with the opportunity to work at their own pace. Moreover, online learning enables students to

take on their responsibilities, improve their time management and planning skills in a flexible learning environment. Thus, it contributes to the development of their self-discipline (Drokina, 2020; Lazarus, 2018).

With the results obtained from the research, a theme was formed about the problems experienced in the online teaching process, and the problems experienced under this theme were discussed in six sub-themes: technical competence and access, preparation and planning, practical, personal, psychological, communication, and support problems. In this sudden transition from face-to-face teaching to digital teaching, the lack of technical infrastructure, the inadequacy of teaching staff to use technology and online course preparation, and the lack of practice in the course are the most basic problems (Alvarez, 2020; Bakhov et al., 2021; Drokina, 2020), but the system responds to the pressure of change with a steep learning curve (Zawacki-Richter, 2021). In addition, the psychological and physical problems caused by the fact that the lessons are given in front of a continuous screen, the difficulty of classroom management, the inability to adapt to the online classroom perception, the feeling of online learning being more superficial than face-to-face learning, which is due to the inability to transfer emotions from the screen to the individual, are among the difficulties experienced. In this regard, it shows that although students need a digital learning alternative, they prefer traditional teaching where their socio-emotional needs are met (Alvarez, 2020; Carver, 2020). Moreover, technological literacy has caused concern among students and instructors who are suddenly exposed to the online learning process (Toquero, 2021). In addition, online learning has also caused psychological problems along with many emotions, such as reluctance to attend classes, low motivation, focusing problems, anxiety, stress, oppression, uncertainty, and frustration. The main reason for this is the pandemic process, where the next stage is uncertain, and it is quite natural for students to experience emotional and psychological problems with the effect of this process (Zhou et al., 2020). In this regard, access to online emotional and psychological support as well as online teaching, should be provided (Kee, 2021). But aside from the online emotional and psychological support in the system, the participants stated that they could not even get technical information support about this transformation from the university staff and instructors during the transition to the online learning process.

Another theme obtained from the results of the research consists of suggestions for online learning. Within the scope of the theme, suggestions are classified according to the content of planning, implementation, infrastructure development, communication and support, and control. In the title of suggestions, the participants think that online learning should be continued in the form of a hybrid system in universities as an alternative learning method to the traditional method. According to Zawachki-Richter (2021), while online learning is possible in fields such as social, cultural, and linguistic sciences, it is not possible in some fields, including medicine, engineering, etc., which require laboratory and internship practices. Although many studies present results on the equal effectiveness of face-to-face education and online education (Barbour & Mulcahy, 2009; Barker & Wendel, 2001), the participants made various suggestions based on their experiences to increase the effectiveness of online learning, such as reducing the quota and duration of the courses, using different teaching methods to make the courses more interactive, diversifying digital resources, providing digital literacy training to everyone involved in the process. The effectiveness of online education is basically possible with the effective inclusion of students in the process, for this, qualified instructors who are familiar with new methods are needed (Albashtawi & Al Bataineh, 2020). In addition, the participants emphasized that online education should be improved by establishing monitoring-evaluation systems and the reliability of online exams

should be increased. However, although it is tried to ensure reliability in online exams, it is not seen as reliable enough to compete with the traditional teacher-student-based exam system (Al-Shalout, Rasmi, & Hassan, 2021).

Consequently, if the results of the research are addressed holistically based on the online learning experiences of the participants, although there are positive opinions about the readiness of the technical infrastructure for online learning in higher education, various difficulties experienced due to the technical infrastructure are in the direction of continuing the studies to strengthen the infrastructure. Aljaraideh and Al Bataineh (2019) articulate that before the nature of online learning, online infrastructure is one of the biggest barriers to the adoption of online learning. On top of this priority, the results on improving the technological literacy of instructors and students, diversifying online learning methods and techniques, enriching digital resources, and increasing online effectiveness indicate that the quality of online learning should be increased. Apart from the technical and qualitative views on online education, the needs arising from psychological problems also draw attention. Participants expect to receive psychological support from universities to manage their feelings, such as anxiety, worry, and stress caused by this sudden transition in education due to the pandemic. Various studies (Alvarez, 2020; Carver, 2020; Kee, 2021; Pollock, 2020) show that this sudden social and systemic transformation of students can have negative emotional and psychological effects, and it is necessary to establish psychological support e-support mechanisms in universities. In addition to the results the current research presents for the improvement of the technical, qualitative, and psychological content of online education, the research also provides the reader with the need to establish control mechanisms to monitor and evaluate the process and to raise the reliability standards of the online exam. As such, online learning is not a teaching method to be used alone, despite the digitalization of education and the world, considering many qualitative, social, and psychological factors. However, it should continue to be implemented and developed as an alternative learning model to traditional face-to-face learning.

Implications and Future Research

The inferences obtained from the research can guide policymakers, higher education administrators, and practitioners in the online education system for the improvement of the online learning system. Higher education administrators should continue to develop the online teaching system as an alternative to traditional face-to-face education. They should strengthen the technical infrastructure, provide training to the instructors and students involved in the process to improve their digital skills, establish units that provide technical support when needed, and provide technical competencies to meet the needs in this regard. In addition, to increase the quality of online education, it should be encouraged to increase the professional development of instructors in issues such as diversification of digital teaching methods and techniques, digital content design to ensure the focus and motivation of the students, making the courses interactive, and enriching digital resources. At the same time, e-psychology support units should be established in universities where students can develop their psychological and emotional skills, such as planning the process, controlling stress and anxiety, managing time, gaining self-discipline during this transformation process, and receiving support. Thus, they should know that they are not alone in the process and that there are experts who will support them in case of need. Moreover, monitoring and evaluation systems should be established to improve and develop online teaching at universities, and problem areas should be identified and improved through continuous feedback in this system. In addition, universities should establish their special precautionary mechanism to ensure

online exam security. There are various models used and recommended in the world (Al-Shalout et al., 2021; Zhu & Cao, 2021).

The implications of the research can also give an idea for different studies. In this regard, more comprehensive studies can be conducted to increase the quality of online education in higher education in Türkiye. It can be determined how the views on online teaching differ in fields such as social sciences, linguistics, and science, and to what extent the problem areas change. Different model proposals can be presented for the development of measurement-evaluation of online teaching and a program related to the subject can be developed.

Limitations

This research is limited to the experiences of graduate students studying at universities (state and foundation) located in Istanbul, Ankara, and Bursa. In order to cover the online teaching experience in the country more comprehensively, the opinions of students studying at universities with regional differences can be consulted. The results obtained may contribute to a comprehensive understanding of the online learning experiences of graduate students in Türkiye. On the other hand, the current research only reflects the perspectives of graduate students toward online teaching. In order to reveal the different dimensions of the subject, the opinions of higher education institution administrators and lecturers can be consulted. Finally, the generalization ability of the qualitative results reached within the scope of the research is limited. However, it is possible to transfer the results and the inferences made based on this to a similar context.

Note

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