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Analysis of distance education activities conducted during COVID-19 pandemic

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It could be suggested that the covid-19 pandemic, which initially emerged in China and then affected the whole world, negatively affected several aspects of life since it halted life globally. One of these aspects is education. Education that usually takes place in various learning environments at schools had to be conducted from a distance after the pandemic. This requirement imposed certain responsibilities on students, teachers and parents, who are among the most important variables in education, and also led to problems in educational activities. Due to these developments, the present study aimed to analyze the educational activities conducted in Turkey during the pandemic. The analyses were conducted on the views of the participating teachers assigned with the purposive sampling method. The main objective of this work done is to analyze the outbreak of Covid-19 process and the remote training activities regarding teachers in Turkey. In the present qualitative study, the data collected with a semi-structured interview form developed by the authors are presented in the findings section based on the sub-themes analyzed with content analysis. The current study findings revealed that the teachers of various disciplines who were included in the study group stated remarkable views on the education conducted during the covid-19 pandemic. Recommendations are also presented based on the study findings.

Key words: Covid-19, pandemic, distance education, teacher, view.

INTRODUCTION

A review of the human life pyramid, which is one of the variables with the highest impact on the change and transformation of globalization, would demonstrate that humankind experienced several epidemics and pandemics caused by different pathogens in history. Examples of these epidemics include Black Plague, Cholera, Yellow Fever, Smallpox, Hong Kong Flu, SARS, MERS, Spanish Flu and Ebola. The common feature of these epidemic diseases, which could easily turn into a pandemic and have high mortality rates, is that these diseases are all induced by zoonotic pathogens that are transmitted by animals to humans (Koçer, 2020). The term zoonosis was first introduced in the 19th century. It could be suggested that with the introduction of the term by Rudolf Virchow, the health correlation between animals and humans became a prominent research topic

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(CDC, 2017).

In addition to the above-mentioned diseases, COVID - 19 was the last disease that has been effective on the world since December 2019 and was declared as a pandemic by World Health Organization). COVID-19 disease is claimed to have originated at Huanan Seafood and Live Animal Market, which is a livestock market in Wuhan, China, in December 2019 (Tesini, 2020; Üstün and Özçiftçi, 2020). Despite the fact that the origin of the pathogen virus, which immediately became an epidemic, was not objectively determined by the scientific community, several people claimed – albeit non evidence – that the disease was caused by contact with the animals sold in the above-mentioned market and their consumption. This virus (2019-nCoV) was first diagnosed in Hubei province in China in late 2019 in a group of patients with pnömoni, by a professional team of physicians, scientists and epidemiologists in about 9 days as a coronavirus that has not previously been detected in humans. The disease was christened as "COVID-19" (Akpınar and Üstün, 2020).

According to the data published in the official WHO website as of May 26, 2020, the number of global covid-19 cases was 5.404.512, while the number of people who died from the disease was 343.514 (WHO, 2020). Due to the case and death incidence of the COVID-19 epidemic, which has been increasing globally every day, it was considered as a pandemic, and several countries closed their borders to the outside world and quarantined their nation. Since these decisions were based on isolation, they led to panic and anxiety around the world, and to support the "stay at home" calls, countries temporarily interrupted formal education activities in several fields, and turned to the distance education method. It was observed that the student population, which has been away from school in more than 188 countries affected by the pandemic, corresponded to 91% of the total global student population (UNESCO, 2020; Emin, 2020).

The distance education activities were adopted to maintain educational activities in countries that were affected by the epidemic by the transfer of the course content and relevant materials to the digital environment. The term "distance education (DE)" was coined in the 1892 University of Wisconsin Catalog, and first mentioned in an article authored in 1906 by the administrator of the same university, William Lighty (Kaya, 2002). Later on, the term was adapted to German (Fernunterricht) by educator Otto Peters in the 1960s and 1970s and to French (Teleenseignement) by distance education institutions in France (Verduin and Clark, 1994; Kaya, 2002).

The United States Distance Learning Association (USDLA, 2004) defined distance education as access to education using tools such as satellite, audiovisual, graphical, computerized, and multimedia, etc. technologies. Distance education includes activities such as multimedia-based education, interactive learning-

instruction and guidance, keyboard control, e-learning independent of time and space, interactive classroom management, digital transfer and exams (Guo, 2010; Guohong et al., 2012). It could be suggested that distance learning has several advantages over traditional classroom education. These advantages include the utilization and sharing of several resources at the same time, interactive collaborative sharing and interaction in the learning-teaching process (Guo, 2010). There are several application examples in the world and digital educational activities take place in several forms. A National Distance Education University was established in Spain to conduct these activities. Similarly, distance education courses (Coursera, EDX, Udacity, Open Yale Courses, Teamtreehouse, etc.) were organized by several educational platforms globally (Samigulina and Samigulina, 2016).

Today, educational knowledge and instruction methods are very important indicators of social development (Collins et al., 2016). It could be suggested that societies who are aware of these indicators tended to conduct instructions on web-based digital environments during the Covid-19 outbreak. In the present study conducted to comprehensively analyze this trend, the views of teachers, who are among the important variables in distance education, were employed.

Aim of the study

The aim of the present study was to analyze the educational activities conducted during the Covid-19 pandemic based on the views of teachers across Turkey. Thus, the following research questions were determined:

(i) In your opinion, what are the most important characteristics of distance education adopted during the pandemic?
(ii) What are your criticism and recommendations about the instruction of the courses instructed with distance education during the pandemic?
(iii) Do you think the resources and material used in the courses instructed with distance education during the pandemic are adequate, why?
(iv) What should be done to improve the efficiency of the distance education system adopted during the pandemic?

METHODOLOGY

The present study aimed to determine teacher views on distance education activities conducted during the Covid-19 pandemic in Turkey is a qualitative study. The methodological stages of the present study are presented in Figure 1.

Research design

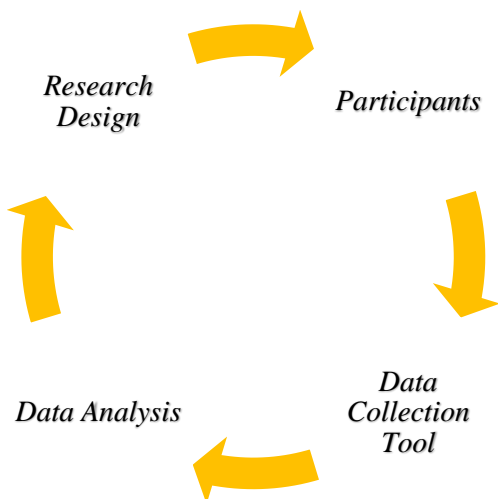The present study aimed to determine teacher views on distance
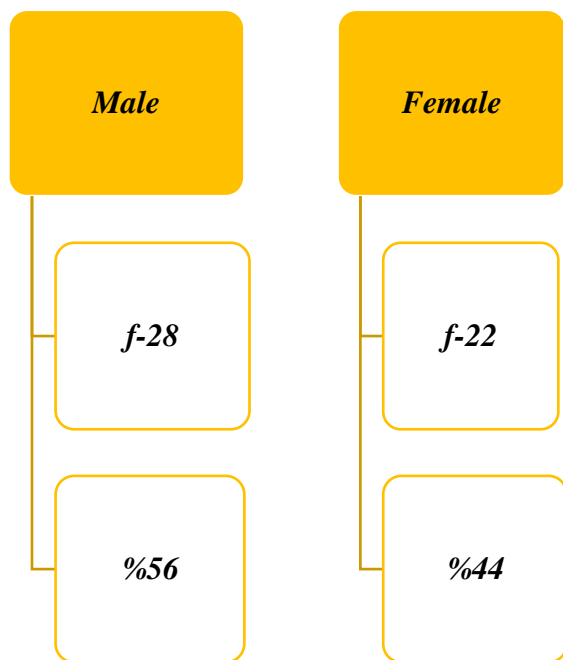
Figure 1. The study methodology.

Figure 3. The distribution of participant disciplines.

Figure 2. The distribution of the participants based on gender.

the facts and not to generalize (Göçer, 2013).

Participants

In the present study that aimed to determine teacher views on distance education activities conducted during the Covid-19 pandemic in Turkey, the participants were assigned with purposive sampling method. The selection criterion was employment in public schools in different provinces in Turkey. The participating teachers were selected from different locations to collect study data that could represent the whole Turkey. Fifty teachers who were employed in various public schools in Turkey were selected. The participant demographics are presented in Figures 2 and 3.

As seen in Figure 2, the majority of the teachers who in the study group were males. This could be explained by the voluntary participation principle in the study. The review of Figure 3 where the distribution of participating teacher disciplines demonstrated that the disciplines of the teachers who supported the study with their views included six disciplines that covered primary, middle and high schools in Turkey.

Data collection instrument

The data for the analysis of distance education activities during the Covid-19 pandemic were collected by obtaining the views of teachers employed in various schools in Turkey. A semi-structured interview form developed by the authors was used to collect teacher views. The semi-structured interview form was developed by determining the questions based on the aim of the study. The principles adopted when determining the questions included the development of easy to comprehend questions, open-ended questions, focused questions, avoidance of guidance, multi-dimensional questions, and logical organization of the questions (Yıldırım and Şimşek, 2011; Koçoğlu and Egüz, 2019). The developed interview was submitted to measurement and evaluation specialists employed in Inonu University in Turkey to ensure the

education activities conducted during the Covid-19 pandemic in Turkey was designed with the phenomenology research design. The phenomenology design focuses on cases that we are aware of but do not have an in-depth and detailed understanding of. Facts could be in various forms such as events, perceptions, trends, concepts and situations. Phenomenology is an adequate basis for research on topics that are not entirely unknown but could not be fully grasped (Yıldırım and Şimşek, 2011; Göçer, 2013). In this model, the researcher is interested in the subjective experiences of the participants and examines the perceptions of the individuals and the meanings they assign to the events. Phenomenology is a descriptive research method. Thus, the method aims to describe

Table 1. The views of participating teachers on the features of distance education.

Theme: Important Features of Distance Education		
Sub-Themes	**f**	**%**
G.1. Accessibility and flexibility	13	26
G.2.Popularity and resource sharing	7	14
G.3.Interaktive software infrastructure	12	24
G.4.Availability of live classroom education	10	20
G.5.Access to virtual resources	8	16
Total	50	100

content validity of the interview form. The semi-structured interview form was finalized based on the expert views and suggestions. The final form included 4 questions. All questions in the semi-structured interview form were provided in writing to the participants in an interactive environment and the participants answered the questions also in writing, which were then collected and analyzed by the authors.

Data analysis

In the study, after the views of the participant teachers in the study group were collected with the semi-structured interview form, the responses were grouped under certain themes with the content analysis technique. The semi-structured interview forms were analyzed qualitatively. Data were analyzed by computer. The findings obtained with data analysis and the developed sub-themes are presented with computer-generated figures. Sub-themes were determined by the authors based on the similar study group participant responses to the questions in the semi-structured interview form. To ensure the data reliability, expert opinions were obtained. The sub-themes associated with the main themes in the study were developed based on the recommendations of the experts. In the study, the responses from the participating teachers were given to the experts whose opinions and suggestions were used in the study, and the findings were asked to be themed with the content analysis technique. By comparing the sub-themes obtained by the experts and those reached by the researchers, the themes that constitute the study findings were reached. The themes that were determined based on the analyses were classified and visualized to demonstrate the correlations. The number of participants (frequency) that stated the theme that reflected the correlations determined during the classification, the percentage of these participants, and similar views were grouped as G.1, G.2, and G.3, presented in the tables in the findings section. Furthermore, selected direct participant quotes were also presented.

FINDINGS

The important features of distance education

In the study, the responses of the participants to the question "In your opinion, what are the most important characteristics of distance education adopted during the pandemic?" included in the semi-structured interview form were analyzed with content analysis method and the findings are presented in Table 1.

As seen in Table 1, the contributing teachers had various and remarkable views. The findings on the participating teacher views, similar to most countries in the world, on the features of distance education adopted during the pandemic are presented in Table 1 as 5 sub-themes. Although each sub-theme was important since it included different evaluations and generalizations, it was observed that the most frequent sub-theme in the study was "accessibility and flexibility". This could be due to the fact that this type of education was popularized in Turkey, similar to other nations, and anyone who desires to utilize distance education could benefit from it to improve their knowledge in any field. A sample of participating teacher views based on the findings detailed in Table 1 is presented below:

"I only knew about the distance education concept by name. After the Covid-19 pandemic, I was alienated with the regular instruction in formal education. So, as you can understand, due to necessity, distance education became the center of our lives. Thus, I can answer the question you ask by stating the availability of this form of education at different times and locations" (Participant 3).
"I was not unfamiliar to distance education due to my discipline. I am also one of the advocates of the thesis that distance education allows to train students who are really aware of their requirements. I do not think that the current implementation of distance learning is efficient since it is imperative. The most important feature of this education method is the easy access of the student to several web-based resources at the same time" (Participant 17).

Distance education instruction methods implemented during the pandemic

In the study, the responses of the participants to the question "What are your criticism and recommendations about the instruction of the courses instructed with distance education during the pandemic?" included in the semi-structured interview form analyzed and classified under sub-themes, and the findings are presented in

Table 2. The views of participating teachers on distance education instruction methods.

Theme: Distance Education Instruction Methods			
Sub-Themes			
Criticism	**Recommendations**	**f**	**%**
G.1. Slide-based presentation	Participation-based discussion	10	20
G.2.Classical instruction	Student-oriented instruction	12	24
G.3.Teacher-oriented question and answer	Student-oriented/teacher-supervised question and answer	15	30
G.4.Learning by observation	Learning by doing and living with sample cases	5	10
G.5.Stationary content-based instruction	Technology-assisted content instruction	8	16
Total		50	100

Table 2. The analysis of the findings presented in Table 2 suggested that the participant teachers stated similar views in four sub-themes. It could be suggested that they ideated significant criticism and recommendations. Based on these suggestions and criticism, the most frequent views in the criticism sub-theme were about teacher-oriented question-answer instruction and the most frequent recommendation was student- oriented/teacher-supervised question and answer instruction. A sample of participating teacher views based on the findings detailed in Table 2 is presented below:

"During the Covid-19 pandemic, I do not think that the distance education provided in our country was qualified; since the education unfortunately is instructed in our country with teacher-oriented instruction method, which is a traditional approach. The student watches almost like a robot. Instead of this type of instruction, I think that it should involve the student in the process, guide the students through activities and allow them to acquire a sense of responsibility" (Participant 23).
"As a teacher and a father, I can easily say the following: I do not believe that students understand a topic, a content, a case or an event by following it. Independent of the type of education. I think the same is true for distance education. Instead, I think that planning activities on the preparation and repetition of the topic and sharing them with their peers in an interactive environment would increase their learning levels" (Participant 10).

The resources and material employed in distance education during the pandemic

In the study, the responses of the participants to the question "Do you think the resources and material used in the courses instructed with distance education during the pandemic are adequate, why?" included in the semi-structured interview form were analyzed and the findings are presented in Table 3.

Here, where the resources and material employed in distance education implemented in Turkey during the pandemic were analyzed based on teacher views with

content analysis, six sub-themes were identified and are presented in Table 3. It was observed that three of these themes were in the category of "yes" and the other three were in the category of "no". The different approaches of the participant teachers to the topic could be suggested as the reason for this. A sample of participating teacher views based on the findings detailed in Table 3:

"I can say that we spent almost the entire spring term conducting distance education. However, in this process, it was the Ministry of National Education that was more active than us teachers; because, I can say that education was coordinated by the ministry. I do not find the resources and materials used in a distance education process where coordination was conducted by a single center and with only a few resources" (Participant 49).
"During the pandemic, we have been conducting the educational activities with distance education and interactively. First of all, I would like to congratulate our Minister of National Education for allowing fast adaptation to the process and providing necessary infrastructure for the students and parents at home. This process may entail certain problems since it as an obligation. However, I am positive about the question you asked on the subject. In this process, I find the utilized resources and material sufficient since the supervision and evaluation of the students by the teachers were not sufficient" (Participant 35).

The measures that could be adopted to improve the effectiveness of distance education

In the study, the responses of the participants to the question "What should be done to improve the efficiency of the distance education system adopted during the pandemic?" included in the semi-structured interview form were analyzed and the findings are presented in Table 4. In Table 4, it could be observed that the participating teachers developed several recommendations.

The review of Table 4, where the findings about the responses of participating teachers in the final question

Table 3. The views of participating teachers on resources and material employed in distance education.

Theme: The resources and material employed in distance education			
Sub-themes		**f**	**%**
Yes	G.1. Inability to evaluate and monitor	7	14
	G.2. MNE based and controlled	5	10
	G.3. Inability to instruct the course based on resources	10	20
No	G.4. Obligation tu use a single resource and material	10	20
	G.5. Avoidance of interactive material	8	16
	G.6.Passive-avoider teacher traits	10	20
Total		50	100

Table 4. The views of participating teachers on the improvement of the effectiveness of distance education.

Theme: The improvement of the effectiveness of distance education		
Sub-Themes	**f**	**%**
G.1. Improvement of parent participation through teacher-parent communications	5	10
G.2.Internet and technological material support	7	14
G.3.Monitoring the student participation in education	5	10
G.4.Conducting online exams in different intervals	6	12
G.5.Informative instruction on distance education	4	8
G.6.Rich content support to motivate students	5	10
G.7.Temporal freedom in participation to education	3	6
G.8.Development of face-to-face education platforms	4	8
G.9.Learing interaction	6	12
G.10.Development of advanced software	5	10
Total	50	100

on semi-structured interview form were presented, revealed that the responses were diverse and remarkable. It was observed that the frequencies of various responses were similar. However, the analysis the study findings presented in Table 4 demonstrated that small groups of participant views differed in many aspects. This difference could be due to the fact that they developed several suggestions on the topic. A sample of participating teacher views based on the findings detailed in Table 4:

"In my opinion, the process requires consultation. In other words, it requires teacher-parent interaction; because, the student is far away from the supervision and control of the teacher in this process and may not take some activities seriously. However, I think that these student problems are caused by the course teacher and the parents. Therefore, the distance education process should be first taken seriously by teachers and parents, and students should be supported when accessing distance education systems. Distance education should not be left to the discretion of the students, but parents

should organize and supervise the process" (Participant 25).

"Although I have several complaints about this distance education process adopted due to the Covid-19 pandemic, I would like to make a single suggestion. Since, if this proposal will not be implemented, I think that this education could not be provided. My suggestion is to provide the student with free internet and material (computer, tablet, etc.) support for distance education" (Participant 12).

DISCUSSION

Before the conclusion of the study, it could be stated that distance education activities became popular in scientific circles in several countries around the world due to the Covid-19 pandemic (Joswey et al., 2020). The present study was conducted to query several features of this education method due to the popularity of distance education during the pandemic. Thus, in the present study that aimed to analyze distance education

conducted in Turkey during Covidi-19 pandemic based on the views of participating teachers, it was observed that different and remarkable findings were observed (Tables 1 to 4). The study findings were presented as sub-themes under the four themes determined with content analysis. These themes were important features of distance education, the distance education instruction methods adopted during the pandemic, resources-materials used in distance education, and the requirements to improve the effectiveness of distance education.

Among the important study findings were those in the important features of distance education sub-theme. The review of these findings presented in Table 1 revealed that the features of distance education such as accessibility, flexibility, popularity and live classroom instruction were mentioned. This finding was consistent with the reports by Elliot and Miller (1999), Kurbel (2001), Mcluhan (2001), Doyle (2001), Kör et al. (2013) and Kantek (2014) in different periods.

In the present study that aimed to analyze distance education in Turkey during the Covid-19 pandemic, it was observed that significant results were obtained on the instruction of distance education during the pandemic (Table 2). These findings revealed that the participants mentioned both critical views and recommendations about the distance education process in Turkey. It could be suggested that the main theme of the criticisms emphasized by the participating teachers was the uniform content and teacher-oriented traditional instruction. In response to these criticisms, they also proposed suggestions that included student-oriented instruction. This study finding underlined the prominent generalization that "independent of the education system, the student should be put at the center to improve the level of meaningful learning in all systems." It could be suggested that this study finding was consistent with the findings reported by Çalışkan (2002) and Demirci (2003).

One of the significant study findings was the competency of the resources and material utilized in distance education. In the study, it was determined that most participating teachers (f-28) had a negative view about competency. It was observed that the teachers justified this in the sub-themes such as non-sociable and non-creative traits of the teachers, their inability to use interactive resources, and using similar resources in the whole education field (Table 3). On the contrary, the participants who found the materials adequate stated that the levels of resource and material use were similar and learning level could be controlled with measurement and evaluation methods. This study finding could be considered as evidence that the participating teachers were not adequately trained in distance education. Since the transition and implementation of distance learning was not a normal process during the pandemic. When justifying the adequacy of the resources and material in distance education, conditions in that period such as implementation factors and economic circumstances

should be taken into consideration.

Among the prominent findings on the implementation of distance education in Turkey during the pandemic based on the views of teachers were those about the measures that should be taken to improve distance education. The analysis of the findings demonstrated that the participants proposed important recommendations about the distance education process (Table 4). These recommendations included face-to-face live courses, technology-assisted education, improved content instruction, communication between the educational components, and activities that would increase student motivation. The review of these findings presented in Table 4 demonstrated that they included suggestions to improve the meaningful learning levels of the students. The present study findings were consistent with those reported by Rusel (1999) as well as Murphy and Crosser (2010). Based on the present study findings,

(i) Due to the public health problems such as Covid-19, Turkey should define technological material and content for distance education infrastructure and update these requirements based on student levels each year;
(ii) The implementation of distance education process should consider application conditions;
(iii) Educational components (student-parent-teacher) should be informed about distance education;
(iv) Material (computers, tablets) should be provided for the students in distance education;
(v) The distance education should include entertaining and motivating content that would increase students' interest in the process.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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