Journal of Qualitative Research in Education

Academician Perspective on the Implementation of Distance Education in Universities during the COVID-19 Pandemic

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To cite this article:

Asma, B., Tezci, I. H. (2023). Academician perspective on the implementation of distance education in universities during the Covid-19 pandemic. *Journal of Qualitative Research in Education*, *34*, 86-113, https://doi.org/10.14689/enad.34.912

Abstract: The purpose of this research was to examine the perspectives of academicians on distance education activities during the pandemic from various aspects. The research study was carried out using a case study design, which is one of the qualitative research methods. The perspectives of 24 academicians working at a state university were explored, and the data collected through an online platform using a structured interview form were analyzed by utilizing the content analysis method. The findings were reported in the form of themes, sub-themes, and codes, supported by participant expressions. Results indicated that academicians faced infrastructure-related problems during the pandemic process, which arose from various aspects. They expressed that distance education applications would be appropriate to use, especially in social sciences, theoretical courses, and crowded classrooms in the post-pandemic period. However, using distance education in math, sciences, and engineering may be inconvenient and create an inequality of opportunity. Academicians also stated that they experienced technical issues during the distance education process, open-to-abuse exams, low participation in classes, and problems in accessing education for students. They emphasized that encountering cases of cheating and plagiarism regarding the measurement and evaluation processes is an important deficiency. Furthermore, academicians made suggestions regarding distance education applications such as maintaining the hybrid teaching model, examining the practices of leading universities, introducing a new model, integrating virtual classroom applications into the process, or introducing existing interactive systems into the system.

Keywords: Pandemic process education, case study, distance education, online education

Article Info

Received: 17 Mar. 2022

Revised: 06 Dec. 2022

Accepted: 22 Dec. 2022

Article Type

Research

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Introduction

The new strain of coronavirus, known as COVID-19, was first detected in Wuhan, China in December 2019 (Ministry of Health, 2020). The virus quickly spread around the world, and the World Health Organization (WHO, 2020) declared it a pandemic. As a contagious infection, COVID-19 has been observed to spread from sick individuals to those in the same environment. The virus has severe symptoms and poses a serious threat to the world, leading to deadly outcomes (Ministry of Health, 2020).

In order to prevent the spread of the epidemic, many states had to take radical measures such as social distancing, quarantining sick people, imposing martial law, restricting international or inter-city travel, and providing education through online applications. To slow the spread of the virus, it has become necessary for people to stay at home. As a result, many countries suspended their educational activities and tried to find alternative ways to continue teaching. Inadequate financial conditions and a lack of physical facilities during the pandemic made the transition to distance education necessary for schools (Urdan & Weggen, 2000). To minimize the impact of the coronavirus on education, many countries have suspended face-to-face education and switched to distance education.

The pandemic has affected many areas that directly concern human life, particularly health, education, tourism, and the economy. After the health sector, education has been the most affected by COVID-19. The closure of schools and universities due to the pandemic has had a negative impact on many students (Zhong, 2020). The pandemic has had a rapid and significant impact on students' education, leading to negative results. While the number of students whose educational activities were restricted in March 2020 was around 300 million, this number rose to 1.6 billion in April. Due to the rapid spread of the coronavirus, many countries in the world had to pause their education systems or find alternative solutions. According to UNESCO's 2020 data, as of April, 92% of students around the world were affected by the pandemic's impact on their education and training. While the number of countries closing schools was six in March, this number rose to 195 a month later.

Distance education is a computer-based teaching method that provides teacher-student interaction from a centralized location when classroom education is not possible due to limitations in the education process (Moore, Deane, & Galyen, 2011). Distance education, which offers a flexible learning environment, is promising due to its innovative side. Distance education has a long history, beginning with mail-based education, continuing with correspondence courses, and then shifting to lectures given on radio and television with the development of communication tools. The use of virtual learning environments for lessons through technologies such as satellite, fiber optic, and computers has continued due to the rapid progress of technology (İşman, 2011).

When examining the distance education process, there are both positive and negative situations. The advantages include ensuring the sustainability of distance education (Akinbadewa & Sofowora, 2020; Seage & Türegün, 2020), providing lifelong learning

(Alharthi, 2020), and reducing education costs (Al-Husban, 2020; Harrison & Lee, 2018). However, the fact that the learner and teacher are in different locations can also cause limitations in terms of method, program, and time (Albalawi, 2018; Hilton & Canciello, 2018; Thompson & McDowell, 2019; Uşun, 2006). Additionally, factors such as lack of infrastructure (software, hardware, etc.), economic reasons, technical staff problems, unawareness of society, especially students, and regional differences in the level of benefiting from information technologies can disrupt distance education activities (Gökdaş & Kayri, 2005).

With COVID-19, a new perspective on distance education during the pandemic period has emerged. Studies on distance education applications are increasing daily in many countries around the world. Arora and Srinivasan conducted a study on this subject with 341 teachers in the Ghaziabad region of India. The study examined the advantages and disadvantages of distance education and the rate of adoption of distance education. While some teachers viewed distance education positively, they generally emphasized problems such as network problems, education, and awareness. Another study examined the perspectives, attitudes, and readiness of university students towards distance education during the pandemic process (Lall & Singh, 2020). As a result of the examination, it was seen that students developed a positive attitude towards distance education due to the flexible learning opportunities. Xie and Yang (2020) examined students' homework during the pandemic and introduced measures for students to study independently.

In this context, in Turkey, various studies have been conducted on different samples to describe the general situation (Bozkurt, 2020; Can, 2021; Özalkan, 2021; Sezgin, 2021). Additionally, there are studies that focus on the work and processes of academicians related to the distance education process (Çardak & Güler, 2022; Dikmen & Bahçeci, 2020; Kurnaz & Serçemeli, 2020; Saruç & Aslantürk, 2021; Şen & Kızılcaoğlu, 2020; Temel & Önürmen, 2022). The results of the study that examined the distance education activities of accounting department academicians revealed that the academicians quickly adapted to the process and considered themselves competent, but they saw the disorder in student-teacher communication as the most significant problem (Kurnaz & Serçemeli, 2020). In another study, the perspectives of academicians on the positive and negative situations they experienced in this process were examined. The removal of the time-space barrier and the strict use of technology were described as positive, while social interaction barriers and infrastructure deficiencies were described as negative situations (Şen and Kızılcaoğlu, 2020). Çardak and Güler (2022) emphasized that the academicians in the Faculty of Education were not prepared for this process beforehand and that they lacked experience in teaching with distance education. They also faced challenges related to competence, infrastructure, technological deficiencies, and various administrative processes. Dikmen and Bahçeçi (2020) examined the strategies of universities regarding pandemic process distance education activities and suggested adapting the programs, having qualified manpower, increasing technological literacy, and implementing emergency action plans in the process of integrating education systems with distance education. Temel and Önürmen (2022)

argued that the success of distance education is linked to the success of visual and audio materials but highlighted that the face-to-face education model is predominantly preferred. Additionally, they stated that the practical or theoretical course is the most important criterion in determining distance education activities.

Parallel to the studies conducted by researchers, significant decisions were made in education and training environments in government and private institutions with the onset of the pandemic in Turkey. Weekly lesson programs in primary, secondary, and high schools were restructured, and education was provided through the Educational Information Network (EBA) and television. A national channel called EBA TV was launched for everyone to benefit from distance education, where common courses are taught according to a determined program, suitable for all levels. Internet access for all EBA activities is provided by telephone operators. This way, students were supported to continue their education (MEB, 2020). Universities have also switched to distance education with the Senate's decisions. Each university has switched to a hybrid or completely distance education approach based on its own infrastructure. At this point, teachers and academicians tried to adapt themselves and their lessons to these educational processes. While universities are introducing new models, many have conducted their courses through online lectures, recorded videos, and homework sharing.

Research Purpose

This study aims to examine the perspectives of academicians on distance education given during the COVID-19 pandemic. It reports the perspectives of academicians who are actively involved in the distance education process, which is implemented for the first time at the national level by the higher education institution.

Significance of Research

It is expected that this research will contribute to the studies to be carried out in fields such as educational technologies and distance education in order to carry out distance education efficiently and to make necessary arrangements or improvements. The literature review has shown that the studies on the subject are limited, and the existing studies generally cover undergraduate and graduate level university students (Lall & Singh, 2020). This study is also important in terms of contributing to the relevant literature as it includes the perspectives of academicians working in different undergraduate departments.

Problem Statement

What are the perspectives of the academicians who teach at the higher education institution on the distance education activities of the pandemic process?

Research Sub-Questions

1) How do academicians find the infrastructure of their universities in the distance education process?

2) Do academicians think that their activities in the distance education process can be sustained after the pandemic?

3) What are the deficiencies that academicians have identified in the distance education process?

4) How do academicians find the quality of distance education activities during the pandemic period?

5) How do academicians find measurement and evaluation practices in distance education activities during the pandemic period?

6) What are the academicians' ideas about a model that will be an alternative to distance education models?

Assumptions

It is assumed that the perspectives obtained from the academicians participating in the research reflect the facts and that the answers are sincere. it is believed that the interview form created based on expert opinions is suitable for addressing the purpose and sub-problems of the study and measuring the desired features.

Limitations

The data obtained from this research are limited to the perspectives of the academicians working in the education faculty of a state university located in a province in the south of Turkey within the body of the Council of Higher Education.

Method

Philosophy of Research

At the beginning of the twentieth century, qualitative research started to emerge in psychology, sociology, and anthropology as a way to understand the complex structure of human life and the aspects that did not align with a positivist approach to human beings. Qualitative research is known by various names, such as "natural research" due to its focus on natural phenomena, "interpretive research" due to the researcher's subjective viewpoint, and "field research" due to its in-depth analysis of a subject in a particular social environment (Baltacı, 2017). Qualitative research is a method that enables researchers to question, interpret, and understand the problem in its natural

environment (Klenke, 2016). These studies rely on data collection forms like interviews, observations, and document analysis to gain insights into and solve problems that have not been previously discovered (Seale, 1999).

Research Model and Design

The survey model is a research method that aims to reveal a situation that has happened in the past or continues today (Karasar, 2007). In this study, the situations experienced by the academicians during the pandemic were described as they were, without any attempt to influence or change them, using the case study descriptive/descriptive case study sub-design, which is a type of qualitative research method. According to Saban and Ersoy (2016), a case study is a research design that allows the evaluation of any situation from the perspective of an individual, group, or society. The descriptive/descriptive case study sub-design is a purely descriptive process that brings together and interprets similar views to provide information about a situation (Davey, 2009; Aytaçlı, 2012). The case study involves determining a research situation and limiting it to its own environment, listing the cases related to this situation, examining the situation and obtaining data, analyzing the data and presenting findings, and finally discussing the results (Carla, 2018).

Participants

Within the scope of the research, 24 academicians with different titles and experiences were consulted. In the determination of these participants, homogeneous case sampling, one of the purposive sampling methods, was used. While purposive sampling allows for in-depth research of information-rich situations, the ideas and thoughts of similar individuals are examined with homogeneous situation sampling, which is one of its sub-branches (Büyüköztürk, Akgün, Demirel, Karadeniz, & Çakmak, 2017). For this purpose, academicians working in the education faculty of a state university in the south of Turkey are the participants in the research. Demographic information of the participants is given in Table 1.

Table 1.

Demographic information of the participants

Variable	Category	Frequency
Gender	Female	11
	Male	13
Title	Professor	6
	Associate	11
	Assistant Professor	5
	Lecturer	2
Distance education experience before the pandemic	Yes, long period of time	1
	Yes, short period of time (at least two semesters)	6
	No	17

Data Collection

The data for the research were collected using online structured interview forms. During the data collection phase, the researchers contacted the academicians and provided support in response to any questions they had about the interview form.

Data Analysis

In this study, in which the perspectives of academicians on the pandemic period distance education process are tried to be revealed, firstly, frequency percentage values are given over multiple-choice questions. In the second stage, the opinions obtained from the academicians were subjected to content analysis within the sub-theme-code relationship. Frequency and percentage values for sub-themes and codes to be created for each sub-problem are given. Then, direct quotations were made from the participant's perspectives on the relevant codes and sub-themes, and examples were given.

Validity and Reliability of the Research

To ensure the validity and reliability of this qualitative study, we have implemented several steps based on recommendations from the literature. To enhance internal validity, we employed long-term interaction and reduced participant bias by providing verbal and written support during the data collection process. We also took measures to prevent misunderstandings and promote participant honesty. Additionally, we emphasized that participants were free to leave the study at any time. For external validity, we utilized purposive sampling, which allowed us to limit the participants and obtain data that was relevant to our research question.

To improve reliability, we adopted data-driven triangulation and investigative triangulation methods, which are recommended in the literature (Streubert & Carpenter, 2011). Data-driven triangulation involves using a wide range of data sources. In this study, we included opinions from participants with different titles and levels of experience in distance education. Investigative triangulation involved individual analysis and interpretation of the data by the authors, which was then combined to enhance the validity of the findings.

Moreover, the use of appropriate and reliable research tools is crucial to ensuring the psychometric qualities of the research (Yin, 2009). In this study, we used pre-applied interview questions and determined the research methodology and data analysis techniques in consultation with experts in the field. By implementing these measures, we believe that our study is valid, reliable, and provides valuable insights into the perspectives of academicians on the distance education process during the pandemic.

Findings

This part of the study presents the results obtained from the analysis of data collected from the participating academicians through content analysis technique. The findings are substantiated with examples of statements provided by the participants.

Figure 1.

Perspectives of the academicians on the infrastructure of the universities in the distance (online) education process

The perspectives of academicians on the infrastructure of their universities during the distance education process are categorized under six headings, as shown in Figure 1. The title most frequently expressed by academicians is "Encountering problems in synchronous education." In this regard, academicians stated that the high number of students in universities could lead to issues, there is a security problem in the platforms offered for synchronous courses, and both university and student infrastructure need strengthening to teach synchronous courses. Another issue brought up by academicians is "exam security." They highlighted problems and security gaps in exams and stated that they encountered problems with the system that would ensure the safe and fair conduct

of exams. "Inadequacy in connection quality and facilities" is another topic that emerged from the academicians' statements. Academicians characterized this situation as a significant issue they encountered in distance education applications during the pandemic process, emphasizing student-related connection problems and the inadequacy of their opportunities. Under the theme of "the necessity of integration of supporting programs/software," the academicians declared that they require utilities/software to create course registrations, process courses, and carry out editing processes, but the universities are unable to meet these needs. Alongside this, academicians also stated problems in filing course records, uploading course materials to the system, and keeping them due to "inadequacy in file management and storage capacity." Another heading expressed by the academicians under this theme is "failure to provide adequate infrastructure." In this title, academicians stated that although this situation was understandable at the beginning of the pandemic, their existing infrastructure for continuing the process and post-pandemic sustainability was not at the desired level.

The statements of some academicians regarding the topics that emerged under this theme are as follows:

"With our current infrastructure, we may have problems in very crowded classrooms at the undergraduate level. However, it is sufficient for graduate level courses." (K3)

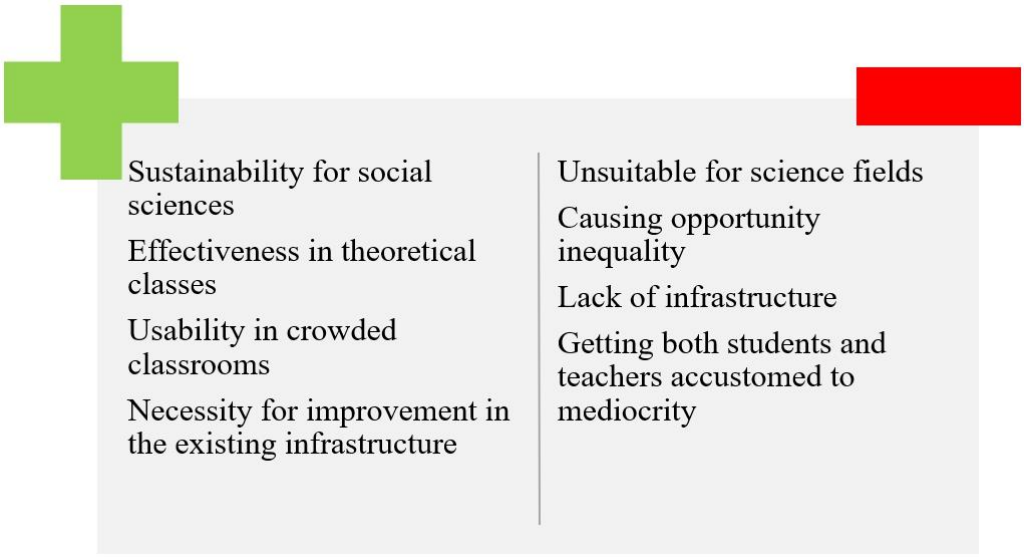
"We did not have a problem in terms of internet connection for distance education. There was no technology-related problem in the use of Teams and Asos platforms. However, the lack of a system that allows students to be observed during the exam is problematic in terms of fairer conduct of the exams. If it continues, I find it sufficient." (K23)

"I think that the infrastructure is insufficient due to the news in the press that the programs used for synchronized lessons are also safe." (F8)

"It wasn't bad for a short time. There is a need for more practical programs for video shooting and editing. And applications that can replace wood." (K2)

Figure 2.

Perspectives of academicians on the sustainability of distance education practices for the post-pandemic period



When examining the perspectives of academicians on the sustainability of distance education practices for the post-pandemic period (See Figure 2), it was found that their perspectives could be grouped into two categories: positive and negative. Under the positive perspectives, one of the titles was "Sustainability for Social Sciences," in which the academicians highlighted the appropriateness of distance education applications for the fields of social sciences. They stated that if the process continues in this manner, distance education applications can be implemented in departments within this field. Another positive perspective was "Effectiveness in theoretical classes." The academicians noted that distance education applications are more efficient in theoretical lessons, and some suggested adopting a hybrid teaching model whereby theoretical courses could be done through distance (online) education, and practical courses could be done in person at universities. They also pointed out that distance education applications could be useful in crowded classrooms after the pandemic. The need for improvement in existing infrastructure was another positive aspect of distance education applications, according to some academicians. They acknowledged that distance education applications could be used after the pandemic, and that the existing applications are sufficient, but improvements and upgrades must be made to the existing infrastructure to enhance the education-teaching process. The negative aspects of distance education applications included "Unsuitable for Science Fields," "Causes Opportunity Inequality," "Lack of Infrastructure," and "Getting Both Students and Teachers Accustomed to Mediocrity." Academicians expressed their perspective that distance education applications may not be effective in digital fields such as medicine or engineering, and that there may be inequalities among students in terms of accessing classes and acquiring the necessary devices. Additionally, some academicians indicated that their existing infrastructure was not prepared to handle the process due to a lack of infrastructure. Furthermore, there were concerns that distance education applications might encourage mediocrity among both students and teachers in certain situations.
The statements of some academicians regarding the topics that emerged under this theme are as follows:

"I think it is sustainable. Social sciences are very convenient for online courses." (K20)

"Although not for every course, it may be sufficient for courses based on theoretical knowledge." (K23)

"I think that at least some sections or subjects of theoretical courses are sustainable, especially when there are large classes." (K21)

"Existing infrastructures are sustainable, provided that they are improved. Because the feasibility of distance education has been seen." (K13)

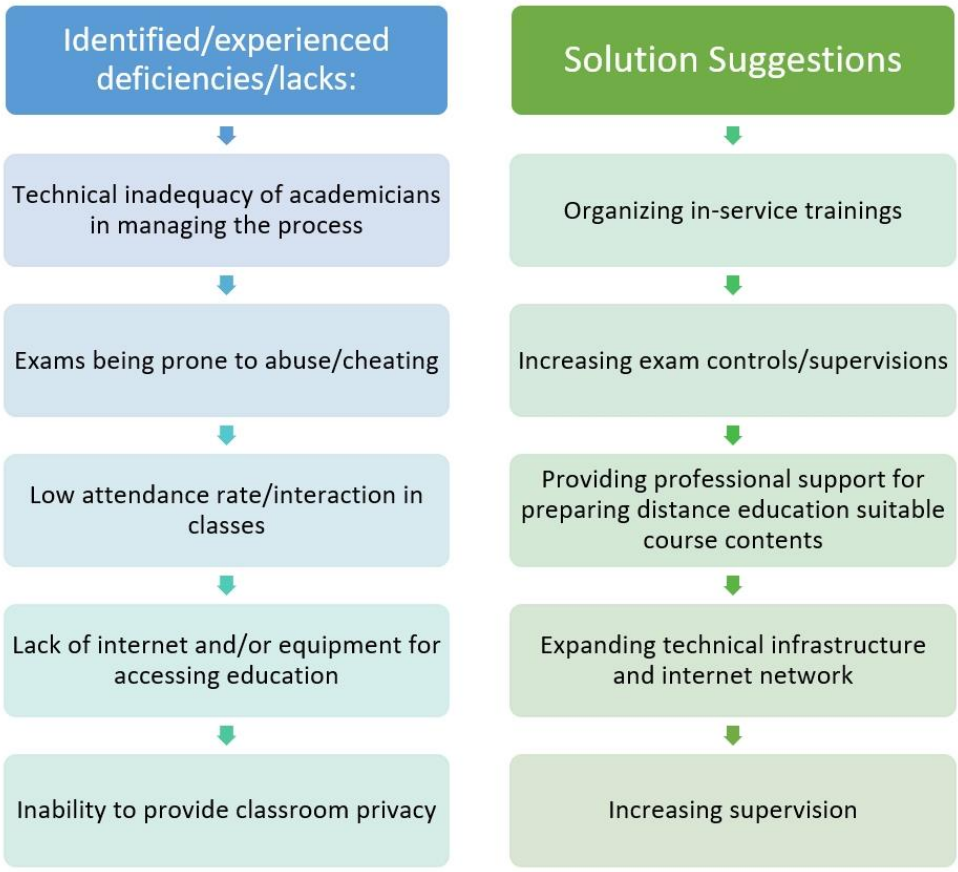
"It's sustainable but I don't think it can be effective in fields like education, medicine or engineering." (K19)

"In the beginning, it is not compulsory but can be started with volunteer teachers and it can become widespread over time. If the infrastructure problem is also solved, why not?" (F7)

"Partly, it is not a suitable application for every course. It is less applicable to numerical divisions." (12)

Figure 3.

The shortcomings and solution suggestions that academicians have identified/experienced in the distance education process during the pandemic period



When examining the shortcomings experienced in distance education applications during the pandemic period, along with proposed solutions (see Figure 3), the statements of the academicians were discussed under ten headings- five of which addressed deficiencies and five that offered solutions. The most prominent issue was "the technical inadequacy of the academicians in managing the process". Academicians who experienced technical problems in the rapid transition to distance education due to the pandemic suggested that "in-service training" be organized by relevant university units and systematically carried out to eliminate this problem. Another shortcoming mentioned by the academicians was "exams being prone to abuse/cheating". The academicians noted that their current opportunities did not provide a solution in this regard, and that students were cheating in an organized way through social media platforms by sharing answers to questions. They offered the solution of "increasing exam controls/supervisions" by experts experienced in technology to address this issue. Academicians also noted a low rate of participation/interaction in courses, which they attributed to the pandemic. They suggested that providing professional support for the preparation of course content suitable for distance education could overcome this issue and increase participation rates. The lack of internet and/or equipment for students to access education was another shortcoming experienced by academicians. While they believed this deficiency could be solved to a certain extent by expanding technical infrastructure and internet networks, they acknowledged that a complete solution might be difficult to achieve. Fewer academicians expressed concern about the lack of privacy in the classroom. They noted that course recordings and interviews about courses were shared on the internet, and that this deficiency could be addressed by increasing supervision related to distance education courses.

Some participant statements regarding the topics that emerged under this theme are as follows:

"Lack of infrastructure and insufficient training of academic staff on this subject" (K13)

"Exams are uncontrolled. Being very open to student abuse. The camera open exam system was better. Students have technical problems during the exam. During this time, the faculty member is dealing with both conducting the exam and dealing with problems from many students. Very low online course participation of students. The interaction is very low." (K23)

"There are tens of thousands, perhaps more, individuals who do not have access to education. Cheated in exams. Questions were answered jointly through Whatsapp groups." (K16)

"Yes there is. Programs can be organized to increase the knowledge level of instructors related to distance education." (K4)

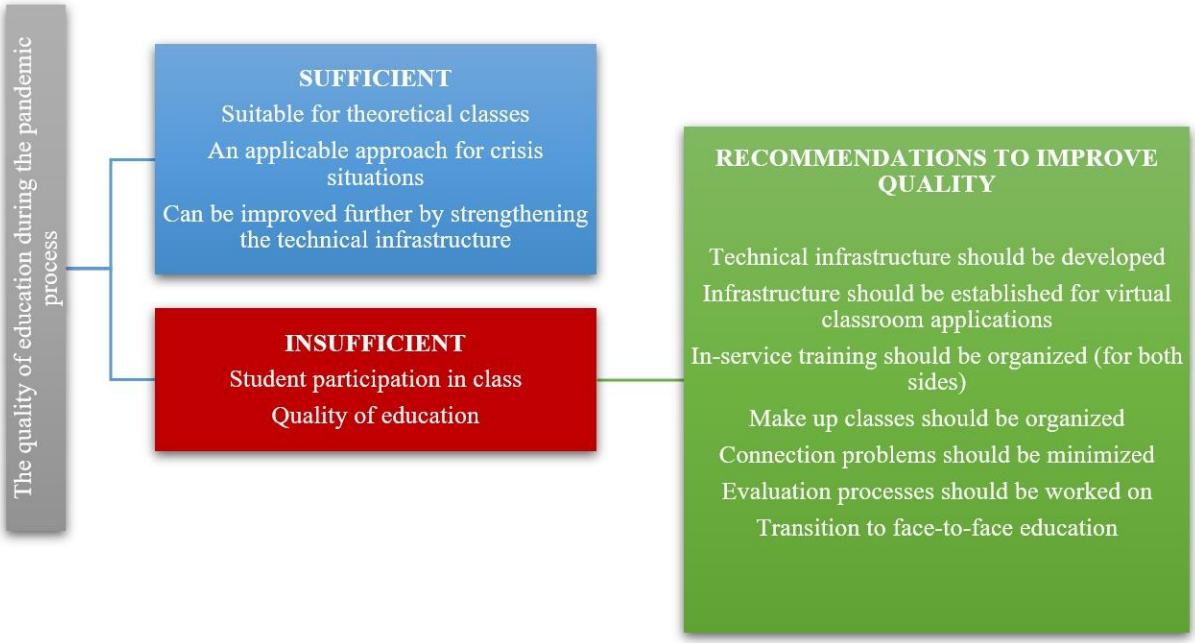
"The system should be developed and experts in the field of CEIT should work" (P6)

"Online course contents should be prepared more professionally. For example, lecture recordings are made in a studio and all students are connected to this recording live." (K20)

"…a good preparation should be made, the seriousness of the situation should be explained to the students. Examinations should be conducted under supervision. (K18)

Figure 4.

Perspectives of academicians on the quality of education and training during the pandemic process and their suggestions to increase the quality



When examining the perspectives of academicians on the quality of education and training during the pandemic process (see Figure 4), two different perspectives (sufficient-insufficient) are apparent. Ten academicians found the quality of education and training during the pandemic process to be sufficient, stating that distance education applications are suitable for theoretical courses and that it is a viable approach for crisis situations. They also noted that technical infrastructure can be strengthened and improved. In contrast, fourteen academicians gave negative perspectives, indicating that this situation stemmed from issues that emerged, especially in terms of student participation and teaching quality. Academicians have put forward seven suggestions for increasing the quality of the education-teaching process. The most prominent suggestion among these is the development of technical infrastructure. The academicians emphasized that this situation should be improved for both students and academicians to achieve an education-training process at the desired level. Another significant suggestion is to create an infrastructure for virtual classroom applications. Due to the quick transition to distance education caused by the pandemic, academicians have suggested that in-service training is also necessary to increase the quality of education. They added that not only they themselves, but also students, should receive in-service training on this subject. Other suggestions to increase the quality of education include organizing make-up lessons, minimizing connection problems, working on evaluation processes, and transitioning to face-to-face education. Academicians who think that the desired level of

educational activities could not be achieved during the pandemic process stated that this situation should be supported with make-up lessons. The academicians who were faced with infrastructure-related problems emphasized that connection problems should be eliminated. Academicians who encountered issues during the examination process stated that conducting studies on evaluation processes would be possible to increase the quality of education. Another noteworthy issue among the suggestions was the opinion that the transition to face-to-face education could increase the quality of education.
The statements of some academicians regarding the topics that emerged under this theme are as follows:

"I find it suitable for theoretical courses. Evaluation processes should be worked on." (K12)

"Of course, it is not possible to achieve the quality of face-to-face teaching. However, it is a viable approach in crisis situations such as epidemics." (K21)

"I think the level was medium. As the technical infrastructure develops, it progresses." (K2)

"As the priority is survival, the quality of education has decreased in distance education. In order to increase the quality in this process, first of all, as a country, everyone should have technical opportunities. Like a tablet, computer or internet…" (K24)

"The quality cannot be said to be good. Face-to-face training should come." (K5)

"Not enough. Education infrastructure should be established." (K9)

"It should be compensated later or postponed" (K11)

Figure 5.

Deficiencies identified/experienced by academicians regarding the distance education measurement and evaluation practices during the pandemic period, and suggestions for eliminating the deficiencies

When examining the deficiencies identified/experienced by academicians in relation to distance education measurement and evaluation practices during the pandemic period (see Figure 1), it becomes apparent that their perspectives can be gathered under five headings. Of these topics, the most frequently mentioned was the difficulty in preventing cheating incidents. Academicians noted that the systems they used in the distance education process were insufficient in this regard and that students cheated in various ways, including sharing exam answers with each other. Consequently, they reported that a sound evaluation could not be made, as stated in the second heading. Another issue encountered during exams was an increase in plagiarism, as students shared previously published studies or authors' views as their own on assignments/projects. Academicians also stated that cheating was most often encountered in exams consisting of multiple-choice questions and that there was a significant security problem in such exams. Another issue that emerged was an increase in replica assignments, with academicians stating that plagiarism was the cause and that some students submitted the same

assignment on behalf of multiple individuals. To address these issues, academicians offered eight suggestions. The first suggestion was to receive support for authentic evaluation. They also stated that increasing control mechanisms would contribute to the measurement and evaluation process. Some academicians suggested research-oriented evaluation and using project/homework-based assessment and evaluation applications as a solution to the inability to eliminate system deficiencies. Others suggested managing the exam process with technical personnel who know the exam system, especially in cases where technical problems cause lecturer-related issues. Developing alternative systems for project/homework applications was also suggested, though no perspective was expressed on how the system should function or what features it should contain. Some academicians recommended that students receive education on ethical issues to address the increase in plagiarism. Finally, using question types that require individual study was also proposed as a way to improve the measurement and evaluation processes.

The statements of some academicians regarding the topics that emerged under this theme are as follows:

"There is a bigger problem than the problems encountered in the lessons. A controllable and objective measurement is not feasible. A solution does not seem possible through known methods." (F8)

"It is very difficult to make a healthy assessment in the current conditions." (K15)

"Unfortunately, I had a big problem with assessment and evaluation. Students copied both from each other and from websites. Since they did not know what the ethical rules were while preparing the homework, it was a purely show evaluation." (K20)

"It is not possible to prevent copying and plagiarism." (K3)

"Support should be obtained from assessment and evaluation experts for authentic assessment. A system should be created to focus on learning instead of grades in structuring exams or assignments." (K16)

"There should be control mechanisms, and students should be educated on ethical issues." (K6)

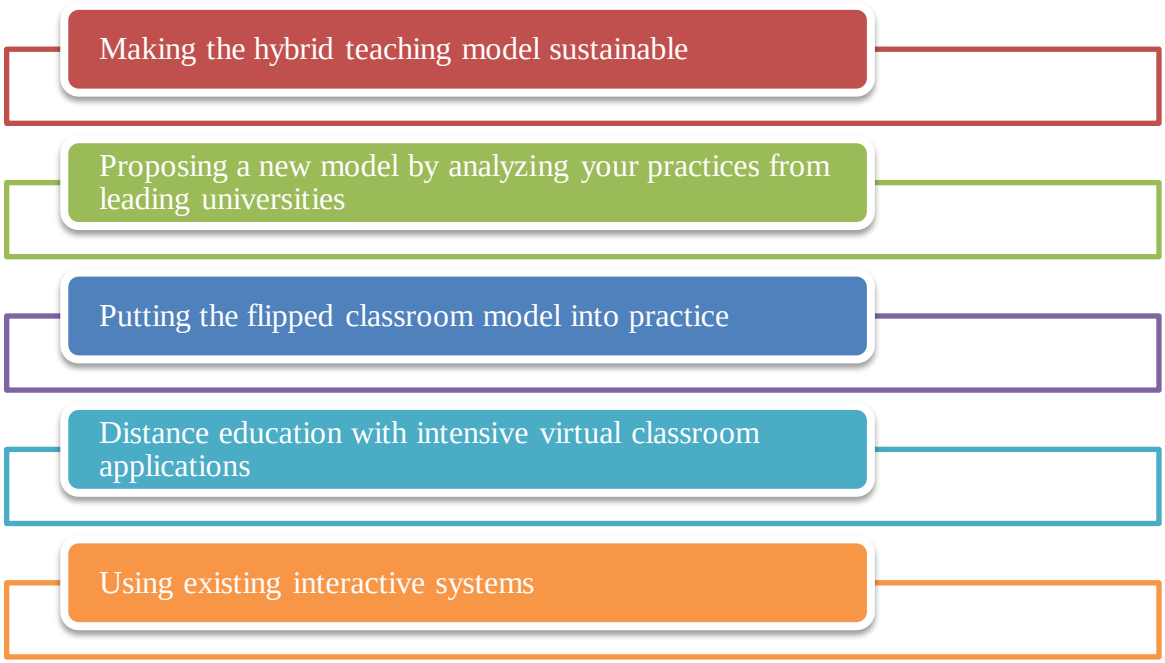
"Infrastructure should be created for alternatives for homework." (K9)

"Evaluation with a time limit or for research" (K22)

"There is no way to avoid copying. So the question types should change in a way that makes individual study essential." (K2)

Figure 6.

Model suggestions of academicians for distance education applications



When examining the model suggestions of academicians for distance education applications (See Figure 6), it was determined that their perspectives were gathered around six suggestions. The most prominent suggestion was the sustainability of the hybrid teaching model. Some academicians suggested that face-to-face education could be included in theoretical courses for distance education applications, while others proposed a course-based planning approach, where some courses could be given remotely and some face-to-face. Another suggestion was to analyze the practices of leading universities and present a new model accordingly. It was emphasized that examining the practices of distinguished universities abroad would contribute to putting forward a new model. The flipped teaching model, where course activities are done through distance education and homework is done face-to-face, was also suggested by some academicians. Another suggestion was to integrate technology into the distance education process by launching virtual classroom applications and intensifying distance education with such applications. The final suggestion was the use of existing interactive systems. Some academicians expressed that integrating these systems into the education and training process could be considered a new model, emphasizing that there are platforms that would contribute to the effective and efficient execution of the distance education process, but different applications exist in universities.

The statements of some academicians regarding the topics that emerged under this theme are as follows:

"For undergraduate programs with large classes, diluted face-to-face classroom applications based on the hybrid model will be the subject of online teaching of the group, except for face-to-face classroom applications in these classes." (K21)
"Obviously, I think it is necessary to benefit from the methods used by distinguished universities such as Harvard in this regard. Because their experience is greater than ours and their infrastructure is more advanced than ours." (K20)
"Hybrid and flipped classroom model" (K18)
"I think it's a semi-remote model. Intensified distance education with virtual classroom application. It can solve the problems I mentioned." (K6)
"Existing models can be learned well and remedial approaches can be developed through them." (K4)

Conclusion, Discussion and Recommendations

This study examined the perspectives of academicians on distance education activities during the pandemic process. The study followed a case study design, which is one of the qualitative research methods, and collected data through structured online interview forms from 24 academicians working at the Faculty of Education of a state university in the south of Turkey. The data were analyzed using the content analysis technique, and the findings were presented in the form of themes and sub-themes, supported by figures and the perspectives of the academicians. Based on the findings, the following conclusions were drawn:

First of all, the study determined the perspectives of the academicians on the infrastructure of the university in the distance education process. Ten of the participants found the infrastructure of the university they work for to be sufficient during the pandemic process, while fourteen stated that the infrastructure provided was insufficient. As a result of the thematic analysis of the perspectives of the academicians, six themes were identified. The most prominent among these themes was the problem of encountering problems in synchronous education. The academicians who expressed their perspectives on this theme stated that they faced problems in synchronous lessons due to the high number of students, security issues on the platforms offered for synchronous lessons, and the insufficient infrastructure of both themselves and the students to be able to connect to the lessons. Another theme was exam security problems. The common view of the academicians who expressed their perspectives on this theme was that they faced security issues in the exams they administered through the platforms they used during the pandemic process. The academicians who shared their perspectives on the events they detected/experienced stated that they faced many security issues during the exam process, from sharing the answers to the exam questions in pre-formed groups to a common exam solution, from simultaneous solution of the questions to the delivery of previous projects by plagiarism. A third theme identified from the perspectives of the academicians regarding the infrastructure of the university they work for during the pandemic process was the lack of connection quality and facilities. In this theme, academicians who associated the problems they encountered mostly with student-related connection problems and inadequacies characterized this issue as one of the most

important problems they faced during the pandemic process. The fourth theme was named "the necessity of integration of supporting programs/software". The academicians who stated that they needed auxiliary programs that would facilitate their teaching, presentation, and evaluation processes in distance education applications during the pandemic process emphasized that they did not receive the desired level of support in this regard. In the fifth theme, "Inadequacy in file management/storage capacity", academicians stated that they had insufficient capacity for storing and filing courses and course resources online. The sixth and final theme was the inability to provide infrastructure competence, which is directly related to the first research question and other themes. Expressing that this situation can be understood due to a rapid transition to the pandemic process and being caught unprepared, the participants stated that if the current process continues and distance education becomes permanent, it may be insufficient, and therefore improvements and developments should be made.

In the second research question, the study examined the perspectives of academicians on the sustainability of distance education applications for the post-pandemic period. The perspectives of the academicians were gathered under two sub-themes, positive and negative features. Academicians who believed that distance education practices were sustainable for the post-pandemic period presented four sub-reasons for their perspective. The most significant reason among these was that distance education practices are sustainable in the social sciences. Academicians also stated that distance education applications are effective in theoretical courses. They emphasized that these applications are more suitable for theoretical lessons, while they pointed out that they may not be as effective in applied lessons. This finding of the study is consistent with the findings of the study conducted by Akyürek (2020). In the related research, it was revealed that while distance education provides some opportunities for theoretical courses and disciplines, it has limitations for applied courses, and therefore, it may not be as effective in these courses. Another reason put forward by academicians was that distance education applications can be used in crowded classrooms. They also stated that face-to-face lessons could be continued in groups consisting of a small number of students, such as in graduate courses, elective courses, etc. Academicians who showed the effect of the current pandemic conditions from their perspective believed that distance education applications could be used in groups where lessons are taught in crowded classes in the post-pandemic period. Another positive perspective presented was that distance education applications would be sustainable for the post-pandemic period due to the necessity of improving the existing infrastructure. In this view, academicians stated that universities raise their infrastructure features to a certain level, albeit unprepared; this infrastructure can be used after the pandemic. However, they also mentioned that the existing systems need development and improvement. On the other hand, the perspectives of academicians who believed that distance education applications could not be sustainable for the period after the pandemic were grouped under four headings. The most prominent among these was the perspective that distance education applications are unsuitable for science fields. Academicians stated that although distance education applications have shown significant improvements compared to the pre-pandemic period, they are not yet suitable for numerical fields. Another negative

perspective was that distance education applications create inequality among students, as students have different socio-economic characteristics and conditions. Academicians underlined that distance education applications could cause this problem if they are used in the post-pandemic period. Another negative view put forward was that the existing distance education infrastructure does not have the level of infrastructure that can sustain such a process, in other words, there is a lack of infrastructure. Academicians stated that this lack of infrastructure exists both at the level of universities and at the level of students and that distance education practices cannot be sustainable for the post-pandemic period unless this situation is resolved.

In the third research question, academicians were asked about deficiencies they identified or experienced in distance education practices during the pandemic and their suggestions for solutions to overcome these deficiencies. As a result of examining the perspectives of the academicians, the study identified five deficiencies and five solutions to eliminate them. The first deficiency was the technical inadequacy of academicians in managing the process. The academicians stated that they were unfamiliar with the process due to the pandemic and suggested organizing in-service trainings to increase their competence in distance education applications to avoid this deficiency in the future. This finding differs from that of Kurnaz and Serçemeli (2020) who examined the perspectives of academicians on distance education. They found that although the participants adopted distance education practices, their self-efficacy for managing the self-process and using the system was high. In the study conducted by Huber and Helm (2020), it was seen that teachers had technological inadequacies. Comparing teachers from different nationalities, researchers revealed that Swiss and Austrian teachers achieved more successful results in terms of technology use in distance education compared to German teachers, emphasizing the necessity of in-service training to develop these skills. Another shortcoming identified by academicians was that exams were prone to abuse/cheating. Academicians stated that they frequently encountered acts of cheating and plagiarism and suggested that exam supervision should be increased and deterrent measures taken in the future. Academicians also considered the low rate of participation/interaction in the courses in the distance education process an important shortcoming. In this regard, they referred to their lack of preparing courses suitable for distance education and stated that professional support should be provided for the preparation of course contents suitable for distance education. A more difficult problem identified by academicians was the lack of internet access and/or equipment for students to access education. Academicians suggested expanding the technical infrastructure and internet network as a solution. Similar findings were revealed in different studies on distance education, where infrastructure and connection problems were found to negatively affect the process and quality of distance education. Finally, the academicians identified the lack of privacy in the classroom as a deficiency, as students shared images and files related to the course on different platforms. They suggested that universities increase supervision on this issue to provide a solution.

In the fourth research question, the study examined the perspectives of academicians on the quality of education and training during the pandemic process and their suggestions

to increase its quality. The findings revealed that there were two different perspectives on the quality of education: adequate and insufficient. Those who believed that the quality of education was sufficient stated that the distance education applications were suitable for theoretical courses and that they benefited from them significantly. They also emphasized that distance education applications play a life-saving role during the pandemic process and that they have more ideas about distance education applications and opportunities due to the COVID-19 pandemic. Some academicians suggested that the process could be made more efficient by strengthening the existing infrastructure. In contrast, those who believed that the quality of education was not sufficient emphasized two points: student participation and the quality of teaching. They offered different solutions to increase the quality, with the development of technical infrastructure being the most suggested among them. Academicians also suggested in-service training for students and themselves, organizing make-up lessons, minimizing connection problems, and working on evaluation processes as ways to increase the quality of distance education. One academician suggested that in order for education to reach the desired level of quality, it is necessary to switch to face-to-face education. Similar findings were reported by Yılmaz et al. (2021) and Karakuş et al. (2020) who underlined the low motivation of students to participate in the course, the desire of the students to return to face-to-face education, the infrastructure problem and the unsuitability of the courses for distance education as reasons why efficiency could not be obtained.

In the fifth research question, the deficiencies identified and experienced by academicians regarding distance education measurement and evaluation practices during the pandemic period, as well as their suggestions to overcome these deficiencies, were examined. The issue most frequently mentioned by academicians was the difficulty they experienced in preventing cheating. Another related concern was the inability to make accurate evaluations. This finding about distance education exams has also been reported in previous studies (Asma, 2021; Cabı, 2016; Can, 2020; Karatay, Kaya, & Başer, 2021; Ünsal, 2021), which stated that the security problem remains a significant challenge in online measurement and evaluation applications. Academicians also identified an increase in plagiarism as another deficiency. According to them, students present ideas and findings that do not belong to them as their own, taken from various sources, and present them as homework or projects to the academicians. Furthermore, academicians reported a security problem in multiple-choice tests, which was related to the difficulty in preventing copying incidents. They stated that the structure of multiple-choice tests facilitated cheating, as cheating groups were established, and the exam questions' answers were shared in these groups. Another shortcoming identified by academicians was the increase in replica assignments. Students share the same assignment among themselves and submit the same assignment on behalf of multiple students, creating problems for academicians. Academicians suggested eight different solutions for eliminating these deficiencies. The most frequent suggestion was to seek professional support for authentic evaluation. In addition to this, academicians suggested increasing control mechanisms, encouraging research-oriented evaluation, conducting exams with technical personnel familiar with the system, using project or homework-based assessment applications, developing alternative systems for project or

homework applications, training students on ethical issues, and asking questions that require individual work. They stated that implementing these steps can eliminate the identified deficiencies.

In the sixth and final question of the research, academicians were asked for model suggestions for distance education applications. The most frequently expressed suggestion by academicians was to make the hybrid teaching model sustainable. They suggested that this process could be done in different ways, such as using distance education for theoretical courses and face-to-face education for applied courses or by planning on a course-by-course basis. Another model suggestion was to analyze the practices of leading universities and reveal a new model. Therefore, examining the practices of leading universities abroad was suggested. The academicians also suggested that putting the flipped teaching model into practice in distance education would contribute to the management of the process, as it focuses on individual work and foresees that theoretical knowledge is carried out in the classroom environment. This model is similar to the hybrid teaching model and is currently being used in certain groups and working environments and being researched in national and international studies. The academicians also stated that intensifying the distance education process with virtual classroom applications would help increase the quality of education, student motivation, and the rate of participation in the course. The final suggestion of the academicians was to use existing interactive systems. They emphasized the necessity of ensuring the integration of these systems into the process, as there are systems that allow distance education to be maintained interactively, but universities put forward different practices in this regard.

Recommendations

The research used a case study design, one of the qualitative research methods, and collected qualitative data to achieve the research objectives. In future research, quantitative data or mixed research designs, which blend quantitative and qualitative data, can be used to reach more people and reveal data on different aspects of the current situation.

The research results indicate that both academicians and students have experienced infrastructure-related problems that negatively affected the education and training process. To avoid similar situations in the future, the Information Technologies and Communication Institution can conduct an investigation to map the existing infrastructure and improve activities in regions where infrastructure is insufficient and the number of students is high. A similar application to the tablet distribution application provided by the Fatih Project under the coordination of the Ministry of National Education can also be applied for students in higher education, particularly those with low socio-economic status, in relation to the infrastructure.

Exam security was one of the remarkable findings in the research and it is essential to take steps to address this issue. To do so, support can be obtained from IT technical personnel and software developers working within authorized institutions to develop software that limits students' movements during exams and prevents the exchange of information from different platforms. TÜBİTAK's projects such as 1001 – Scientific and Technological Research Projects Support Program can be applied to provide financial support for this process.

The research revealed a lack of utilities for online education, as lessons were conducted in the form of an online adaptation of face-to-face lessons, not tailored to the online environment. To address this issue, workshops on the theme of digital transformation in education can be organized. Reports obtained from these workshops can be used to determine the features of auxiliary programs that will make lessons more effective and enjoyable. Related programs can then be introduced to the education community with the support of IT technology experts.

In the study, academicians stated that there was an increase in homework with high replica and plagiarism rates. To address this issue, universities can make differences in the scope of the exam and in the types of questions. Additionally, free plagiarism detection programs can be provided to universities to resolve this situation, and the quota limit in agreements with existing plagiarism detection programs can be removed. To avoid causing financial difficulties for universities, such programs can be developed within the body of CHE, and universities can be given the right to use them.

While the research highlights the unpreparedness of both academicians and students for online education, it also suggests that the rapid pace of technological development necessitates greater proficiency among both groups. To this end, it is suggested that educators gain experience in online teaching by mandating that they deliver at least one online course per year.

Ethics Committee Approval: This study was approved by the Ethics Committee of Akdeniz University Ethics Committee's with the decision date 21.08.2020 and numbered E-25/08/2020-89533.

Informed Consent: An informed consent was obtained from all participants prior to their inclusion in the study.

Peer-review: Externally peer-reviewed.

Authors' Contributions: Data Collection-B. A., I.H.T.; Analysis and Interpretation- B. A., I.H.T.; Literature Review-I.H.T.; Proofreading and Editing -B.A.; Critical Review-I.H.T.

Conflict of Interests: The authors have no conflict of interest to disclose.

Financial Disclosure: The authors declared that this study has received no financial support.

References

Akinbadewa, B. O., & Sofowora, O. A. (2020). The effectiveness of multimedia instructional learning packages in enhancing secondary school students' attitudes toward Biology. *International Journal on Studies in Education (IJonSE), 2*(2), 119-133. https://doi.org/10.46328/ijonse.19

Akyürek, M. İ. (2020). Uzaktan eğitim: Bir alanyazın taraması. *Medeniyet Eğitim Araştırmaları Dergisi*, *4*(1), 1-9. https://dergipark.org.tr/tr/pub/mead/issue/56310/711904

Almaghaslah, D., & Alsayari, A. (2020). The Effects of the 2019 Novel Coronavirus Disease (COVID-19) Outbreak on Academic Staff Members: A Case Study of a Pharmacy School in Saudi Arabia. Risk management and healthcare policy, 13, 795–802. https://doi.org/10.2147/RMHP.S260918

Al-Husban, N. A. (2020). Critical thinking skills in asynchronous discussion forums: A case study. *International Journal of Technology in Education (IJTE), 3*(2), 82-91. https://doi.org/10.46328/ijte.v3i2.22

Albalawi, A.S. (2018). The effect of using flipped classroom in teaching calculus on students' achievement at University of Tabuk. *International Journal of Research in Education and Science (IJRES), 4*(1), 198-207. https://www.ijres.net/index.php/ijres/article/view/187

Alharthi, M. (2020). Students' attitudes toward the use of technology in online courses. *International Journal of Technology in Education (IJTE), 3*(1), 14-23. https://ijte.net/index.php/ijte/article/view/18

Asma, K. (2021). Öğretmen ve öğrencilerin görüşleriyle yabancı dil öğretimde çevrimiçi sınav uygulamalarının incelenmesi: Bir durum çalışması [Yayımlanmamış yüksek lisans tezi]. Akdeniz Üniversitesi, Eğitim Bilimleri Enstitüsü.

Aytaçlı, B. (2012). Durum çalışmasına ayrıntılı bir bakış. *Adnan Menderes Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Dergisi*, *3*(1), 1-9. https://dergipark.org.tr/tr/download/article-file/399478

Baltacı, A. (2017). Nitel veri analizinde Miles-Huberman modeli. *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *3*(1), 1-14. https://dergipark.org.tr/tr/pub/aeusbed/issue/30008/290583

Bayburtlu, Y.S. (2020). Covid-19 pandemi dönemi uzaktan eğitim sürecinde öğretmen görüşlerine göre Türkçe eğitimi. *Turkish Studies*, *15*(4), 131-151. https://dx.doi.org/10.7827/TurkishStudies.44460

Birişçi, S. (2013). Video konferans tabanlı uzaktan eğitime ilişkin öğrenci tutumları ve görüşleri. *Journal of Instructional Technologies and Teacher Education*, 2(1), 24-40. https://dergipark.org.tr/tr/pub/jitte/issue/25080/264691

Bozkurt, A. (2020). Koronavirüs (Covid-19) pandemi süreci ve pandemi sonrası dünyada eğitime yönelik değerlendirmeler: Yeni normal ve yeni eğitim paradigması. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, *6*(3), 112-142. https://dergipark.org.tr/en/pub/auad/issue/56247/773769

Büyüköztürk, Ş., Akgün, Ö. E., Demirel, F., Karadeniz, Ş., & Çakmak, E. K. (2015). Bilimsel araştırma yöntemleri.

Cabı, E. (2016). Uzaktan eğitimde e-değerlendirme üzerine öğrenci algıları. *Yükseköğretim ve Bilim Dergisi*, *6*(1), 94-101. https://doi.org/10.5961/jhes.2016.146

Can, E. (2020). Coronavirüs (Covid-19) pandemisi ve pedagojik yansımaları: Türkiye'de açık ve uzaktan eğitim uygulamaları. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, *6*(2), 11-53. https://dergipark.org.tr/tr/pub/auad/issue/55662/761354

Çardak, U., & Güler, Ç. (2022). Uzaktan eğitim ve uzaktan öğretmen yetiştirme bağlamında akademisyen uygulama, görüş ve önerileri. *Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, *19*(Özel Sayı), 323-353. https://dergipark.org.tr/tr/pub/yyuefd/issue/68424/1068111

Davey, L. (2009). The Application of Case Study Evaluations. Elementary Education Online, 8(2), ç:1-3.

Dikmen, S., & Bahçeci, F. (2020). Covid-19 pandemisi sürecinde yükseköğretim kurumlarının uzaktan eğitime yönelik stratejileri: Fırat Üniversitesi örneği. *Turkish Journal of Educational Studies*, *7*(2), 78-98. https://dergipark.org.tr/tr/pub/turkjes/issue/54378/721685

Günbayı, İ. ve Işık, Ö. (2013). Kitle iletişim araçlarının eğitime etkilerine ilişkin yönetici, öğretmen, öğrenci ve veli görüşleri: Bir durum çalışması. *Akdeniz Üniversitesi İletişim Fakültesi Dergisi*, (20), 105-139. https://dergipark.org.tr/tr/pub/akil/issue/48086/608044

Gökdaş, İ. ve Kayri, M. (2005). E-öğrenme ve Türkiye açısından sorunlar, çözüm önerileri. *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, 2*(2), 1-20. https://dergipark.org.tr/tr/pub/yyuefd/issue/13720/166071

Harrison, T.R., & Lee, H.S. (2018). iPads in the mathematics classroom: Developing criteria for selecting appropriate learning apps. *International Journal of Education in Mathematics, Science and Technology (IJEMST), 6*(2), 155-172. https://doi.org/10.18404/ijemst.408939

Hilton, J.T., & Canciello, J. (2018). A five-year reflection on ways in which the integration of mobile computing technology influences classroom instruction. *International Journal of Technology in Education (IJTE), 1*(1), 1-11. https://www.ijte.net/index.php/ijte/article/view/1

Holloway, I., & Wheeler, S. (1996). *Qualitative research for nurses*. Oxford: Blackwell Science Ltd.

Horspool, A., & Lange, C. (2012). Applying the scholarship of teaching and learning: Student perceptions, behaviours and success online and face-to-face. Assessment & Evaluation in Higher Education, 37(1), 73-88. http://dx.doi.org/10.1080/02602938.2010.496532

Huber, S. G., & Helm, C. (2020). COVID-19 and schooling: evaluation, assessment and accountability in times of crises—reacting quickly to explore key issues for policy, practice and research with the school barometer. *Educational Assessment, Evaluation and Accountability*, *32*(2), 237-270. https://doi.org/10.1007/s11092-020-09322-y

İşman, A. (2011). *Uzaktan eğitim*. Pegem Akademi.

Kaden U. (2020). COVID-19 school closure-related changes to the professional life of a k–12 teacher. Education Sciences, 10(6), 165. https://doi.org/10.3390/educsci10060165

Karadağ, E. ve Yücel, C. (2020). Yeni tip Koronavirüs pandemisi döneminde üniversitelerde uzaktaneğitim: Lisans öğrencileri kapsamında bir değerlendirme çalışması. *Yükseköğretim Dergisi*, *10*(2), 181-192. https://doi.org/10.2399/yod.20.730688

Karakuş, N. Ucuzsatar, N. Karacaoğlu, M. Ö. Esendemir, N. ve Bayraktar, D. (2020). Türkçe öğretmeni adaylarının uzaktan eğitime yönelik görüşleri. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, (19), 220-241. https://doi.org/10.29000/rumelide.752297

Karasar, N. (2007). *Bilimsel araştırma yöntemi: kavramlar, ilkeler, teknikler*. Nobel Yayın Dağıtım.

Karatay, H., Kaya, S. ve Başer, D. (2021). Türkçenin yabancı dil olarak öğretiminde uzaktan eğitime yönelik öğrenci görüşleri. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, (24), 223-232. https://doi.org/10.29000/rumelide.995286

Kürtüncü, M. ve Kurt, A. (2020). Covid-19 pandemisi döneminde hemşirelik öğrencilerinin uzaktan eğitim konusunda yaşadıkları sorunlar. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, COVID-19 özel sayısı 2 , 66-77. https://dergipark.org.tr/tr/pub/asead/issue/54658/725503

Kurnaz, E., & Seçmeli, M. (2020). Covid-19 pandemi döneminde akademisyenlerin uzaktan eğitim ve uzaktan muhasebe eğitimine yönelik bakiş açilari üzerine bir araştırma. *Uluslararası Sosyal Bilimler Akademi Dergisi*, (3), 262-288. https://dergipark.org.tr/tr/pub/utsobilder/issue/55152/741358

Lall, S., & Singh, N. (2020). COVID-19: Unmasking the new face of education. *International Journal of Research in Pharmaceutical Sciences, 11*(SPL1), 48-53. http://dx.doi.org/10.26452/ijrps.v11iSPL1.2122

MEB (2020). Bakan Selçuk, Koronavirüs'e karşı eğitim alanında alınan tedbirleri açıkladı. http://www.meb.gov.tr/bakan-selcuk-koronaviruse-karsi-egitim-alaninda-alinan-tedbirleri-acikladi/haber/20497/tr

Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same?. *The Internet and Higher Education*, *14*(2), 129-135. https://doi.org/10.1016/j.iheduc.2010.10.001

Özalkan, G. Ş. (2021). Uzaktan eğitimde ölçme ve değerlendirme: Pandemi sürecinde sosyal bilimler eğitimini yeniden düşünmek. *International Journal of Economics Administrative and Social Sciences*, *4*, 18-26. http://ijeass.gedik.edu.tr/en/download/article-file/1547485

Saruç, S., & Aslantürk, H. (2021). Covid-19 pandemi sürecinde Türkiye'de sosyal hizmet eğitiminin sosyal hizmet akademisyenleri perspektifinden değerlendirilmesi. *Toplum ve Sosyal Hizmet*, *32*(2), 421-438. https://dergipark.org.tr/tr/pub/tsh/issue/62060/849278

Seage, S. J., & Türegün, M. (2020). The Effects of Blended Learning on STEM Achievement of Elementary School Students. *International Journal of Research in Education and Science*, *6*(1), 133-140. https://doi.org/10.46328/ijres.v6i1.728

Seale, C. (1999). Quality in qualitative research. *Qualitative inquiry*, *5*(4), 465-478. https://doi.org/10.1177%2F107780049900500402

Serçemeli, M. ve Kurnaz, E. (2020). Covid-19 pandemi döneminde öğrencilerin uzaktan eğitim ve uzaktan muhasebe eğitimine yönelik bakış açıları üzerine bir araştırma. *Uluslararası*

Sosyal Bilimler Akademik Araştırmalar Dergisi, *4*(1), 40-53. https://dergipark.org.tr/tr/pub/utsobilder/issue/55152/741358

Sezgin, S. (2021). Acil uzaktan eğitim sürecinin analizi: Öne çıkan kavramlar, sorunlar ve çıkarılan dersler. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, *21*(1), 273-296. https://dergipark.org.tr/tr/pub/ausbd/issue/60870/902616

Streubert, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing*. (5th ed.). Philadelphia: Lippincott Williams ve Wilkins.

Şen, Ö., & Kızılcalıoğlu, G. (2020). Covid-19 pandemi sürecinde üniversite öğrencilerinin ve akademisyenlerin uzaktan eğitime yönelik görüşlerinin belirlenmesi. *International Journal of 3D Printing Technologies and Digital Industry*, *4*(3), 239-252. https://dergipark.org.tr/tr/pub/ij3dptdi/issue/57949/830913

Temel, F., & Önürmen, O. (2022). Pandemi Sürecinde Yükseköğretim Kurumlarında Uzaktan Eğitim: İletişim Akademisyenlerinin Uzaktan Eğitime Bakışı. *Yükseköğretim Dergisi*, *12*(1), 89-101. https://dergipark.org.tr/tr/pub/yuksekogretim/issue/70252/1129720

Thompson, V. L., & McDowell, Y. L. (2019). A case study comparing student experiences and success in an undergraduate course offered through online, blended, and face-to-face instruction. *International Journal of Education in Mathematics, Science and Technology (IJEMST), 7*(2), 116-136. https://ijemst.net/index.php/ijemst/article/view/551

UNESCO (2020). *COVID-19 educational disruption and response*. https://en.unesco.org/covid19/ educationresponse

Urdan, T. A., & Weggen, C. C. (2000). *Corporate E-learning: Exploring a New Frontier*. WR Hambrecht & Co./Equity Research.

Uşun, S. (2006). *Uzaktan eğitim*.Nobel Yayın.

Ünsal, A. (2021). COVID 19 Pandemi döneminde çevrimiçi muhasebe eğitiminin ZOGA analizi. *Sosyal Araştırmalar ve Davranış Bilimleri*, *7*(13), 451-470. https://doi.org/10.52096/jsrbs.6.1.7.13.22

Yılmaz, H., Sakarya, G., Gayretli, Ş. ve Zahal, O. (2021). Covid-19 ve çevrimiçi müzik eğitimi: okul öncesi öğretmen adaylarının görüşleri üzerine nitel bir çalışma. *Journal of Qualitative Research in Education*, *28*, 283-299. https://doi.org/10.14689/enad.28.12

Yin, R. K. (2003). *Case study research: Design and methods*. Sage Publications.

WHO (2020). *Coronavirus disease 2019 (COVID-19) Situation Report–1*. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10_4

Xie, Z., & Yang, J. (2020). Autonomous learning of elementary students at home during the COVID-19 epidemic: A case study of the second elementary school in Daxie, Ningbo, Zhejiang province, China. *Best Evidence in Chinese Education*, 4(2), 535–541. https://dx.doi.org/10.2139/ssrn.3555537

Zhong, R. (2020). *The coronavirus exposes education's digital divide*. https://www.nytimes.com/2020/03/17/technology/china-schools-coronavirus.html

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