

Pre-service Teachers' Concerns in Emergency Remote Teaching During the Covid-19 Pandemic¹

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Article History:

Received 10.10.2022

Received in revised form 09.12.2022

Accepted

Available online 01.01.2023

This study seeks to reveal the concerns of pre-service teachers in emergency remote teaching applied during the Covid-19 pandemic process. The study was designed as content analysis, which is one of the qualitative research methods. The study group consists of 45 pre-service teachers who continue their education at a public university in the south-eastern region of Turkey in the spring semester of the 2021-2022 academic year and received remote teaching during the Covid-19 pandemic. A semi-structured interview form was used to collect data from pre-service teachers. The semi-structured interview form prepared through a literature review was checked by two field experts and the final decision was made for the forms in line with the obtained feedback. A voice recorder was used during the interviews. The names of the pre-service teachers interviewed in the study were coded as K1, K2, ... K45. The data obtained from the interviews were descriptively analysed and themes, codes, frequencies, and percentages were determined. The concerns of pre-service teachers participating in the study during emergency remote teaching were gathered under four themes. As a result, it was revealed that pre-service teachers experienced concern about using computers, professional and personal development, communication and social interaction, effectiveness and online trust in emergency remote teaching applied during the Covid-19 pandemic. Recommendations for future studies were presented in the study.

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Keywords: Emergency remote teaching, concern, online learning, distance learning

INTRODUCTION

Technology and internet advances many areas of life have been affected. In the wake of faster and easier access to information with the effect of communication, interaction, and digitalization that merged particularly in the 21st century, individuals with information technology competencies are needed in all fields. In this context, individuals are forced to constantly improve their digital competencies. Undoubtedly, as in all fields, efforts to integrate technology and the internet into education have also increased in the field of education to raise avant-garde individuals. While the education world witnesses an increase in such efforts, it can be said that the problems of individuals receiving face-to-face education increase due to reasons such as work rush, lack of suitable time, health reasons, long distances, and inequality of opportunity. Despite various impossibilities, countries have started to head towards and spread remote teaching using information technologies in an attempt to provide education to their citizens (Odabaş, 2003; Özbay, 2015).

Remote teaching is defined as the synchronous and asynchronous instruction between students and teachers when they are separated by physical distance with technology tools and regardless of time and place (Anderson & Rivera-Vargas, 2020; Sewart, Keegan & Holmberg, 2020). Remote teaching is also defined as an education model in which students can go over their lessons in written, audio, and video formats at any time in a virtual environment by means of technology tools independent of time and space (Clark, 2020).

It is seen that remote teaching has both advantages and disadvantages when compared to face-to-face education. Remote teaching is advantageous as it addresses a wide audience, supports individual learning, is widespread and without space and time limitations, allows learners to go over lessons, ensures diversity, easy access to content, fast communication, use of technology tools, and provides multimedia (Atik, 2020; Çokyaman & Ünal, 2021; Sayan, 2020). Yet it has also disadvantages including infrastructure and technical problems, technical knowledge requirements, socialization barrier, increased workload of teachers,

¹ Part of this work was presented orally at the 15th International Computer and Instructional Technologies Symposium.

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limitations regarding proficiency, lack of interaction and equipment, cost, inability to benefit from advantages, the readiness of students and teachers, and the challenge of application (Anderson & Rivera-Vargas, 2020; Alea, Fabrea, Roldan & Farooqi, 2020; Bozkurt, 2020; Bagrıacık Yılmaz, 2019; Fidan, 2020).

The Covid-19 pandemic forced almost the whole world to urgently switch to remote teaching. As the pandemic spread all over Turkey, all educational institutions launched emergency remote teaching in March 2020. In the wake of these developments, the concept of "Emergency Remote Teaching" emerged (Hodges, et al., 2020) and since then, it has been studied in various papers (Bozkurt, 2020; Schlesselman, 2020). In contrast to systematic remote teaching, emergency remote teaching is an education model in which access to materials is provided safely during its implementation, although it is not planned (Bozkurt, 2020; Hodges et al., 2020). In short, unlike well-planned online learning, it can be expressed as an education method that takes place to maintain the instruction that cannot be continued face-to-face in a crisis.

The literature review highlights that studies on emergency remote teaching during the Covid-19 pandemic were conducted in Turkey and all over the world. Most of these studies focused on the positive and negative aspects that occurred during emergency remote teaching. Students were reported to have adverse conditions as they had increased cognitive load without a complete instructional delivery and self-discipline (Atılğan et al., 2021), experienced communication and interaction as well as technical problems (Adnan & Anwar, 2020; Çakın & Külekçi Akyavuz, 2020; Dutta & Smita, 2020; Keskin & Özer Kaya, 2020; Mhlanga & Moloj, 2020), had a low level of participation and motivation (Canpolat & Yıldırım, 2021), failed to have appropriate medium for applied courses (Kurnaz & Serçemeli, 2020; Keskin & Özer Kaya, 2020, Kedraka & Kaltsidis, 2020; Shim & Lee, 2020), experienced problems in terms of emotional state, privacy, and psychological anxiety (Kürtüncü & Kurt, 2020; Bozkurt, 2020; Khlaif, Salha & Kouraichi 2021; Cao et al., 2020), went through socialization concerns (Adnan & Anwar, 2020; Başaran, Doğan, Karaoğlu & Şahin, 2020) faced financial situation problems (Adnan & Anwar, 2020; Dutta & Smita, 2020) and measurement-evaluation problems (Bozkurt, 2020). On the other hand, they were provided with an environment in which their own learning speed could be supported (Keskin & Özer Kaya, 2020; Canpolat & Yıldırım, 2021) as well as an environment independent of time and place, easy accessibility, and increased internal motivation (Bozkurt, 2020), the education gap was closed and the need for education was fulfilled (Canpolat & Yıldırım, 2021; Toquero, 2021), and their academic achievements increased (Iglesias et al., 2021). Cao et al. (2020) reported that students experienced anxiety in emergency remote teaching during the Covid-19 pandemic.

A review of studies revealed that a vast majority of the studies were designed to shed light on problems experienced in emergency remote teaching with some studies focusing on financial concerns, privacy concerns, and social interaction concerns. Concern is generally defined as mental and physical states such as uneasiness, tension, anxiety, discomfort, fear, panic, excitement, restlessness, tremor, insecurity, and stress experienced by individuals against physical changes and over-performance (Atkinson, Atkinson, & Hilgard, 1995). Concern is considered an important condition in learning (Arribathi, Suwanto, Budiarto, Supriyanti & Mulyati, 2021). Especially in the internet environment, unknown situations and problems can cause concern (Ekizoğlu & Özçınar, 2011). Therefore, it is also important to reveal on which issues the effects of the problems experienced may cause concern. In this context, it is suggested that more effective remote teaching is likely if concerns are properly determined. In addition, if such concerns are eliminated, such elimination is likely to contribute to designing new online learning environments. This study seeks to reveal pre-service teachers' concerns in emergency remote teaching during the Covid-19 pandemic. For this purpose, the following research questions were addressed:

1. What are pre-service teachers' concerns about using computers?
2. What are pre-service teachers' concerns about professional and personal development?
3. What are pre-service teachers' concerns about communication and social interaction?
4. What are pre-service teachers' concerns about effectiveness and trust in the online learning environment?

METHOD

Research Design

Designed to reveal the concerns experienced by pre-service teachers in emergency remote teaching during the Covid-19 pandemic, in this research interviews were conducted with pre-service teachers. That content analysis was used as a data analysis method in the research. Content analysis is aimed at understanding the full context of how humans think, feel, or behave and why (Myers, 2019). The definitions of content analysis have changed over time (Koçak & Arun, 2013). However, it is generally defined as an analysis method that measures the data obtained in a systematic and impartial manner through digitization (Wimmer & Dominick, 2000).

Study Group

The study group consists of 45 volunteer pre-service teachers who continue their education at a public university in the south-eastern region of Turkey in the spring semester of the 2021-2022 academic year and received remote teaching during the Covid-19 pandemic. The criterion sampling method was employed in the study. The criterion sampling method is aimed at selecting a sample unit according to the criterion list prepared by the researcher (Marshall & Rossman, 2014). Thus, the criterion in the present study was an experience of remote teaching for at least one semester. In this regard, the demographic characteristics of the study group are presented in Table 1.

Table 1: Demographic characteristics of the study group

Demographic Characteristics		f	%
Gender	Female	26	57.78
	Male	19	42.22
Grade	1.	13	28.89
	2.	9	20.00
	3.	15	33.33
	4.	8	17.78
Department	Science Teacher	4	8.89
	English Language Teaching	6	13.33
	Social Sciences Teaching	7	15.56
	Turkish Teaching	8	17.78
	Classroom Teaching	10	22.22
	Elementary Mathematics Teaching	10	22.22

Table 1 reveals that 26 (57.78%) of the study group participating in the research are female and 19 (42.22%) are male pre-service teachers. The highest of the participating pre-service teacher was from the 3rd grade 15 (33.33%), and the lowest was from the 4th grade. The highest of pre-service teachers from six different departments was from the Department of Classroom Teaching and Elementary Mathematics Teaching 10 (22.22%), and the lowest from the Department of Science Teaching 4 (8.89%).

Data Collection

In the study, the data were obtained with a semi-structured interview form. The form, which was prepared through a literature review, was examined by two field experts in instructional technologies, and the final decision was made for the forms in line with the feedback. Using a voice recorder, each interview lasted an average of 20-30 minutes. The names of the pre-service teachers interviewed in the study were coded as k1, k2, ... k45. Participant confirmation was obtained for in-depth information and the accuracy of their unclear answers during the interviews.

Data Analysis

In the study, the computer-aided environment was used to analyse the data obtained from the interviews. In this way, all the data obtained were converted into a single text and subjected to content analysis. Content analysis refers to the handling of unnoticed themes and concepts in a descriptive framework so that the concepts summarized and interpreted within the scope of descriptive analysis themes

do not remain superficial (Yıldırım & Şimşek, 2018). In addition to this, the opinions of some pre-service teachers were included with direct quotations for the sampling of the findings.

Validity and Reliability

Some of the measures taken regarding the proof of validity and reliability in the study are summarized below:

- The investigators made use of literature in the formation of research questions
- The final form was determined in line with the expert opinions by developing an interview form.
- The purposive sampling method was used to determine the study group.
- Direct quotations for sampling of the findings were included.
- In addition to instant participant confirmation within the scope of the reliability of the data obtained during the interviews, the confirmation of all participants was obtained to reveal the agreement and disagreement regarding the findings. The agreement in this context was found as 35 (77.77%). It can be said that the results obtained in the research are reliable since the agreement is over 70% (Baltacı, 2017; Yıldırım & Şimşek, 2018).

FINDINGS

The themes and codes of the data obtained for the sub-problem are summarized in the tables, respectively, in this study, which is aimed at revealing pre-service teachers' concerns in emergency remote teaching during the Covid-19 pandemic. Table 2 shows the opinions of pre-service teachers about using a computer.

Table 2: Opinions of pre-service teachers about using computer

Theme	Codes	Frequency	%
Using Computer	The uncomfortableness to log in with the computer	39	86.67
	Anxiety arising from sitting in front of the computer at home	34	75.56
	Concern that a job takes a long time when using a computer	33	73.33
	Fear of information deletion from the computer	30	66.67
	Concern about failing to complete a task when using a computer	28	62.22
	Anxiety about learning computer terminology	25	55.56
	Concern about being depressed while working at the computer	24	53.33
	Pessimism to do research with a computer	24	53.33
	Feeling uncomfortable while using the computer	20	44.44
	Fear of having difficulty using the computer	18	40.00
	Worrying about having to use a computer	16	35.56
	Fear of using materials on the computer	12	26.67
	Being stressed while working at the computer	11	24.44
	Concern about getting an "error" message from the computer	8	17.78

Table 2 reveals that based on the opinions of pre-service teachers regarding computer use, they mostly experience the uncomfortableness to log in with the computer 39 (86.67%), anxiety arising from sitting in front of the computer at home 34 (75.56%), and Concern that a job takes a long time when using a computer 33 (73.33%), concerns they least experience are fear of using materials on the computer 12 (26.67%), stress while working at the computer 11 (24.44%), and concern about receiving an "error" message from the computer 8 (17.78%). This result is said to stem from the fact that pre-service teachers do not have sufficient equipment and skills to use. The opinions of some pre-service teachers regarding the findings are presented below.

K3: Even using the computer was a problem for me; even thinking about it really annoyed me. That is not all. When it was time for the lesson, logging on to the ALMS system and going in front of that computer bothered me because I was not learning anything, and there is much more. For example, I didn't know what

to do when I was given homework. I can't use the computer anyway. I had a hard time, so I often made mistakes. I had difficulty even downloading videos and presentations.

K9: While I was studying online, I started to have pain in my body due to sitting in front of the computer for hours. It made me uncomfortable and I could not fully follow the lessons.

K15: Actually, I am good at computer skills and I like working with the computer, but I did not enjoy it at all during the Covid-19 pandemic. I don't know but maybe it is because I haven't used the computer for such a long time. There were times when I didn't watch the lectures, I had headaches, so I didn't want to attend the class. Not only me but my friends were also having problems. What is clear is that teacher, I don't want to watch a lecture with the computer anymore, I used to do research for the lessons before, but now I am very tired and depressed. I couldn't find the things I wanted, at first it was fine, but as time progressed, using the computer and logging on to the ALMS system, watching lectures, downloading presentations, all of this made me uneasy. Besides, teacher, my computer broke down and an error occurred. I was worried about how I could attend the classes.

K32: I will explain briefly, teacher. I was annoyed when logging on to the ALMS with a computer, listening to lectures, and doing research. I was studying for a long time, but seeing information deleted made me depressed and nervous and so I didn't even want to hear the name of the computer, but I had to as it was my last year and I had to graduate. I do not know if I am a proper graduate but remote teaching was not good at all, and it did not contribute to my profession at all.

K 35: Sometimes, when I failed to attend the lectures for a long time, the teachers made it necessary to watch these lectures one by one, so I had concerns about failing to finish them in time.

The opinions of pre-service teachers on professional and personal development are given in Table 3.

Table 3: Opinions of pre-service teachers on professional and personal development

Theme	Codes	F	%
Professional and Personal Development	Concern about lack of contribution to professional development	3	77.78
		5	
	Fear of lack of professional knowledge	3	68.89
		1	
	Anxiety about the non-suitability of the working environment for the profession	2	48.89
		2	
	The uncomfortableness of being a graduate of remote teaching	1	37.78
		7	
	The uneasiness of the idea of a decrease in the prestige of the profession	1	35.56
		6	
	Anxiety about failing to transfer information to students	1	26.67
		2	
	Inability to attract students' attention to the profession	9	20.00
Inability to answer students' questions	7	15.56	
Inability to make effective assessments and evaluations of students	7	15.56	
Worrying about failing to do an internship	7	15.56	
Worrying about failing to possess the qualifications required by the profession	6	13.33	
Inability to use teaching methods and techniques effectively	4	8.89	
The discomfort of being a boring teacher	4	8.89	

Table 3 reveals that based on the opinions of pre-service teachers on professional and personal development, they mainly experience concern about lack of contribution to professional development 35 (77.78%), fear of lack of professional knowledge 31 (68.89%), and anxiety about non-suitability of the working environment for the profession 22 (48.89%). On the other hand, concerns they least experience are worrying about failing to possess the qualifications required by the profession 6 (13.3%), inability to use teaching methods and techniques effectively 4 (8.89%), and discomfort of being a boring teacher 4 (8.89%).

This possibly stems from the fact that pre-service teachers feel inadequate in terms of readiness for remote teaching. The opinions of some pre-service teachers regarding the findings are presented below.

K16: The lack of preliminary preparation worries me because I failed to do an internship in my future profession. Teacher, truth be told, I will graduate, but I think that will happen without adequate professional knowledge. I don't know if I will be a good teacher or transfer information properly, and what's more; I may fail to answer students2 questions during the course. This makes me think a lot and I'll probably be a boring teacher.

K20: I have always thought that remote teaching is not suitable for my profession and I can't remember anything I learned. It didn't help me and made me annoyed. I think I didn't get the necessary information. Even if I am appointed as a teacher, I don't know what to do, which worries me. Sometimes I am thinking of going over all I have learned again and again. I could not do an internship and that was a problem. I'm nervous, I'm still afraid of whether I will be a good teacher or not.

K26: Teacher, I did not have professional personal development, on the contrary, I can say that I lay fallow. Besides, I was out of spirits when I got sick and I don't want to be a graduate of remote teaching. Everyone knows that it does not help us and this makes them think about whether they will be good teachers or not.

K34: I really don't know how to answer this question. I see neither personal nor Professional contribution. I have learned everything I know during face-to-face education.

Pre-service teachers' opinions on communication and social interaction are given in Table 4.

Table 4: Opinions of pre-service teachers on communication and social interaction

Theme	Codes	F	%
Communication and Social Interaction	Being annoyed when no feedback is received	41	91.11
	Fear of having to speak	40	88.89
	Being bothered by the lack of face-to-face interaction	38	84.44
	Anxiety about repeating the same words	36	80.00
	Fear of communicating with mentors and students	34	75.56
	Concern about slip of the tongue and trembling of the voice	34	75.56
	Choosing to remain silent	33	73.33
	The uneasiness in communicating	29	64.44
	Embarrassment and shyness in communicating	26	57.78
	Concern about failing to use effective language skills	26	57.78
	The uneasiness of being misunderstood when communicating	25	55.56
	Fear of criticism and judgment from others	16	35.56
	Anxiety about not being respected by peers	14	31.11
Worrying about failing to control anger	11	24.44	

Table 4 reveals that based on the opinions of pre-service teachers on communication and social interaction, they mainly get annoyed when no feedback is received 41 (91.11%), experience fear of having to speak 40 (88.89%) and are bothered by the lack of face-to-face interaction 38 (84.44%), while concerns they least experience are fear of criticism and judgment from others 16 (35.56%), anxiety about not being respected by peers 14 (31.11%), and worrying about failing to control anger 11 (24.44%). This possibly stems from the fact that they have never experienced remote teaching before. The opinions of some pre-service teachers regarding the findings are presented below.

K19: I am afraid that others will misunderstand me and judge me during online education. I think that remote teaching cannot replace face-to-face education, which is annoying for me.

K28: I was having trouble communicating, I was hesitant to communicate, I was upset when I sent e-mails to the teachers, but at the same time I was worried about the reply. I could not speak at all in online classes, but I was watching videos of lessons. Once, the teacher asked something and at that moment, my blood pressure started to drop, I started to repeat the same word at least 3 times...

K37: I do not think that remote teaching can ever replace face-to-face education. I was having problems while communicating with the teachers. Not being able to get an answer to the e-mails I sent was making me uneasy, I was constantly checking if there was a reply because there were always system errors. It should definitely not be preferred for applied courses.

K45: I had problems not only with the teachers but also with my classmates because I didn't know many of them anyway. I was trying not to talk even during classes, after all, I don't know them and I was just wondering what they would think about me, so maybe I would get angry and be misunderstood if I faced something I didn't like.

Pre-service teachers' Opinions of pre-service teachers on effectiveness and online learning environment are given in Table 5.

Table 5: Opinions of pre-service teachers on effectiveness and online learning environment

	T	Codes	F	%
Effectiveness and Online Trust		Concern about the fact that remote teaching is not as effective as face-to-face education	43	95.56
		Anxiety about failing to achieve permanent learning	42	93.33
		Need for face-to-face communication	42	93.33
		Negative impact on student achievement	32	71.11
		Being doubtful of the inability to make the student more active	22	48.89
		Anxiety about being inefficient	22	48.89
		Fear of personal privacy	18	40.00
		Lack of a good learning environment	16	35.56
		Concern about exposure to theft of personal information	10	22.22
		Distrust in the remote teaching environment	8	17.78

Table 5 reveals that based on the opinions of pre-service teachers on effectiveness and online trust, they mainly experience concern about the fact that remote teaching is not as effective as face-to-face education 43 (95.56%), anxiety about failing to achieve permanent learning 41 (93.33%), and need for face-to-face communication 41 (93.33%), while concerns they least experience are lack of a good learning environment 16 (35.56%), concern about exposure to theft of personal information 16 (35.56%), and distrust in the remote teaching environment 8 (17.78%). This possibly stems from the lack of pre-service teachers' knowledge about remote teaching. The opinions of some pre-service teachers regarding the findings are presented below.

K7: I don't trust remote teaching at all, I don't know what I've learned, and even if I know, I quickly forget it. It wasn't effective and I wish I had continued face-to-face education, after all, we all got sick (Covid).

K21: Teacher, I really don't want to remember those days. Illness, system errors, communication problems, etc. and the ALMS was not good at all, it was not effective, I could not be active, and it affected my success. I was more effective before, that is, it was better to receive face to face. I often experienced system errors and had to write down my information.

K43: This is the easiest question in this interview, teacher because remote teaching is not effective at all, I didn't learn anything because I was not active. I believe in learning by doing. I couldn't even communicate and remote teaching is not a good environment, and new things were constantly being asked. I sent an e-mail, but nothing happened and so I don't trust the system and the system gives so many errors that I am afraid that my information can be stolen. These still worry me. I am still wondering who keeps my personal information.

DISCUSSION, CONCLUSION and RECOMMENDATIONS

The results obtained in this study related to pre-service teachers' concerns about emergency remote teaching during the Covid-19 pandemic were discussed according to the order of the sub-problems along with some recommendations.

The opinions of the pre-service teachers about using computers in emergency remote teaching revealed the following negative aspects: logging in, sitting in front of the computer at home, time-consuming work, information deletion, failure to finish a job, the need for learning computer terminology, doing research, having difficulty in using a computer, experiencing anxiety, tension, restlessness, pessimism, fear, and doubt, demoralization, and uneasiness and discomfort in issues such as receiving "error" messages. In this context, it can be inferred that pre-service teachers experience concerns about computer use in emergency remote teaching.

Pre-service teachers' opinions on professional and personal development in emergency remote teaching revealed the following negative aspects: lack of contribution to professional development, inadequacy in professional knowledge, unsuitable working environment for their profession, fear of being a graduate of remote teaching, the idea of having a less prestigious profession, inability to transfer information to students, inability to attract students' questions, experiencing anxiety, restlessness, fear, discomfort and uneasiness about failing to answer students' questions in the future, failing to make effective assessment and evaluation, do an internship, and possess qualifications required by the profession, concerns about being a boring teacher, and fear of failing to use teaching methods and techniques effectively. In this context, it can be inferred that pre-service teachers experience concerns about professional and personal development in emergency remote teaching.

Pre-service teachers' opinions on communication and social interaction in emergency remote teaching revealed the negative aspects: failing to receive feedback, having to talk, lack of face-to-face interaction, repetition of the same words, lack of communication with mentors and students, fear of slip of the tongue and trembling of the voice, preferring to remain silent to communicating, experiencing restlessness, anxiety, loss of mood, fear, discomfort and uneasiness, and embarrassment and shyness, inability to use effective language skills, misunderstanding, criticism and judgment from others, being anxious about not being respected by peers, and failing to control anger. In this context, it can be inferred that pre-service teachers experience concern about communication and social interaction in emergency remote teaching.

Pre-service teachers' opinions on the effectiveness and online trust revealed the following negative aspects: concern about the fact that remote teaching is not as effective as face-to-face education, anxiety about failing to achieve permanent learning, need for face-to-face communication, negative impact on student achievement, being doubtful of inability to make the student more active, anxiety about being inefficient, fear of personal privacy, lack of a good learning environment, concern about exposure to theft of personal information, and distrust in the remote teaching environment. This implies that pre-service teachers experience concerns about emergency remote teaching.

The research results are observed to coincide with the results of similar studies in the literature. To set an example, Can (2020) reported that students as well as teachers are inadequate in using information technologies in the distance education process. Besides, Yurdakal and Susar Kırmızı (2021) reported that system errors and internet speed problems are experienced considering the opinions of pre-service teachers regarding emergency remote teaching. Another finding of similar studies revealed that students experience difficulties due to hardware and technical problems in emergency remote teaching (Keskin & Özer Kaya, 2020). Karakuş, Ucuşatar, Karacaoğlu, Esendemir, and Bayraktar (2020) investigated the opinions of pre-service teachers continuing their education in the Turkish department about distance education to find out that communication and interaction between students and teachers decreased, their social interactions were negatively affected, and pre-service teachers were concerned about communication in front of peers and teachers in the classroom environment. On the other hand, Yolcu (2020) reported that the lack of social interaction in the remote teaching system caused discomfort among students. Along the same lines, Sığın (2020) reported that remote teaching does not allow effective communication between students and teachers, the students are not disciplined during the lesson, permanent learning is not ensured due to their indifference to the lesson, and academic success decreases. It was also reported in another study that communication and interaction between students and teachers decreased in distance education (Gewin, 2020; Sintema, 2020). Students' participation in classes decreased and their motivation was low in online or offline learning environments (Bakioğlu & Çevik, 2020; Nakhla, 2019). In the study conducted by Wang and Zhao (2020), it was reported that university students have high levels of anxiety in online learning environments while Drange and Wyk (2019) found that university students experience social anxiety over 70%, and the most worrying situation is performing and speaking in front of the audience. Similarly, it was

concluded that the Covid-19 process increased the anxiety of university students (Ma, 2021) and the symptoms of social anxiety appeared (Thompson, Mancebo & Moitra, 2021). On the other hand, some research results contradict the results of this study. In this context, it was reported that students do not need face-to-face communication and have better communication and interaction with their peers in distance education (Sindiani et al. 2020). It was also reported that the Covid-19 process had a positive effect on the use of technology and professional development (Bakioğlu & Çevik, 2020).

In conclusion, pre-service teachers were observed to experience concerns about emergency remote teaching during the Covid-19 pandemic. It was also concluded that the pre-service teachers' concerns were mainly about using computers, professional and personal development, communication and social interaction, effectiveness, and online trust. In this context, besides the dimensions revealed in the research, a measurement tool can be developed to determine the concerns by investigating various variables that have emerged in other studies conducted in the literature. Accordingly, systematic content analysis studies related to the effects of online learning environments on concerns can be conducted. Finally, the present study can be re-examined in terms of the effects of different variables with a larger sample group.

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

Ethics Approval

The formal ethics approval was granted by the Social and Human Sciences Research and Publication Ethics Committee of Siirt University. We conducted the study in accordance with the Helsinki Declaration in 1975.

Funding

No specific grant was given to this research by funding organizations in the public, commercial, or not-for-profit sectors.

Research and Publication Ethics Statement

The study was approved by the research team's university ethics committee of the Siirt University (Approval Number/ID: 2022/3662).

Contribution Rates of Authors to the Article

The authors provide equal contribution to this work.

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