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Teachers' Opinions on the Application, Methods and Techniques Used in the Process of Distance Education

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Abstract

Technological developments have also been effective in the diversification of educational environments. Along with traditional face-to-face education, distance education methods have also started to become widespread with the Information Revolution. Especially during the Covid 19 epidemic, education and training continued through online platforms. Until this date, distance education applications were used in a limited number of private primary and secondary education institutions. For this reason, the number of teachers who had previous knowledge and experience in distance education practices remained extremely low. Therefore, the majority of teachers met with distance education during the pandemic process. This historical pedagogical transformation process is one of the most important breaking points in the history of Turkish and world education. In this research, it will be tried to reveal the opinions of teachers about distance education applications during the Covid 19 pandemic. For this purpose, 10 open-ended questions were asked to the teachers in the study, which was carried out with the phenomenology pattern, which is one of the qualitative research methods. In these questions, teachers were asked about the online platforms used, the educational applications preferred to make the lessons more efficient, their advantages and disadvantages, and whether they meet their learning needs. At the end of the research, most of the teachers stated that face-to-face education is more effective especially in reaching students, but these applications and platforms provide a great advantage especially in order not to interrupt education during the pandemic process.

Keywords: Covid 19, online education, distance education.

Introduction

Following Covid19, schools have started to continue their education and training through online platforms. Furthermore, students (8th and 12th graders), especially those in the stages of high school and university entrance exams, continued their education online for a while and then switched to a hybrid learning system. However, in this process, students and teachers encountered some difficulties. While some of these difficulties are caused by the teacher, others may be caused by physical distance, the tools used for communication and time-related problems (Elcil & Sözen Şahiner, 2014). Problems related to internet infrastructure and technology and deficiencies in the physical environments where students are located have also been effective in the inadequacy of distance education activities (Can & Köroğlu, 2020).

There are universities in our country that provide distance education and fortunately, since they were providing distance education before the pandemic, they continued their activities during the pandemic without any difficulties. However, teachers and students working in preschool, primary and secondary education institutions were inexperienced in this regard because they had not used online learning environments before the pandemic. Both teachers and students did not have sufficient infrastructure to use online learning environments and applications that could make them efficient. Teachers working in public schools tried to adapt to distance learning through in-service training programs organized by MoNE, and teachers working in private schools tried to adapt to distance learning through trainings provided by their institutions.

According to Moore & Kearsley (2011), distance education is a planned learning and teaching activity that can be communicated with the help of educational technologies other than traditional education, where the teaching process can be organized in different places. Distance education is a process that tries to provide equality of opportunity in education, allows people to receive education throughout their lives, and helps to continue education in cases where face-to-face education cannot be

provided by utilizing the opportunities offered by technology (Kaya, 2006). In online learning environments, student participation is both personal and social (Hrastinski, 2009). In these environments, it is important to make students feel like they are part of a community rather than alone. Making students feel like part of a community will positively affect success, interaction and attitude in these learning environments (Haar, 2018; Yılmaz, 2016) Due to factors such as teacher, student's personal characteristics, teaching method, interaction, etc., what students feel in the community also varies (Yıldız, 2020). For this reason, teachers have utilized digital applications and activities that can attract students' interest, increase their motivation, and provide mutual interaction in order to make them feel more comfortable and actively participate in the community. The applications known as Web 2.0 tools, where various games, activities, videos, visuals, presentations, posters, etc. course materials and course environments can be designed, provide significant advantages to teachers. Digital game design techniques were also utilized throughout this process (Şahin at al., 2017). The aim of the study is to identify the online applications that teachers use in their lessons, to determine the teaching processes they apply to make them more effective, and to reveal the advantages and disadvantages of these applications. To this end, the study sought answers to the following questions:

1. Which applications are used in the distance education process?
2. What are the advantages and disadvantages of the applications used?
3. Which applications, methods and techniques are selected to address the different characteristics of students?
4. Do the distance education applications and teacher competencies meet the educational needs?
5. What are the teacher suggestions for eliminating the problems and deficiencies experienced in the distance education process?

Method

The Design of the Study

This study was conducted using phenomenology design, one of the qualitative research methods. Phenomenology research aims to examine phenomena in depth. The aim of this study was to obtain new information about the phenomena that we are aware of or that we are not yet aware of by conducting interviews with individuals and groups (Gürbüz & Şahin, 2018). In addition, a review was conducted based on the experiences (Moustakas, 1994). Therefore the phenomenology study design was preferred for the study herein.

Study Group

The study group was determined by using easily accessible case sampling, one of the purposeful sampling methods (Yıldırım & Şimşek, 2013). In order to collect the data, the researchers sought the opinions of Turkish, Social Studies, Mathematics, Science and Foreign Language teachers working in different private schools in the city center of Istanbul. The opinions of the teachers were obtained on a voluntary basis. Graph 1 shows the professional experience of the teachers.

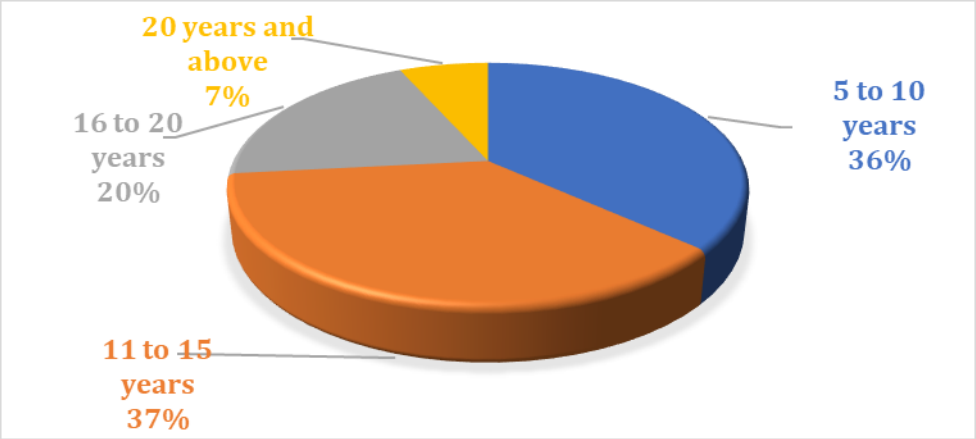

Figure 1. Professional experience of teachers

Of the 30 teachers who participated in the study, 11 had 5 to 10 years of professional experience. 11 of them have 10 to 15 years of professional experience. While 6 of them have 16 to 20 years of professional experience, 2 of them have 20 years or more of professional experience.

Collection of the Data

The teachers who voluntarily participated in the study were sent a google form with 10 open-ended questions in addition to personal information to collect the data. At the beginning of the Google form, there is an explanatory section informing the teachers participating in the research and it is emphasized that participation in the research is voluntary. In addition, the contact information of the researchers was also given so that they could reach them whenever needed.

The first part of the Google form included questions about the participants' personal information such as gender, educational status, professional experience, etc. The second part included questions that could answer the research questions about the applications, methods and techniques used in the distance education process. Among them were questions about the applications and platforms used by the teachers during the distance education period in the schools where they work, online applications that support distance education, advantages and disadvantages of the applications used in distance education, which applications are used by taking into account the different characteristics of the students, whether the applications meet the needs of the students, and the competencies required for distance education. In addition, teachers' suggestions were also sought to make distance education activities more efficient. While preparing the questions, expert opinion was consulted, and the questions were finalized by organizing them according to the suggestions from the experts.

After the questions were completed, they were sent to teachers working in different branches via Google form. The answers received from the teachers were collected. The answers given by the teachers to the questions were recorded and the teachers participating in the study were given pseudonyms as T1, T2, T3, T4, ...

Analysis of the Data

The research data were analyzed using the content analysis method. Content analysis enables the identification of recurring topics, problems or words and concepts among the collected data, determining how many times they are repeated and interpreting the data (Miles & Huberman, 2014). The answers given were grouped and then themes were created and data analysis was completed.

Validity and Reliability

In order to increase the validity and reliability of the research, the data obtained through the google form were also supported by the relevant literature. Then, the answers given to the questions were compared and the consistency of the answers was examined. The research questions were prepared with the help of expert opinion. The draft questions were reorganized in the light of the feedback from the experts and the questions were finalized. After the data were analyzed, the results obtained were shared with the participants and the accuracy of the evaluations was confirmed. While presenting the research findings, comments were supported by including direct quotations from teacher responses.

Ethical Permits of Research

This study complied with all the rules to be followed within the scope of the "Directive on Scientific Research and Publication Ethics of Higher Education Institutions". No actions specified under the second section of the Directive, "Actions Contrary to Scientific Research and Publication Ethics", have been practiced.

Ethics Committee Permission Information:

Name of the committee that made the ethical evaluation = Istanbul Medeniyet University Educational Sciences Ethics Committee

Date of ethical review decision = 17/05/2021

Ethics assessment document issue number = 20/ 05 /2021

Findings

Below, we present teachers' opinions on which applications, methods and techniques are used in the distance education process, whether these applications meet the educational needs, the advantages and disadvantages of the applications, methods and techniques used in this process, and what needs to be done to improve the distance education process and overcome the deficiencies experienced. Firstly, teachers were asked about the system/application through which they carry out the distance education process in the school where they work in the context of research question 1. Graph 2 shows the responses of the teachers.

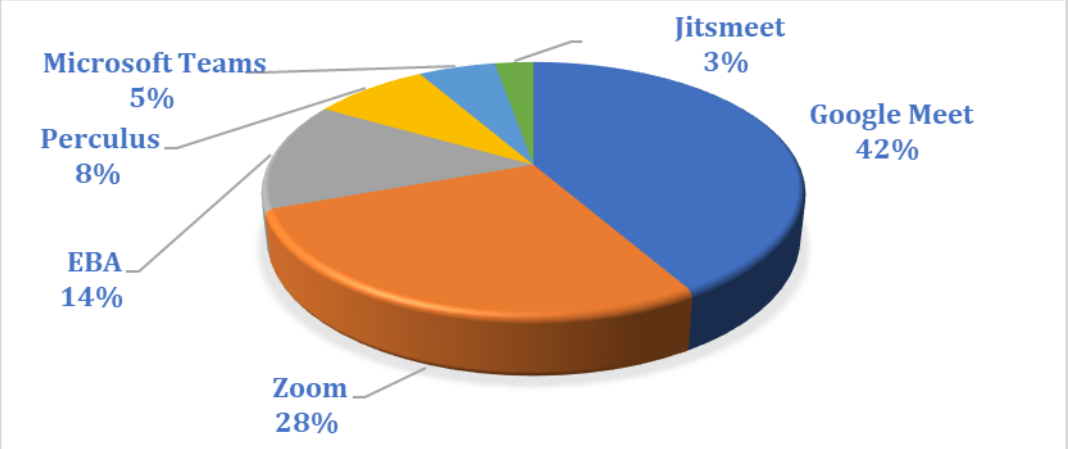

Figure 2. First study question: applications where distance education is conducted

As seen in Graph 2, 42% (f15) of the teachers participating in the study conduct distance education through the "Google meet" application. On the other hand, 28% (f10) of the teachers use "Zoom" application in distance education. Apart from these applications, 14% of teachers use "EBA" (f5) and 8% use "Perculus" (f3) applications. The least preferred applications were "Microsoft Teams" (f2) with 5% and "Jitsmeet" (f1) with 3%.

Teachers try to make their lessons more effective and useful by integrating different online applications with the applications mentioned in Graph 2. Accordingly, the teachers were asked which other online applications they have used in the distance education process. Table 1 shows the teacher responses to the question.

Table 1. *Continuation of the first study question: Other online applications utilized by teachers*

Name of Application	f	Name of Application	f
Google Applications (meet, classroom, drive, slides, forms, Jamboard,	20	Phet simulation	3
Zoom	11	Web 2.0 Tools and videos (youtube)	3
Padlet	8	Teachermade	2
Kahoot	7	Tinkercad	2
Nearpod	5	Teachable Machine	2
Online simulations	5	Kodable	2
Learning Apps	4	Python Code.org	2
Canva	4	Wordwall	2
Edpuzzle	3	Quizlet	2
Whiteboard	3	Kami	2
Flipgrid	3	Khan Academy	2
Quiziz	3	Crame, Edmodo, Active Inspire, Wordcloud, Educandi, Jitsmeet, Liveworksheet, Wizer me, Online Teaching and Assesment Tools, Artsteps, Peardeck, Breakout Rooms, Bambalzo, Blendspace, PPT/Prezi	1

In Table 1, in the category of other online applications used by teachers, the most preferred ones were "Google applications: meet, classroom, drive, slides, forms, jamboard" (f20). This answer was followed by "Zoom" (f11). The other most preferred applications were "Padlet" (f8); "Kahoot" (f7); "Nearpod" (f5); "Online simulations" (f5); "Learning Apps" (f4); "Canva" (f4). The least preferred applications were "Edpuzzle" (f3); "Whiteboard" (f3); "Flipgrid" (f3); Quiz (f3); "Mentimeter" (f3); "Phet Simulation" (f3); other "Web 2. 0 tools and videos (youtube)" (f3) and "Teachermade" (f2); "Tinkercad" (f2); "Teachable Machine"; "Kodable"; "Python Code.org"; "Wordwall" (f2); Quizlet (f2). The applications preferred only once were "Crame" (f1); "Edmodo" (f1); "Active Inspire" (f1); "Wordcloud" (f1); "Educandi" (f1); "Jitsmeet" (f1); "Liveworksheet" (f1); "Wizer me" (f1); "Online Teaching and Assesment Tools" (f1); "Artsteps" (f1); "Peardeck" (f1); "Microsoft Teams" (f1); "Breakout Rooms" (f1); "Bambalzo" (f1); "Blendspace" (f1); "PPT, Prezi, Presentation tools" (f1).

As seen in Table 1, Google applications other than Google Meet are among the other applications used by teachers. The fact that there are more than one application belonging to Google has been effective in teachers' use of other applications other than Google Meet. Teachers preferred to use other Google applications in addition to their own applications even if they did not continue the distance education process through Google Meet. Zoom application is also among the preferred applications in both Graph 1 and Table 1. The reason for this is that even if the teachers do not continue the distance education process through Zoom, they prefer to use it as a supporting application in their studies. For

example, T1, the first teacher who participated in the research, shared that he continued the distance education process through Google Meet, but from time to time they also participated in different studies through Zoom.

The second question asked teachers' opinions about the advantages and disadvantages of all the applications they used for themselves and their students. Table 2 shows the responses from the teachers.

Table 2. *Second study question: Teachers' views on the advantages and disadvantages of the applications used*

Advantages	f	Disadvantages	f
Offers a fun and easy learning environment with online games and different applications and activities (visual and auditory learning)	13	Causes falling behind the teaching plan because it takes time and learning takes time	4
Offers interactive, participatory education	8	Causes students to spend long periods of time in front of the screen	3
Provides effective, permanent information flow through prepared presentations and offers the opportunity for repetition.	5	Students perceive every moment of the learning process as fun and games, and the same activities create a cognitive load on students (Focusing problem)	3
Ensures the continuation of education	5	It becomes difficult for the student to understand instructions and interact with his/her friends	3
Enables students to learn in their own environment	4	Internet connection problems can disrupt education	3
Increases student attention, interest and motivation	4		
Supports individual focus, attention	3		
Gains speed in access to information	3		
Facilitates student follow-up (homework control, achievement tracking), performance evaluation in digital environment	2		

The most important advantage teachers saw was that online games and different applications and activities provided fun and easy learning opportunities (f13). Providing interactive, participatory education was also among the other advantages (f8). The other most preferred advantages were that the presentations provided effective, permanent information flow, that the presentations provided the opportunity for repetition and ensured the continuity of education (f5). Enabling students to learn in their own environment and increasing students' interest and motivation were also among the advantages repeated by four participants (f4). Other advantages include providing support for individual focus and attention (f3) and speed in accessing information (f3). 2 participants saw it as an advantage that it facilitates student follow-up and performance evaluation in digital environment (f2).

T2 mentioned the advantage of the application as "students have the opportunity to respond to the questions asked at the same time and make comments without being affected by each other's answers". It is thought that students can participate in the lessons interactively in this way.

The disadvantages included: lagging behind the program because it takes too much time (f4); causing students to spend time in front of the screen for a long time (f3); perceiving every moment of the learning process as entertainment, game, creating cognitive load, causing focusing problems (f3); students having difficulty in understanding the instructions, decreasing interaction with their friends

(f3); and problems in internet connection disrupting education (f3). 3 participants (T20, T22, T23) did not answer the question at all, while T26 only answered "it is useful".

T3 believes that the applications are advantageous in terms of providing active participation in the lesson and supporting individual learning with the comment "Thanks to these applications, we enable students to participate more actively in the lessons, albeit remotely, and students can learn the acquisitions more effectively with their own applications and answers". T3 commented on the disadvantage of the applications as "...However, we cannot include these applications in every lesson due to time constraints" and stated that more time may be needed in the lessons using the applications.

T14 mentioned that "The applications support the students both aurally and visually" and, like the other 12 participants, stated that students can learn fun and easily. Again, she mentioned the advantages of the applications with the comment: "...They can also be used as student assessment tools..." The same participant stated that there are disadvantages as well as advantages of the applications with the following comment: "...Long videos or complex, more complicated simulations sometimes take a long time for students to learn. In some cases, when students are stimulated with the same application for a long time, it creates a cognitive load on the student and does not support their learning" With this comment, she believes, like the other 3 participants, that the time allocated to the lesson for the applications is insufficient, and like the other 2 participants, she considers that it can be harmful for the student to spend a long time in front of the computer and that the student may face situations where the student has difficulties in learning.

Considering that students may have different characteristics from each other and that the applications used for the course may not appeal to every student at the same rate, the participants were asked whether there were any applications and activities that they had chosen considering the differences of the students and they were asked to share what these applications and activities were. Table 3 shows the findings of the activities that the participants prepared by taking into account the differences of the students.

Table 3. *Third study question: studies appropriate for student differences*

Study / Activity	f
Group Work (GRAPS, Raft, Six Hat Thinking, Menu activities)	6
Questions Suitable for the Level	4
PPT Presentation	3
Video and audio recordings/ Other gamification activities/ Case studies/brainstorming/ various visuals and pictures	3

According to Table 3, teachers mostly stated that they prepared group activities in accordance with student differences (f5). In addition, they stated that they prepared different activities such as GRAPS, Six Hats Thinking, Menu Activities in these group activities. This was followed by questions appropriate to student level (f4) and PPT presentations (f3) and differentiation activities such as "video and audio recordings; other gamification activities; case studies; brainstorming; using various pictures and visuals (f3). 2 participants stated that they did differentiation activities for student differences but did not give any examples. The other 12 teachers either left this question completely blank or stated that they did not work on this educational need.

As can be seen in Table 3, few of the participant teachers stated that they prepared studies for student differences and gave examples of these studies (f16). This suggests that students may

experience deficiencies in terms of the competence to prepare studies for student differences in the distance education process. These deficiencies may be due to the teacher's inability to fully reach the student in the distance education process. Another reason may be that teachers need in-service training on practices, methods and techniques to meet this need.

T14 answered: "I prepare these activities according to students' interests, students' learning methods or students' readiness (academic level). Generally, after applying a quiz or assessment, I group students according to their academic level and do group work with different worksheets and activities." The participant gave GRASPS; Six hat thinking activities and Menu activities as examples of different activities. The other 5 participants also stated that they included the same types of activities in their group work.

T4 shared examples of the applications she used by giving the following answer: "By using gamification in the subjects, they both relieve their stress and learn the subject by playing games. Escape games and wordwall activities are useful for this."

The teachers who shared that they prepare activities in accordance with student differences in their lessons stated that they can usually do group work by creating rooms with Breakout Rooms (f6). They also shared that they could prepare games online through different applications such as Wordwall and Learning Apps and play these games in groups, and that they also used Edpuzzle in their studies (f3). There is also a teacher who stated that by applying Flipped Classroom, students worked with their own groups on online platforms after the lesson and presented the work of these groups during the lesson.

The fourth question asked the participants' opinions on whether the practices used by teachers and teacher competencies meet the needs of students. Table 4 presents the opinions of the teachers on whether the practices used meet the needs.

Table 4. *Fourth study question: Teachers' opinions on whether the applications used meet students' needs*

Meets student needs because;	f	Does not meet student needs, because;	f
Includes activities to improve the quality of learning	11	Does not meet	8
Includes activities aimed at developing student skills	8	Cannot meet emotional and social needs	5
The applications used increase interest and motivation, increase active participation	3	The advantages of face-to-face training are needed	3
Access to information is fast and practical	1	Difficulties in reaching some students during online learning	3
		Prolonged screen time is difficult and risky for health, does not serve kinesthetic learning characteristics	3

As seen in Table 4, teachers stated that the applications met their learning needs because they consisted of studies aimed at increasing the quality of learning (f11). In addition, they stated that the applications met students' needs in terms of supporting students to develop their skills (f8); increasing interest and motivation (f3); and providing quick and practical access to information (f1). Some of the teachers who thought that there were activities to improve the quality of learning mentioned that students' thinking, critical thinking and creative thinking skills improved thanks to the activities (f6). In

addition to these skills, they also shared that students' cooperation skills improved thanks to group work.

8 participants (f8), on the other hand, did not make any other comment, but simply stated that "the practices do not meet the needs of the students". 5 participants thought that students' emotional and social needs were not met (f5). For example, T11 said, "These practices cannot fully meet the social and emotional needs of students. Students' need for socialization started during the pandemic " T20 shared that these practices may be insufficient for students who learn by establishing emotional bonds.

Three participants stated that the advantages of face-to-face education were needed; that there were difficulties in reaching some students during online learning; that students being in front of the screen for a long time posed a risk to health; and that it could not serve kinesthetic learning characteristics (f3).

T15 gave examples of the reasons why the practices could not basically meet the needs of the students as follows:"...Since students learn in depth by using their sensory organs, especially in science lessons, changing the environment they are in (laboratory, garden, gym) affects their motivation and the tools they touch enable them to learn sensory learning. If students do not stand up or move in this process, if they are only supported visually or auditorily, they may not learn fully because they create a cognitive load in these channels."

Participants were also asked about their thoughts on whether they have the necessary competencies for distance education within the scope of study question 4. Graph 3 shows the opinions of the teachers.

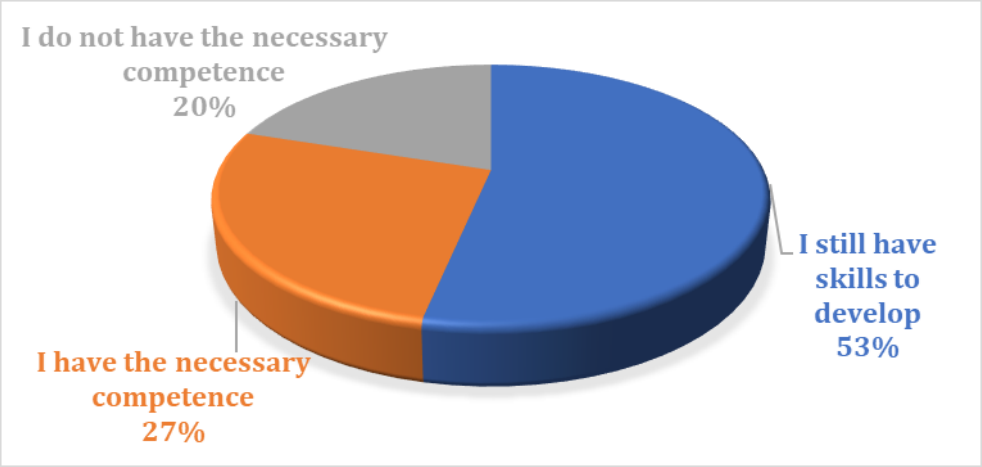

Figure 3. Fourth study question: views on teacher competencies

As seen in Graph 3, 57% of the participants (f16) answered "I think I have the necessary competencies, but there are skills I need to improve". For example, T6 commented that "I have the necessary competencies for distance education, but I continue to learn new activities that I can benefit students by following the current innovations in educational technologies".

29% of the participants (f8) only answered "yes, I have the necessary competencies". T30 was one of these participants with her comment "Yes, I think I have all the competencies" and she did not give any other explanation.r.

20% of the participants (f6) answered "no, I do not have the necessary competence".

Within the scope of the fourth study question, the participants were also asked what competencies they think they lack in order to make the distance education process more efficient. Graph 4 shows the answers of the participants.

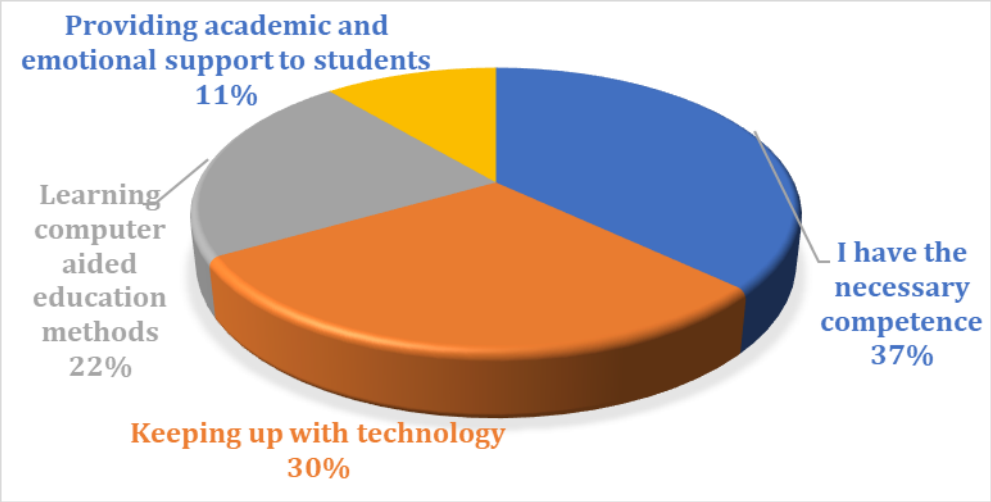

Figure 4. Fourth study question: Distance education competencies

As seen in the answers in Graph 4, 37% (f10) of the participants think that they have no deficiencies in distance education. For example, T7 answered as "I think that our development has reached a very good level at the end of one and a half years".

30% (f8) of the participants stated that they had difficulties in keeping up with technology; 22% (f6) stated that they had deficiencies in computer assisted education methods. For example, T21 emphasized the importance of following technological developments by saying "Many people started to use web 2.0 tools and I should continue to learn them".

11% of the participants (f3) stated that they experienced deficiencies in terms of active participation in the lesson and trying to reach students academically and emotionally.

Finally, in order to find an answer to the fifth study question, the participants were asked what suggestions they could make in order to overcome the deficiencies experienced in the distance education process. Table 5 shows the answers given by the participants.

Table 5. *Fifth study question: suggestions for overcoming the deficiencies experienced in the distance education process*

Participant Opinion	f
Providing in-service training to teachers	10
Use of online assessment tools	7
Ensuring equal opportunity for students in distance education	6
Creating a technological environment suitable for distance education	5
Providing psychological support to teachers and students	4
Supporting students academically	3

As can be seen in Table 5, teachers most frequently (f10) suggested more in-service training opportunities to overcome the problems experienced in distance education. For example, T28 expressed the necessity of in-service training with the suggestion that "technologically necessary trainings should be increased". Suggestions related to the use of online assessment tools were among the most preferred

suggestions (f7). The teachers' learning online assessment tools and using these applications to evaluate students' course performances and academic achievements are thought to overcome the deficiency in the field of assessment and evaluation in the distance education process.

Another most preferred suggestion was to provide equal opportunity to students in distance education (f6). For example, T3 stated that "the principle of equality and justice should be ensured for every student". Creating a technological environment suitable for distance education (f5); providing psychological support to teachers and students (f4); supporting students academically (f3) are among the other suggestions of the participants.

Discussion and Conclusion

This study aimed to determine the online applications used by teachers in their lessons in the distance education process, to determine the teaching processes they apply to make them more effective, and to reveal the advantages and disadvantages of these applications. In addition, the advantages and disadvantages of these applications, the methods and techniques used, and which applications, methods and techniques are preferred for the development of creative thinking, critical thinking and collaboration skills were revealed. The activities that teachers carry out by taking into account the different characteristics of the students were identified. Teachers' comments on whether the distance education applications used and teacher competencies meet the educational needs; teachers' suggestions for eliminating the problems and deficiencies experienced in the distance education process were received.

According to the findings we obtained from the research data, private school teachers mostly continued their education and training through Google meet and Zoom platforms during the distance education process. In addition to the Education Information Network (EBA), teachers also used platforms such as Perculus, Microsoft Teams and Jitsmeet. Alper (2020) concluded in his study that teachers communicated with their students via Zoom, Whatsapp, Google Classroom, e-mail and telephone during the distance education process. Other applications used by the teachers participating in the study during the education process include Google applications (Google meet/classroom/form/ drive/slides), Jamboard, Padlet, Kahoot, Learning Apps, Online simulations, Canva, Nearpod, Edpuzzle, Mentimeter, Quiziz, Teachermade and other web 2.0 tools. Özdemir Baki and Çelik (2021) reported that teachers use programs such as Zoom, TeamLink, DroidCam, Teknokent distance education program as well as applications such as EBA, Whatsapp, Youtube, Perculus in the distance education process. Alper (2020) stated that teachers encountered different applications such as Camtasia, Padlet, Pawtoon, Edpuzzle, Kahoot, Vimeo, Webinars, Flipgrid, Plickers, Canva, Kizoa, Quick, etc. during the distance education process. The applications used by the teachers participating in other studies and the applications used by the teachers participating in our study are similar. Kör et al., 2013 stated that applications, animations, videos with course content and simulations used in distance education courses can increase student interaction and active participation, attract students to the lesson and make education more efficient (Kör et al., 2013). Başaran & Kılınçarslan, 2021 also reported that students' participation in the lesson increases thanks to gamification activities designed through the applications used (Başaran & Kılınçarslan, 2021). The teachers who participated in the study also stated that the applications they used positively affected learning with similar statements.

In Turkey, distance education has generally been carried out through the Education Information Network (EBA) prepared by the Ministry of National Education (MoNE, n.d.). Few of the teachers participating in the study stated that they benefited from EBA during the distance education process. We believe that the fact that teachers work in private schools and that private schools continue education through the applications and platforms of their own choice is the reason for this situation.

Participants see it as an advantage that they can create fun learning environments with online games, applications and activities that support visual and auditory learning thanks to the applications they use. Başaran and Kılınçarslan (2021), like the teachers participating in the study, stated that the preparation of gamification activities using applications creates a fun learning environment. The teachers participating in the study also stated that these applications offer learning opportunities in which students actively participate. They stated that thanks to the presentations and studies they prepared, they realized lessons in which they could realize permanent learning, provide easy information flow and provide repetition opportunities. Learning becomes more permanent in lessons where students have the opportunity to learn by doing, experiencing and applying (Babayiğit & Gültekin, 2019). Participants see the continuation of education, especially during the pandemic process, enabling students to learn in their own environment, increasing students' attention, interest and motivation, and speeding up access to information as other advantages of the applications. A small number of teachers also stated that the digital environment facilitates student follow-up (homework control, achievement tracking) and performance evaluation. Alper (2020), in the data he obtained from teacher opinions, determined the advantages of distance education as being able to reach the lesson at the desired time, reducing the loss of time, having some advantages in terms of attention, motivation, and providing more comfortable teaching by choosing the environment.

Participants see it as a disadvantage that they can fall behind the teaching plan because too much time is spent due to the applications and that learning takes time. In addition, the disadvantages include the fact that it causes students to spend time in front of the screen for a long time, that every moment of the learning process is perceived by students as a game and entertainment, that the use of the same activities and applications can create a cognitive load on students, and that they may experience focusing problems. While it is easier for students to communicate and interact with each other and their teachers in face-to-face education, it becomes difficult to establish this interaction in distance education (Akyürek, 2020). In particular, there may be problems related to increasing student motivation and interest and adapting to the course environment (Kara & Sevim, 2013).

Participants also see the students' difficulty in understanding the instructions, the difficulty in interacting and socializing with their friends, and the problems experienced due to internet connections as disadvantages. According to Özgöl, Sarıkaya, and Öztürk (2017), experiencing attendance problems, not being able to fully realize the applied lessons, students' lack of previous experience with distance education, lack of asking questions and receiving feedback, and problems with internet connection are among the disadvantages of distance education for students. Alper (2020) listed the negative aspects experienced by teachers in the distance education process as not being able to establish effective communication as in face-to-face education, not receiving feedback from students, having difficulties in the preparation phase, not being able to use the methods and techniques they want, increasing the time they spend in front of the computer, and spending more time in virtual environments. These findings

are similar to the data of our study. Özellikle öğrenci motivasyonu ve ilgisinin artırılmasına ve ders ortamına uyum sağlanmasına ilişkin sorunların yaşandığı görülmüştür (Kara & Sevim, 2013).

Teachers stated that they mostly used applications such as Breakout rooms, Google (Google doc/forms/slides/drive/meet) applications, Jamboard, group work using these applications, games played, Microsoft Teams, Kahoot, Artsteps to develop students' collaboration skills. Applications such as "Answer the question, step on the gas", "Who wants to be a millionaire" and Zoom, Crams, Quiziziz, Quizlet, Kami, Nearpod were preferred only once by the teachers. Teachers also stated that they used Breakout rooms, Padlet, Canva, Zoom, Postermywall, Microsoft Teams, Artsteps applications to develop students' critical thinking and creative thinking skills. Nearpod, Wizerme, Flipgrid, Mindminister, Quizlet, Bookwidget, Inquary Argumantation Technological Lab Activity, Phet Simulation Programs were preferred once by the teachers. Known as 21st century skills, educational technologies are also utilized to develop these skills. It is important to utilize educational technology applications to develop these skills both in distance education and face-to-face education periods. Dağhan et al. (2017) state that teachers and students should be able to use educational technologies for the development of 21st century skills. In the distance education process, planning and course designs should be developed to increase the efficiency of the course through the right technology and applications at the right time rather than the inclusion of various educational technologies and applications in the course environment (Özkul & Girginer, 2014). Therefore, teachers can be successful in developing students' critical thinking, creative thinking and collaboration skills as long as they plan lessons in accordance with the purpose and goal by making use of the applications mentioned in the research data. Gelen (2017) indicated that the continuation of lessons in distance education environments where technological developments are utilized, intractive, and interactive, as well as many other factors, and the acquisition of thinking skills will positively affect the development of 21st century skills. Teachers implement and evaluate lessons designed by thinking creatively to develop skills. For this, they need to have creative ideas, contribute to their colleagues with their different ideas, and serve as models (Günüç, Odabaşı & Kuzu, 2003). Teachers stated that they used methods and techniques such as group work, designing posters and banners, problem solving based on case studies, making use of visuals and videos, analyzing visuals and videos, preparing presentations, and question-answer to develop students' critical thinking and creative thinking skills. They also shared that they used GRASPS, Raft Activity, Menu Activity, Experiment-Observation, Digital exhibitions and games. Dramas, brainstorming, preparation of concept and mind maps, free lectern activities, homework, cartoons, fairy tales and stories, Six Hats Thinking Technique, Flipped Classroom, Wordwall and Edpuzzle were preferred once.

Each child has different abilities, interests and motivation, learning type and intelligence (Aktepe, 2005). These differences may also cause differences in learning habits. Taking into account the different characteristics of their students, teachers stated that they mostly used group activities (GRASPS, Raft, Six Hats Thinking, Menu activities). Asking questions appropriate to student levels and PPT presentations are also among the most preferred activities. Applications such as using video audio recordings, gamification activities, case studies, brainstorming, various visuals and pictures, Flipped Classroom, Wordwall, Edpuzzle were preferred once.

The majority of teachers think that the applications used and teacher competencies are not sufficient to meet their educational needs. They argued that the applications did not meet their educational needs due to reasons such as being insufficient to meet emotional and social needs, needing

the advantages of face-to-face education, having difficulties in reaching and communicating with some students in online learning environments, making it difficult for students to stay in front of the screen for a long time and carrying health risks, and not being able to serve kinesthetic learning characteristics.

The findings show that more comments were made that the needs were not met. Some teachers, on the other hand, stated that these applications increased the quality of learning, student interest and motivation, helped students to actively participate in the lesson, and that access to information was faster and more practical.

Studies have concluded that some teachers have difficulty in adapting the educational technologies they use to the course process and may have difficulty in creating an efficient course environment by integrating teaching methods and techniques with technological applications (Erbil, Demir & Erbil, 2021). Data obtained in our study showed that although teachers did not make such a statement directly, they shared that distance education applications do not replace the advantages of face-to-face education and that there may be difficulties in reaching all students. Lecturers working at universities also generally share that the efficiency of face-to-face education cannot be obtained in distance education (Sayan, 2020). In addition, teachers think that they have come a long way by improving themselves during the pandemic process, but they need to improve themselves more technologically (Baran & Sadık, 2021).

Teachers suggested that in-service trainings should be provided to overcome the problems and deficiencies in the teaching process and that teachers should be provided with opportunities to participate in these trainings. They also suggested that psychological support should be provided to both students and teachers during the pandemic process. There are also similar studies in which teachers' opinions on the need to support teachers with in-service trainings were obtained. Erbil, Demir, and Erbil (2021) suggested that teachers should be supported with in-service trainings especially on technology literacy. The teachers participating in our study expect to be supported with academic and emotional trainings in addition to educational technologies. It is recommended that teachers learn techniques to increase interest and motivation. Baran and Sadık (2021) also stated that in face-to-face teaching, it is easier for teachers to attract the attention of their students and provide lesson motivation, while in distance education they have difficulty because they cannot make eye contact with their students. There are studies suggesting that some studies and arrangements should be made in order to reach students socially and emotionally and to solve the problems arising from the inability to establish eye contact in the online process (Genç, 2020; Yurtbakan & Akyıldız, 2020; Erbil, Demir & Erbil, 2021;). Akdemir (2011) indicates that students do not have problems in communicating and interacting with their teachers in the distance education process, but students' interactions with their friends are restricted.

Teachers stated that solutions should be produced to use online assessment and evaluation tools, to evaluate students' academic achievements, and to increase online exam success. Baran and Sadık (2021) stated that although the courses continue as distance education, there are difficulties in conducting exams over distance education platforms, so teachers have difficulty in understanding whether learning has taken place. Adıgüzel (2020), on the other hand, reported that the most ideal method to measure student success during the pandemic period is written exams with open-ended questions, while the multiple-choice test technique, which is thought to be both easier and more objective, is not reliable in measuring success in the distance education process.

Equality of opportunity in education should be ensured and all students should be provided with the opportunity to benefit from educational opportunities. Providing computer and internet support to students and teachers in lower income groups, developing more course materials in accordance with students' interests and levels, preparing lesson plans, organizing activities to increase creative thinking, questioning and critical thinking skills are also critically important. Other suggestions include increasing the quality of internet connection speed, solving infrastructure problems, developing a good information network, and reorganizing the rote-based subject acquisitions in the curriculum.

In order for all students and teachers to take an active part in the distance education process, there is a need to meet the technological material needs and to solve the problems of internet, internet connection and infrastructure (Demir, F. & Özdaş, F., 2020; Erbil et all., 2021; Genç, 2020; Uyar, 2020;).

Recommedations

In today's world where distance education applications are increasing, it will be useful for teachers to plan the lesson very well in order to increase the efficiency in learning environments. Planned lessons will also limit the time that the student will spend in front of the screen. In addition, it is thought that teachers should be supported with the necessary trainings in order to use the right application in the right lesson environment and at the right time. For this, in-service trainings should be increased and teachers should be provided with opportunities and time to update themselves.

We also recommend that teachers be provided with support on how to adapt learning methods and techniques to the lessons they teach using technological applications. For example, Information Technologies teachers working in schools can plan short trainings at regular intervals so that teachers can closely follow current educational technology applications and use them in their lessons. New solutions that can improve student interaction in the distance education process should be developed and students should be supported to grow up as social individuals who can express themselves.

Teachers should be provided with the necessary knowledge to develop skills and values and to address student differences. Emphasis should be placed on organizing trainings and workshops for teachers, especially on the learning and teaching of 21st century skills and differentiation studies.

It is also important to minimize these problems by developing solutions for the inadequacy of technological equipment, physical and infrastructure problems in educational environments, especially computer, internet and internet connection problems, and to ensure equality of opportunity in education. The Ministry of National Education's project, the Movement to Increase Opportunities and Improve Technology (FATIH), provides support for information technology-related course materials in schools (Fatih Project, n.d.). We recommend that these efforts be increased and that the needs of students and teachers continue to be met.

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BIOGRAPHICAL NOTES

Contribution Rate of Researchers

Author 1: 50%

Author 2: 50%

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Conflict Statement

Participants contributed voluntarily to the research. There is no conflict of interest between the parties.

Genişletilmiş Türkçe Özet

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Uzaktan Öğretim Sürecinde Kullanılan Uygulama, Yöntem ve Teknikler ile İlgili Öğretmen Görüşleri

Giriş

Eğitim teknolojilerinin gelişimine bağlı olarak uygulanmaya başlayan uzaktan eğitim özellikle pandemi sürecinde eğitim öğretimin devam etmesine büyük katkı sağlamıştır. Uzaktan eğitim, öğrencilere eğitimde fırsat eşitliği sunmayı amaçlayan, bireylerin yaşam boyu öğrenmesini kolay hale getiren, teknolojinin sunduğu imkanları avantaja çevirerek eğitimin devamını sağlayan bir eğitim faaliyetidir (Kaya, 2006). Uzaktan eğitim sürecinde öğretmenlerin yaşadığı sorunlar arasında eğitim teknojilerinin kullanımı, öğrenme ortamının düzenlenmesi, ders materyallerinin temini ve verimli bir şekilde kullanımı ile internet bağlantısına bağlı sorunlar yer almaktadır. Özellikle öğrenci motivasyonu ve ilgisinin artırılmasına ve ders ortamına uyum sağlanmasına ilişkin sorunların yaşandığı görülmüştür (Kara & Sevim, 2013). Bu süreçte öğrenme ortamlarının tasarlanmasında web 2.0 eğitim teknolojilerinden faydalanılmıştır. Öğrenciler için verimli dersler organize edilmeye çalışılmıştır.

Araştırmanın amacı, öğretmenlerin derslerinde kullanmış oldukları çevrimiçi uygulamaları belirlemek, bunları daha etkin hale getirmek için uyguladıkları öğretim süreçlerini saptamak ve bu uygulamaların avantaj ve dezavantajlarını ortaya koymaktır. Araştırmanın problem durumu ise; öğretmenlerin uzaktan öğretim sürecinde dersleri daha verimli hale getirebilmek için kullandıkları uygulama, yöntem ve tekniklerin neler olduğu ve bu uygulama, yöntem ve tekniklerin kullanım alanları hakkında öğretmen görüşlerini almaktır. Araştırmanın alt problemleri aşağıda verilmiştir.

1. Uzaktan eğitim sürecinde kullanılan uygulamalar hangileridir?
2. Kullanılan uygulamaların avantaj ve dezavantajları nelerdir?
3. Öğrencilerin farklı özelliklerine hitap etmek amacıyla seçilen uygulamalar, yöntem ve teknikler hangileridir?

4. Kullanılan uzaktan eğitim uygulamaları ve öğretmen yeterlilikleri eğitim ihtiyaçlarını karşılayabilmekte midir?

5. Uzaktan öğretim sürecinde yaşanan sorunların ve eksikliklerin giderilmesine yönelik öğretmen önerileri nelerdir?

Yöntem

Bu araştırma nitel araştırma yöntemlerinden fenomenoloji (olgu bilim) deseni kullanılarak yapılmıştır. Fenomenoloji (olgu bilim) araştırması, olguların derinlemesine incelenmesini amaçlamaktadır. Bu araştırma deseni ile birey ve gruplarla görüşmeler yapılarak farkında olunan ya da henüz farkında olmadığımız olgular ile ilgili yeni bilgiler elde edilmesi amaçlanmaktadır (Gürbüz & Şahin, 2018).

Araştırmanın çalışma grubu amaçlı örnekleme yöntemlerinden kolay ulaşılabilir durum örneklemesine uygun olarak belirlenmiştir (Yıldırım & Şimşek, 2013). Araştırmanın verilerini toplayabilmek için İstanbul il merkezinde farklı özel okullarda çalışan Türkçe, Sosyal bilgiler, Matematik, Fen Bilimleri ve Yabancı dil öğretmenlerinin görüşlerine başvurulmuştur. Araştırma ile öğretmenlerin derslerinde hangi uygulama, yöntem ve tekniklerden faydalandıkları, bu yöntem ve tekniklerin avantaj ve dezavantajları, bu yöntem, teknik ve uygulamaları kullanabilmek için gerekli olan öğretmen yeterlikleri ile ilgili görüşlerine ulaşılması amaçlanmıştır.

Araştırmanın verilerini toplamak için araştırmaya gönüllü olarak katılım gösteren öğretmenlere google form üzerinden kişisel bilgilerin yanında çevrimiçi öğrenme ortamlarında kullanılan uygulamalara ilişkin 10 tane açık uçlu soru gönderilmiştir. Sorular hazırlanırken uzman görüşüne başvurulmuş, sorular uzmanlardan gelen önerilere göre düzenlenerek son halini almıştır. Katılımcı öğretmenler için soru formunun başına araştırma ile ilgili açıklayıcı bilgi eklenmiştir. Ayrıca diledikleri zaman ulaşabilmeleri için araştırmacıların iletişim bilgileri de verilmiştir. Araştırmaya gönüllü olarak katılan öğretmenlerden gelen cevaplar araştırmanın verilerini oluşturmuştur. Araştırma verileri içerik analizi ile analiz edilmiştir. Öğretmenlerin sorulara verdikleri cevaplar kaydedilmiş olup araştırmaya katılan öğretmenlere Ö1, Ö2, Ö3, Ö4,… rumuz verilmiştir. Verilen cevaplara göre temalar oluşturularak veri analizleri tamamlanmıştır.

Bulgular

Uzaktan eğitim sürecinde kullanılan uygulama, yöntem ve teknikler ile ilgili öğretmen görüşlerine başvurulan araştırmanın bulguları incelendiğinde öğretmenlerin bu süreçte en çok Google meet (f15) ve Zoom (f10) uygulamalarını kullandıkları, derslerini bu platformlar üzerinden sürdürdükleri sonucuna ulaşılmıştır. Öğretmenler Eğitim Bilişim Ağı (EBA) (f5), Perculus(f3), Microsoft Teams(f2), Jitsmeet(f1) gibi uygulamalardan da bahsetmiştir ancak bu uygulamaları tercih edenlerin sayısı azdır. Araştırmaya katılan öğretmenler özel okullarda çalışmaktadırlar ve özel okulların uzaktan eğitim sürecini devam ettirmek için tercih etmiş oldukları Google Meet, Zoom, vb. platformlar bulunmaktadır. Öğretmenlerin kullandığı diğer yardımcı uygulamalar arasında Google uygulamaları (Meet, Classroom, Drive, Slides, Forms, Jaboard, vb.) (f20), Zoom (f11), Padlet (f8), Kahoot (f7), Nearpod(f5), Online simülasyonlar (f5), Learning Apps (f4), Canva (f4) vb. uygulamalar bulunmaktadır.

Öğretmenler, online oyunlar ve farklı uygulama ve etkinliklerle eğlenceli ve kolay öğrenme imkânı sunulmasını en önemli avantaj olarak görmüşlerdir (f13). İnteraktif, katılımcı eğitim imkânı

sunmaları da diğer avantajları arasında yer almıştır (f8). Hazırlanan sunumların etkin, kalıcı bilgi akışı sağlaması, sunumların tekrar olanağı sunması ve eğitim öğretimin devamını sağlaması da diğer en fazla tercih edilen avantajları oluşturmaktadır (f5). Öğrencinin kendi ortamında öğrenmesini sağlaması; öğrencilerin ilgi ve motivasyonlarını artırması da dörder katılımcı tarafından tekrarlanan avantajlar arasında yer almaktadır (f4). Bireysel odaklanma ve dikkat konusunda destek sağlaması (f3); bilgiye erişimde hız kazandırması (f3) da diğer avantajlar arasında yer almaktadır. 2 katılımcı ise dijital ortamda öğrenci takibini ve performans değerlendirmeyi kolaylaştırmasını avantaj olarak görmüşlerdir (f2).

Uzaktan eğitim uygulamalarının kullanımı fazla zaman aldığı için programın gerisinde kalınabilmesi (f4); öğrencinin uzun süre ekran başında zaman geçirmesine neden olması (f3); öğrenme sürecinin her anının eğlence, oyun olarak algılanması, bilişsel yük oluşturması, odaklanma sorununa neden olması (f3); öğrencilerin yönergeleri anlamakta zorlanması, arkadaşları ile etkileşiminin azalması (f3); internet bağlantısındaki sorunların eğitim öğretimi aksatması (f3) ise dezavantajları olarak görülmüştür. 3 katılımcı soruya hiç cevap vermemiş, Ö26 ise sadece "faydası var" cevabını vermiştir.

Katılımcılara, öğrencilerin farklılıklarını göz önünde bulundurarak seçmiş oldukları uygulama ve etkinlik olup olmadığı sorulmuştur. Eğer varsa bu uygulama ve etkinliklerin neler olduğunu paylaşmaları istenmiştir. Öğretmenler öğrenci farklılıklarına uygun olarak en çok grup çalışmaları hazırladıklarını (f5) belirtmişlerdir. Bunun yanında bu grup çalışmalarında GRAPS, Altı Şapka Düşünme, Menu Etkinlikleri gibi farklı çalışmalar hazırladıklarını belirtmişlerdir. Bunu öğrenci seviyesine uygun sorular (f4) ve PPT sunumlar (f3) ve "video ve ses kayıtları; diğer oyunlaştırma etkinlikleri; örnek olay incelemeleri; beyin fırtınası; çeşitli resim ve görsellerden yararlanma (f3) gibi farklılaştırma etkinlikleri takip etmiştir. 2 Katılımcı öğrenci farklılıklarına yönelik çalışmalar yaptığını belirtmiş ama yaptığı çalışmalara örnek vermemiştir. Diğer 12 öğretmen ise bu soruyu ya tamamen boş bırakmışlar ya da bu eğitim ihtiyacına yönelik çalışma yapmadıklarını belirtmişlerdir. Elde edilen verilerde görüldüğü gibi katılımcı öğretmenlerin azı öğrenci farklılıklarına yönelik çalışmalar hazırladığını belirterek bu çalışmalara örnek verebilmiştir (f16). Bu da öğrencilerin uzaktan eğitim sürecinde öğrenci farklılıklarına yönelik çalışmalar hazırlayabilme yeterliliği noktasında eksiklikler yaşayabildiklerini düşündürmektedir. Derslerinde öğrenci farklılıklarına uygun etkinlik hazırladıklarını paylaşan öğretmenler grup çalışmalarını genellikle Breakout Rooms ile odalar oluşturarak da yapabildiklerini belirtmişlerdir (f6). Ayrıca çevrimiçi ortamda Wordwall, Learning Apps gibi farklı uygulamalar aracılığıyla oyunlar hazırlayarak bu oyunları gruplar şeklinde oynayabildiklerini, çalışmalarında Edpuzzle'dan da faydalandıklarını paylaşmışlardır. (f3).

Öğretmenlerin kullandıkları uygulamalar ve öğretmen yeterliklerinin öğrenci ihtiyaçlarını karşılayıp karşılamadığı ile ilgili görüşleri alınmıştır. Öğretmenler, kullanılan uygulamaların öğrenme niteliğini artırmaya yönelik çalışmalardan oluşmasından dolayı (f11) öğrenme ihtiyaçlarını karşıladığını belirtmişlerdir. Bunun yanında uygulamaların öğrencilerin becerilerini geliştirmelerine destek olması (f8); ilgi ve motivasyonu artırması (f3); bilgiye hızlı ve pratik bir şekilde erişim sağlaması (f1) açısından öğrenci ihtiyaçlarını karşıladıklarını ifade etmişlerdir. Öğrenme niteliğini artırmaya yönelik çalışmaların yer aldığını düşünen öğretmenlerden bazıları yapılan etkinlikler sayesinde öğrencilerin düşünme, eleştirel düşünme, yaratıcı düşünme becerilerinin geliştiğine değinmişlerdir (f6) Bunun yanında grup çalışmaları sayesinde bu beceriler yanında öğrencilerin işbirliği becerilerinin de geliştiğini paylaşmışlardır. 8 katılımcı (f8) ise, başka hiçbir yorum yapmadan sadece "uygulamalar öğrenci

ihtiyaçlarını karşılamıyor" yorumunu yapmıştır. 5 katılımcı öğrencilerin duygusal ve sosyal ihtiyaçlarının karşılanmadığını (f5) düşünmektedir. Üçer katılımcı ise yüz yüze eğitimin avantajlarını ihtiyaç duyulduğunu; çevrimiçi öğrenme sırasında bazı öğrencilere ulaşma konusunda güçlük çekildiği; öğrencilerin uzun süre ekran başında olmasının sağlık açısından risk oluşturduğunu; kinesteteik öğrenme özelliklerine hizmet edemediğini (f3) belirtmişlerdir.

Katılımcılara öğretim sürecini daha verimli hale getirmeleri için eksik olduklarını düşündükleri yeterliklerin neler olduğu sorusu yöneltilmiştir. Katılımcıların %37'si (f10) uzaktan eğitim konusunda eksiğinin olmadığını düşünmektedir. Katılımcıların %30'u (f8) teknolojiye ayak uydurabilme konusunda sıkıntı yaşadıklarını; %22'si (f6) bilgisayar destekli eğitim yöntemlerinde eksikleri olduğunu belirtmişlerdir. Katılımcıların %11'i ise (f3) derse aktif katılım sağlama, öğrencilere akademik ve duygusal yönden ulaşmaya çalışma noktasında eksiklikler yaşadıklarını ifade etmişlerdir.

Katılımcılara uzaktan eğitim sürecinde yaşanan eksiklerin giderilebilmesi için ne gibi önerilerde bulunabilecekleri de sorulmuştur. Öğretmenler uzaktan eğitimde yaşanan sorunların giderilmesi için en çok (f10) daha fazla hizmet içi eğitim imkanı sunulmasını önermişlerdir. Çevrimiçi değerlendirme araçlarının kullanımı ile ilgili öneriler ise en çok tercih edilen (f7) diğer öneriler arasında yer almaktadır. Öğretmenlerin çevrimiçi değerlendirme araçlarını öğrenmeleri ve bu uygulamaları kullanarak öğrencilerin ders performansları ve akademik başarılarını değerlendirebilmeleri sayesinde uzaktan eğitim sürecinde ölçme değerlendirme alanındaki eksikliğin giderileceği düşünülmektedir. En çok tercih edilen bir diğer öneri ise uzaktan eğitimde öğrencilere fırsat eşitliğinin sağlanması (f6) olmuştur. Uzaktan eğitime uygun teknolojik ortamın oluşturulması (f5); öğretmen ve öğrencilere psikolojik destek sağlanması (f4); öğrencilerin akademik yönden desteklenmesi (f3) katılımcıların diğer önerileri arasında yer almaktadır.

Tartışma ve Sonuç

Araştırma verilerinden elde ettiğimiz bulgulara göre özel okul öğretmenleri uzaktan eğitim sürecinde eğitim öğretime en çok Google Meet ve Zoom platformları üzerinden devam etmişlerdir. Öğretmenler Eğitim Bilişim Ağı (EBA)'nın yanında Perculus, Microsoft Teams ve Jitsmeet gibi platformları da tercih etmişlerdir. Alper (2020), araştırmasında, uzaktan eğitim sürecinde öğretmenlerin öğrencileri ile Zoom, Whatsapp, Google Classroom, E-posta ve telefon üzerinden iletişime geçtikleri sonucuna ulaşmıştır. Araştırmaya katılan öğretmenlerin eğitim öğretim sürecinde faydalandıkları diğer uygulamalar arasında Google uygulamaları (Google meet/classroom/form/ drive/slides), Jamboard, Padlet, Kahoot, Learning Apps, Online simülasyonlar, Canva, Nearpod, Edpuzzle, Mentimeter, Quiziz, Teachermade ve diğer web 2.0 araçları bulunmaktadır. Araştırmaya katılan öğretmenlerden azı uzaktan eğitim sürecinde EBA'dan faydalandıklarını belirtmişlerdir. Bu öğretmenlerin özel okulda çalışıyor olmaları ve özel okulların kendi seçtikleri uygulama ve platformlar üzerinden eğitime devam etmelerinin bu duruma sebep olduğu düşünülmektedir.

Katılımcılar kullandıkları uygulamalar sayesinde online oyunlar, görsel ve işitsel öğrenmeyi destekleyen uygulama ve etkinliklerle eğlenerek öğrenme ortamları oluşturabilmelerini avantaj olarak görmektedirler. Başaran ve Kılınçarslan (2021) da araştırmaya katılan öğretmenler gibi uygulamalar kullanılarak oyunlaştırma etkinlikleri hazırlanmasının eğlenerek öğrenme ortamı oluşturduğunu belirtmişlerdir. Araştırmaya katılan öğretmenler de bu uygulamaların öğrencilerin aktif katılım sağladığı öğrenme imkanları sunduğunu ifade etmişlerdir. Araştırmaya katılan öğretmenler dezavantaj

olarak ise uygulamaların çok fazla zaman harcayabildiğini, ekran başında kalınan sürenin fazla olması ve bunun sağlık açısından da riskli olması, öğrencilerin eğitim sürecini hep eğlence ve oyun aktiviteleriyle geçireceği algısının oluşması, iletişim, etkileşim sorunlarının yaşanması, internet bağlantısı ile ilgili sorunların yaşanması gibi faktörleri sıralamışlardır. Akyürek (2020) de yüzyüze eğitim sürecinde öğrencilerle daha kolay iletişim kurulabildiğini ancak online eğitim sürecinde bunun zorlaştığını belirtmiştir.

Öğretmenler, öğrencilerin iş birliği becerisini geliştirmek için en çok Breakout rooms, Google (Google doc/forms/slaytlar/drive/meet) uygulamaları, Jamboard, bu uygulamaları kullanarak oluşturdukları grup çalışmalarını örnek vermişlerdir. Bunun yanında oyun içerikli etkinlikler, Microsoft Teams, Kahoot, Artsteps gibi uygulamalar kullanılarak yapılan etkinlikler de tercih edilmiştir. Öğrencilerin eleştirel düşünme ve yaratıcı düşünme becerilerini geliştirmeye yönelik de Breakout rooms, Padlet, Canva, Zoom, Postermywall, Microsoft Teams, Artsteps uygulamalarını kullandıklarını belirtmişlerdir. Becerilerin gelişimi için öğretmenler en çok grup çalışması yapabilecekleri uygulama ve etkinlikleri tercih etmişlerdir. Yine kendi ürünlerini tasarlayabilecekleri etkinlik ve uygulamalardan faydalandıklarını paylaşmışlardır. Özkul & Girginer (2014), öğrenme ortamında kullanılacak yöntem ve uygulamaların doğru seçiminin ders hedeflerini ve öğrenme becerilerinin kazandırılmasında önemli olduğunu belirtmiştir.

Her çocuk, birbirinden farklı yetenek, ilgi ve motivasyon, öğrenme türü, zeka gibi farklı özelliklere sahiptir (Aktepe, 2005). Bu farkılıkları öğrenme alışkanlıklarında da farklılıklara neden olabilmektedir. Öğretmenler öğrencilerinin farklı özelliklerini göz önünde bulundurarak en çok grup çalışmalarına (GRASPS, Raft, Altı Şapka Düşünme, Menu etkinlikleri) yer verdiklerini belirtmişlerdir.

Araştırmalara göre bazı öğretmenlerin kullandıkları eğitim teknolojilerini ders sürecine uyarlamakta güçlük çektikleri, öğretim yöntem ve teknikleri ile teknolojik uygulamaları birbirine entegre ederek verimli bir ders ortamı oluşturmakta zorlanabildikleri sonucuna varılmaktadır (Erbil, Demir & Erbil, 2021). Araştırmamızda elde edilen verilerde öğretmenler doğrudan böyle bir açıklamada bulunmasalar da uzaktan eğitim uygulamalarının yüz yüze eğitim avantajlarının yerini tutmadığını, öğrencilerin tamamına ulaşabilme noktasında sıkıntı yaşanabildiğini paylaşmışlardır. Tüm öğrenci ve öğretmenlerin uzaktan eğitim sürecinde aktif yer alabilmeleri için hem teknolojik materyal ihtiyaçlarının giderilmesi hem de internet, internet bağlantısı, altyapı sorunlarının giderilmesine ihtiyaç duyulduğu birçok araştırmanın sonuçlarını oluşturmaktadır (Demir & Özdaş, 2020; Erbil ve diğerleri, 2021; Genç, 2020; Uyar, 2020).

Öneriler

Uzaktan eğitim sürecinin daha verimli geçmesini sağlamak amacıyla öğretmenlerin ders planları üzerinde daha titiz çalışmaları dersin konu ve kazanımlarına uygun yöntem ve tekniklerin seçimine özen gösterilmeleri önerilmektedir. Öğretmenlerin uzaktan eğitim için daha yeterli hale gelebilmesi için eğitim teknolojilerinin kullanımına ilişkin hizmet içi eğitimlerle desteklenmeleri, bu eğitimleri alabilmeleri için kendilerine imkan ve zaman sunulması önerilmektedir.

Öğrencilerin bireysel farklılıkları göz önünde bulundurularak hazırlanacak öğrenme ortamlarının artırılması, öğretmenlerin farklılaştırma yöntemleri ile ilgili bilgi ve deneyim kazanma konusunda kendilerini geliştirmeleri, güncel gelişmeleri takip etmeleri önerilmektedir. Ayrıca öğrencilerin işbirliği becerilerinin gelişmesi, eleştirel ve yaratıcı düşünme ve diğer becerilerinin

gelişmesi için de uygun etkinlik ve yöntemlerle desteklenmeleri, öğretmenlerin bu konularda da kendilerini geliştirmeleri, bireysel olarak da eğitimleri ve sanal ortamdaki faydalı sayfaları takip etmeleri önerilmektedir. Okullarda ve evlerdeki teknolojik eksikliklerin giderilmesi, internet bağlantısı sorunlarının, öğrenme ortamlarındaki fiziki ve alt yapı sorunlarının çözülmesi, eğitimde fırsat eşitliğinin sağlanması için hem devlet hem de özel kurumların gerekli çalışmalara ağırlık vererek süreci devam ettirmesi önerilmektedir.