Opinions of teacher candidates on the effects of emergency distance education implementations during the Covid-19 pandemic period on learning-teaching process, metacognition and social skills: A case study

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Abstract

The aim of this study is to examine the effects of emergency distance education implementations carried out during the Covid-19 process on metacognition, social skills, active participation, communication with faculty members, as well as learning and teaching processes based on the views of education faculty teacher candidates. The research is a case study. The study was carried out in the Education Faculty of the Kafkas (n:31) and Education Faculty of the Trakya (n:20) in the 2020-2021 Fall semester. Opinions about the process were taken from 51 volunteer participants using a semi-structured interview form. Data was analyzed using content analysis and inductive analysis. As a result of the research, the elements that prospective teachers think that emergency distance education applications increase the effectiveness of the learning-teaching process were obtained in the themes of metacognition, social skills, active participation, effective communication with faculty members, and learning-teaching process. The factors that have a negative impact on the emergency distance education process are again expressed as increasing homework load, insufficient explanation of educational tasks, problems caused by the pandemic, problems originating from the internet, systemic-technological problems, inadequacies in gaining metacognition skills, and uniformity in methods and techniques.

Keywords: Metacognition; emergency distande education; social skills; self-regulation; Covid-19

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1. Introduction

1.1. Introduce the problem

In the global world, problems in education, health, industry and many fields are experienced on a global scale. As a matter of fact, the Covid-19 virus which emerged in Wuhan, China on December 2019 spread throughout the world in 2020-2021 causing a pandemic. So much so that Covid-19 emerged as a virus (Huang, Wang, Li, Ren, Zhao, Hu, Cao, 2020) that spread all over the world in a short time after it emerged in Wuhan, China, and caused severe pneumonia. The rapid and easy spread of the virus among people has forced governments to take some measures. Countries closing their borders, imposing restrictions on domestic travel, banning social activities where people come together, transforming the education-training process into a distance education model, and working from home are some of these measures (United Nations Development Program [UNDP] Turkey, 2020). However, while some of the schools have chosen to transfer the spring semester of the 2019-2020 academic year to the next year, some schools have started to continue education by preferring systems that support distance education (Domenico, Pullano, Coletti, Hens, & Colizza, 2020).

In this direction, the Higher Education Institution (YÖK) in Turkey announced that education and training in universities be suspended for three weeks as of March 16, 2020 (YÖK, 2020) in order to slow the spread of the virus and reduce the victimization in education and training (YÖK, 2020) On March 26, 2020, again due to the uncertainty of the epidemic process, it was announced that there will be no face-to-face classes in the spring semester of the 2019-2020 academic year. Thus, the distance education system in Turkey came to the fore. As a result of some studies carried out by YÖK at the level of universities, it has been determined that the distance education systems of 123 universities are sufficient to complete the education period, and the universities that are insufficient in this field in cooperation with other universities, with the support of TRT, and schools such as Istanbul University, Anadolu University and Atatürk University. It was reported that it will be supported by the education system (YÖK, 2020). YÖK has handled distance education studies in 5 basic structures such as legislation, infrastructure, human resources, content and practice. Appropriate legislation has been developed for universities with sufficient infrastructure, limited to only one semester and to conduct distance education. In addition to the implementation part, it was emphasized that the process should be continued in accordance with the academic calendars of the universities.

In such a process, distance education according to Gülnar (2008); with its three most distinctive features, is defined as an education system in which an effective method is followed in accessing and transporting information resources, technology is utilized in the best way, the learner and the teacher are independent in terms of place and time. In this case, having learners' learning to learn skills will contribute to the functional execution of

the process. As a matter of fact, metacognition appears as a person's knowledge about himself and his control, his knowledge about the teaching process and its control. The fact that learners take responsibility for their own learning during the Covid pandemic process, they become independent learners, have self-efficacy and self-awareness skills. The thinking process will also have a positive reflection on their performance in the emergency distance education process. As a matter of fact, today's technologies allow creating synchronous or asynchronous learning networks in distance education and is an important advantage that technology adds to distance education.

When using learning networks, a students' ability to use their metacognition, planning, organization and evaluation skills at a high level will make an important contribution to the independent learning process. Metacognition encompasses all processes related to cognition, such as anticipating something about one's own thinking, thinking about and responding to one's own thinking by controlling, and regulating (O'Neil and Abedi 1996, p. 235). Metacognition is an individuals thinking process about their own thinking and plays an important role in self-regulation. In the emergency distance education process, it is possible for learners with self-regulation skills to overcome this process more easily. In addition, there is a transition from the thought of distance education to the concept of distance learning by differentiating conceptually. With a learning-centered approach, training independent learners with metacognition, planning, organization and evaluation skills comes to the fore. In such a process, the development of social awareness and skills of learners will bring some disadvantageous situations when considered in the context of distance learning. So much so that, as the name draws attention, there is a physical distance in distance education, and this distance will inevitably be reflected in social awareness and skills. On the other hand, UNESCO Turkey National Commission (2020) shared ten suggestions on 30.03.2020 for the healthy execution of distance education practices. These recommendations are;

1- While determining the high or low technologies to be selected for use, examining the preparedness situation and choosing the most suitable ones for the current situation,

2- Taking inclusive measures to ensure students' access to distance education programs,

3- Taking necessary precautions for data privacy,

4- While planning the timing of distance education programs, the situation of the region, education level etc. factors into account,

5- Taking measures against psycho-social difficulties,

6- Providing support trainings on the use of digital tools,

7- By blending appropriate approaches, preventing overloading of students and data, limiting the number of applications and platforms,

8- Determining the appropriate rules for distance learning and providing the feedback that students need,

9- Arranging the duration of the distance education units in accordance with the self-regulation skills of the students,

10- Communities including teachers, parents and school administrators are formed and the problems encountered in the process are discussed.

With the fulfillment of these measures, the limitations of distance education in the social context can be eliminated. However, this is directly related to the economic power of countries and the value they attach to education. It is a well-known fact we call the education that is not face-to-face and conducted over the internet as distance education. In fact, there are important differences between distance education and emergency distance education in terms of both the tools used and the functioning of the system. Distance education carried out during the pandemic period is the temporary transfer of face-to-face education to the technology environment in a crisis and is called emergency distance education.

Curriculum and course materials prepared for face-to-face environments are transferred to the online environment, this situation is considered as a solution for emergencies and when life returns to normal and the problem disappears, face-to-face education is started again. In these conditions, the primary purpose is to provide temporary access to education and training supports that can be quickly established and used reliably during an emergency or crisis (Akkoyunlu and Bardakçı, 2020). Therefore, during the COVID-19 pandemic process, the structure carried out in many universities in Turkey has emerged not as distance education, but as emergency distance education, which has brought many reflections in the process. Problems such as internet, computer and technical infrastructure problems have increased the gap between students. According to Illich (1975), who advocates a schoolless society, school reproduces the inequality of individuals. As Bourdieu stated in connection with cultural capital, as the economic status and education level of their families and states increase, the opportunities for students to benefit from education increase. So much so that before the pandemic, there were already problems in ensuring equality in education, and it became even more difficult to ensure equality in this education during the pandemic process. In this process, with the increasing importance of education and technology, a "digital" division emerges between those who can access information and technology and those who cannot. When there is no equal access to technology, the inequalities between those who use technology and those who cannot, expressed as "digital cleavage", will have an undesirable effect on the concept of "lifelong learning educators".

Since the closure of schools due to the pandemic, UNICEF has established a distance education platform called "Passport to Learning" to support the ministries of education and science in different countries to ensure the continuity of students, help parents,

caregivers and teachers access distance learning resources, and support during quarantine (Miks & McIlwaine, 2020). Inequalities in education are still being tried to be eliminated through the global learning platform launched by UNICEF and Microsoft. In such a process, the Covid-19 pandemic, which affected the whole world in 2020, caused the transition to emergency and normal distance education practices in various education levels in many countries.

Changes occurred in technological developments and social, scientific and psychological changes occurred on a global scale, etc. The possibility of repeating extraordinary events has brought with it the necessity of improving distance education practices. Due to this need, studies that evaluate the effectiveness of existing practices and make due diligence have gained importance. In particular, the importance of learning to learn, taking responsibility for one's own learning, and raising individuals with critical thinking and problem-solving skills will be beneficial during pandemic periods in terms of skills to be gained on a global scale. A configuration that integrates high-level thinking skills in distance education practices will also make teaching processes more functional. As a matter of fact, making a due diligence on the extent to which high-level thinking processes and skills, social skills and the learning-teaching process are adapted in emergency distance education applications in the Covid-19 pandemic will also appear as a positive structure in later regulations.

However, in the literature review, there are studies that reflect the views of teacher candidates regarding the distance education system applied during the Covid-19 pandemic period (Arı and Kanat, 2020; Duban and Şen, 2020; Karakuş, Ucuzsatar, Karacaoğlu, Esendemir & Bayraktar, 2020; Karatepe, Küçükgençay and Peker, 2020, Türküresin, 2020). For these reasons, it is aimed to examine the effects of emergency distance education applications carried out during the Covid-19 process on metacognition, social skills, active participation, and communication with faculty members, learning and teaching process according to the views of teacher candidates. For this purpose, answers to the following questions were sought:

■ What are the views of prospective teachers on the impact of the emergency distance education applications employed during the Covid-19 epidemic on the development of metacognition skills?

■ What are the views of prospective teachers on the impact of the emergency distance education applications employed during the Covid-19 epidemic on the development of their social skills?

■ What are the opinions of teacher candidates on the impact of the emergency distance education applications, which were employed during the Covid-19 epidemic, on active participation?

■ What are the views of prospective teachers on effective communication with faculty members of the emergency distance education applications employed during the Covid-19 epidemic?

■ What are the views of teacher candidates on the impact of the emergency distance education applications, which were implemented during Covid-19, on the learning-teaching process.

2. Method

2.1. Research design

In this study, it was aimed to examine the emergency distance education applications, which were made in Turkey due to the Covid-19 pandemic in 2020, in the dimensions of metacognition, social skills, active participation, effective communication with faculty members, as well as learning and teaching process according to the views of teacher candidates. This study, in which emergency distance education applications were collected using a data source in its own context, was designed as a case study from qualitative research methods. In the case study, the factors related to a situation (environment, individuals, events, processes, etc.) are investigated with a holistic approach and it is focused on how they affect the relevant situation and how they are affected by the relevant situation. (Yıldırım & Şimşek, 2008, p.77). In this research, the opinions of prospective teachers regarding the emergency distance education application, which has been transitioned in Turkey due to the Covid-19 pandemic, are at the forefront.

2.2. Participants

The study population of the research consists of primary school teachers, and pre-school teachers in the second and third grades of the Education Faculties of the Caucasus and Trakya University, which are located on the western and eastern borders of Turkey. In the 2020-2021 fall semester, where students with different cultural characteristics are concentrated, and who have similar characteristics, students of the department of guidance and psychological counseling, 31 students from Kafkas University Dede Korkut Faculty of Education and 20 students from Trakya University Faculty of Education, who continue the emergency distance education application, which is also directly affected by volunteers constituted the participants of the research. Data was collected from 51 participants with a semi-structured interview form. The reason for choosing this group is that it is easily accessible. In typical case sampling, it is essential to select cases that are highly likely to be encountered within the existing diversity. Considering that the majority of undergraduate students continue their education online (synchronously and asynchronously) during the pandemic process, it is thought that the experiences of the students who constitute the participants of the study are typical.

2.3. Instruments and data collection

In the study, a semi-structured interview form was used as data collection tool. The questions in the semi-structured interview form were prepared according to the research sub-objectives. The first draft form was read to three experts working in the field of educational sciences and a language expert. After the necessary corrections, a trial interview was held with three undergraduate students studying at a different university, and it was finalized after it was decided that it was clear enough. While preparing these questions, care was taken to write them in a way that would serve students to make assessments in the context of the distance education process in terms of metacognition, social skills, active participation, communication with faculty members, learning and teaching. Examples of questions in the semi-structured interview form are presented below:

1- In the development of online distance learning planning skills.

2-In providing motivation in the online distance education process.

2.4. Data analysis

Before starting the data collection process in the research, the relevant literature was scanned, the students in the group where the data would be collected were informed about the research, and a personal information question consisting of three questions prepared for the experiences of the 65 students who wanted to participate. After applying a semi-structured interview form with 49 questions about skills, active participation, communication with faculty members and the learning and teaching processes, the forms were examined, themes and codes were created. Data was collected from the students participating in the research on a voluntary basis, and it was concluded that 51 of them had evaluable qualifications. It was stated that if there are places where they do not want to be used from the information they provided, it will definitely not be used, and they can leave the study whenever they want. A semi-conducted interview form data was collected from the participants via e-mail and Moodle. In addition, some interviews were recorded via an online application (Moodle) with their knowledge and permission. Content analysis and inductive analysis technique were used in the analysis of the interview data. The main purpose in content analysis is to reach concepts and relationships that can explain the collected data. (Creswell, 2014). According to Creswell (2014), the concepts underlying the data and the relationships between these concepts are revealed through coding in inductive analysis. In order not to reveal the identities of the participants, their names were coded as T1 and their real names were kept confidential. As a result of the content analysis, the codes and themes were extracted by using the answers given by the students. In the research, two important processes were carried out in order to ensure the validity of the

results. The first is to explain the data analysis process (how the conceptual category is reached) in detail, and the second is to select the examples that are assumed to represent the best for each of the categories obtained in the research and include these examples in the findings section. In order to ensure the reliability of the research, the codes of two independent researchers and the categories related to the codes were compared in order to confirm whether the codes given under the conceptual category reached in the research represent the mentioned conceptual categories. The inter-coder reliability obtained as a result of the comparison of the opinions of the two researchers was calculated as .84 (Reliability=consensus/consensus+disagreement) (Miles and Huberman 1994).   In addition, the codes that had disagreements between the two researchers were discussed and the mentioned codes were placed under appropriate categories. In order to achieve a consensus among the researchers, the reasons for the prospective teachers' statements were taken into account. In addition, the frequencies and percentages of each code were presented in tables using the statistical program, and the findings were interpreted accordingly**.**

3. Results

It is possible to gather the elements that teacher candidates think that emergency distance education applications increase the effectiveness of the learning and teaching process, under the themes of " metacognition", "social skills", "active participation", "effective communication with faculty members", "learning and teaching process".

3.1. Results regarding the positive opinions of prospective teachers about the effect of emergency distance education on the teaching process

According to the opinions of the prospective teachers, the findings regarding the factors that positively affect the effectiveness of the learning-teaching processes of the emergency distance education applications during the Covid-19 process are presented in Table 1.

Table 1. The elements of the emergency distance education process that affect the learning-teaching dimension positively according to the opinions of the prospective teacher

Themes	Frequency	%
Development of metacognition skills	12	14,28
Development of social skills	23	27,38
Ensuring active participation	8	9.52
Ensuring effective communication with faculty members	19	22,61
The functional progress of the learning-teaching process	22	26,19
Total	84	100

As seen in Table 1, the elements of the emergency distance education process that positively affect the learning-teaching process, according to the opinions of the prospective teachers; development of metacognition skills n: 12, development of social skills n: 23, active participation n: 8, effective communication with faculty members n: 19, and functional progress of the learning-teaching processes n: 22.

3.2. Development of Metacognition Skills: Prospective teachers stated that synchronous-asynchronous courses made significant contributions to the development of planning, organization and evaluation skills in the learning-to-learning process. They stated that the different teaching materials used in the distance education process contributed to the development of self-regulation skills. E.g; If we look at the views on the contribution of distance education to metacognition planning skills;

T2 *"I can say that it is beneficial in determining my learning purpose correctly. Because the course hours are short and I can see my learning purpose while doing a lot of homework given after the theoretical information given in the courses."*

T1 *"It is good in terms of repeating information. Because the course content is uploaded to the system. In addition, it is sufficient to fulfill my homework, research and learning responsibilities. Because homework has been made compulsory and homework is evaluated. It is also sufficient for the development of my organizational skills. Because the homework given allows me to cooperate with other individuals."*

T24 *"It contributed to the creation of the study program. Because it allowed me to attend classes more regularly and take notes."*

T4 *"It contributed to the development of my planning skills. Because it required me to make a plan in terms of course hours and homework delivery."*

If we look at the views on the contribution of distance education to the organizational skills of metacognition;

T2 *"It was helpful in the development of my organizational skills. Because I had to move forward in the direction of planning in this process. It facilitated access to information. Because it is an asynchronous system. In addition, distance education courses contributed to the development of my problem-solving skills. Because we provided the data that we could not obtain in the lessons and solved the problems ourselves."*

T24 *"It contributed a lot to the development of my organizational skills. Because in this process, when I was given more than one homework at the same time, my organizational skills increased."*

T29 *"It has partially contributed to the development of my organizational skills. Because of my visa assignments, I had to work in an organized way. In addition, it is very good in*

terms of repeating the information because there is an opportunity to listen to the lesson again. It is faster in accessing information, because the computer phone is always active."

T27 '*It is suitable for creating new ideas. Because ideas are being developed to make the most of the environment created."*

T26 *"It was effective in terms of repeating the information. Because we had the chance to listen to the lessons we missed on the website and it was effective in reaching different sources, we had the opportunity to do research after the end of the lesson in the places we did not understand."*

If we look at the views on the contribution of distance education to the assessment skills of metacognition;

T25 *"It had positive effects on the development of my assessment skills. Because, due to the time limitation of the course, it is useful in terms of learning and evaluating the subjects myself."*

T32 *"It was effective in the development of my planning skills. Because the videos and lecture notes were recorded in the e-lesson system, we had the chance to reach them whenever*

we wanted. This provided some comfort. It was necessary to make an effective planning in order not to break away from the lessons."

T33 *"It was effective in determining my learning purpose correctly. Because I focused on the determined issues. Since the people to consult and receive information are limited, it required a condition to set a purpose for learning."*

T36 *"In terms of repeating the information, I think it can be repeated more in the virtual environment. Because we have the opportunity to access most information when we want it and when we are ready."*

3.3. Development of Social Skills: Prospective teachers stated that synchronous and asynchronous courses contributed significantly to the development of social skills.

If we look at the views of distance education on the contribution of social skills to taking joint responsibility;

T24 *"It contributed to taking responsibility with my classmates. Because we did some of our homework by forming groups and taking the same responsibility."*

T1 *"It is sufficient to take responsibility with my classmates. Because the research assignments given to be evaluated with the limited time, raised a sense of responsibility collectively".*

T43 *"It was effective in taking responsibility with my classmates. Because we cooperated."*

If we look at the views on the contribution of distance education to the development of one's social skills with the help of different internet applications (WhatsApp, Facebook, …etc);

T18 *"Different internet applications (WhatsApp, Facebook, etc.) have been effective in the development of my social skills. Of course, besides this positive effect, it is a pity that I waste a lot of time on these sites. Because instead of spending time on social media, I would like to be in my classes at school."*

T50 *"It contributed to the development of my social skills with the help of different internet applications (WhatsApp, Facebook, etc.). Because we had the opportunity to communicate with friends in fields outside of our own."*

If we look at their views on the contribution of distance education to the development of mutual information exchange skills in the social dimension;

T8 *"We have improved in information exchange. Because not everyone can participate in this process with distance education, so we need to exchange information."*

T3 *"We were lacking in information exchange with our teachers, but we were able to establish it with our friends. Because the questions we would ask our teacher sometimes*

came to our minds later, and we could rarely reach them, but we were able to communicate with our friends."

If we look at the views on the contribution of distance education to social development through peer assessment;

T6 *"It was effective in peer assessment. Because we often had difficulties in the same issues as our other friends and we saw how close our levels were."*

T9 said, *"We have seen some facts in the peer assessment. Because it was an unusual situation and we saw how people behaved in this situation."*

T45 *"It was effective in peer assessment. Because when I compared myself with my friends, it was easy to see the difference and make an assessment."*

If we look at the views on the contribution of distance education to the socialization process through written communication;

T10 *"It helped me to socialize through written communication. Because, I think it will contribute to socialization to some extent by making use of the internet and mobile networks."*

T11 *"It is useful for me to socialize through written communication. Because with this training, we improve our written communication. In this sense, we socialize."*

If we look at the views on the contribution of distance education to the development of communication skills in the dimension of socialization;

T25 *"It has improved in terms of communicating with my friends. Because we can discuss what we can do."*

T39 *"It was effective in communicating with my friends. Because I asked my friends about things I did not understand."*

3.4. Ensuring Active Participation: Prospective teachers stated that synchronous and asynchronous courses made significant contributions to the active participation process. If we look at the views on the contribution of distance education to active participation;

T20 *"The e-course system provided was sufficient. Because we were compelled to comment."*

T6 *"It contributed to your active participation, because some of them showed how responsible they really are."*

T14 *"Everyone in the class participates willingly and actively."*

T16 *"While active participation was high at first, it started to decrease gradually."*

T18 *" I have witnessed my friends who are afraid to speak in school environment attend online classes."*

3.5. Ensuring Effective Communication with Faculty Members: Prospective teachers stated that synchronous and asynchronous courses contributed to effective communication with faculty members. If we look at their views on the contribution of distance education to effective communication with faculty members;

T1 *"It is sufficient to get support from the instructors , because we have the opportunity to reach the instructors whenever we want through the system, and we can reach the instructors through different communication channels with the ease provided by technological tools."*

T2 *"I had no problems in getting support from the instructors, because they helped us solve our problems."*

T6 *"I did not have a problem in getting feedback from the instructors, because I usually didn't have to follow and communicate with his instructions, so his instructions were good enough for me in most things."*

T9 *"I think that the instructors are successful in problem solving competence, because even though it is a new system, they got used to it quickly and gave feedback if we reached them."*

T10 *"I can say that it contributes to getting support from the instructors, because we have the opportunity to communicate with the instructors in situations such as homework and lessons. We can be informed via message and communication. In addition, in the problem-solving competence of the instructors, it makes use of the instructors. We may have the opportunity to solve the questions that we do not understand and cannot solve with the help of the instructors."*

T15 *"Adequate level in reaching the instructors, because there are parts where we can get news through the system. Sufficient in receiving support from instructors, because they help us against the problems we are experiencing."*

T16 *"I think that it is effective for the instructors to get to know their students, because since they evaluate the homework individually, there are those who give feedback when there is any problem, and therefore they have the opportunity to get to know them better. We don't have any problems getting support from the lecturers because they try to motivate us as much as they can and motivate us to go through the process as well as possible."*

T18 said, *"It had positive results for me in getting feedback from the instructors because I got immediate feedback in my e-mails".*

T20 *"It was convenient to reach the instructors. They all gave their e-mails."*

3.6. Functional Progress of the Learning-Teaching Process

They stated that the synchronous and asynchronous courses contributed to the functional progress of the learning-teaching processes. If we look at the views on the

contribution of distance education to the functional progress of the learning and teaching processes of the courses;

T3 *"Distance education contributed to the use of different materials in different courses, because we used social media."*

T5 *"Distance education has benefited from the use of different types of assessment in different courses, because before we were subjected to evaluation only by exam, now various forms or weekly assignments are given and these are used during the evaluation".*

T9 *"It contributed to a more effective conduct of different courses. Because although it had a bad effect on the practical lessons, more time would be allocated for some lessons under normal conditions. With distance education, it became more effective and accurate timing. In addition, we learned how to use the time correctly and effectively, since the course times are short. The use of different assessments was also a plus. As conditions changed, both oral and written communication took place."*

T11 *"Distance education contributed to the effective use of time in different lessons, because there is a limited time and it is necessary to evaluate it. This necessity arises. There are many types of assessments that we can find online as well and it contributes in that sense."*

T12 *"Distance education is much more efficient than the classical course environment, because it is like taking private lessons. It creates a more comfortable environment than face-to-face. We pay attention to use the time effectively".*

T19 *"Even if distance education is not efficient enough, it is better than no lessons."*

3.7. Results regarding the negative opinions of prospective teachers about the effect of emergency distance education on the teaching process

According to the opinions of the prospective teachers, the findings regarding the factors that negatively affect the effectiveness of the learning and teaching processes of the emergency distance education applications during the Covid-19 process are presented in Table 2.

Table 2. Factors that negatively affect the efficiency of the emergency distance education process of the learning and teaching process according to the opinions of the prospective teachers

Themes	Frequency	%
Development of metacognition skills	11	19.29
Development of social skills	29	50.87
Ensuring active participation	8	14.05
Ensuring effective communication with faculty members	4	7.017
The functional progress of the learning-teaching process	5	8.77
Total	57	100

As seen in Table 2, the factors that negatively affect the learning-teaching process of the emergency distance education process according to the opinions of the prospective teachers; development of metacognition skills n: 11, development of social skills n: 29, active participation n: 8, effective communication with faculty members n:4, and functional progress of the learning-teaching process n:5 students.

3.8. Development of Metacognition Skills: They stated that synchronous and asynchronous courses do not make significant contributions to the development of planning, organization and evaluation skills in the learning-to-learn process. They stated that the different teaching materials used in the distance education process did not contribute to the development of self-regulation skills. E.g; If we look at the opinions that distance education does not contribute to the planning skills of metacognition;

T1 *"My planning skills are weak in development, because class hours are not suitable for me. It is weak in creating a work program, because I did not create a study program for the distance education method before."*

T3 *"It is deficient in determining my learning purpose correctly, because it creates uncertainty on subjects that are not fully relevant to the lessons."*

T13 *"It has a negative effect on the development of my planning skills, because we were in a more programmed state at school. I'm having a hard time creating a work schedule, because there is no working environment at home. I have difficulty in determining my learning purpose correctly, because I can't concentrate at home. I have difficulty in maintaining motivation, because I can't get my motivation up."*

If we look at the opinions that distance education does not contribute to the organizational skills of metacognition;

T9 *"It was not effective in the development of my organizational skills, because face-to-face communication is more effective for organization. It is not enough to reach different*

sources, bcause it is more difficult to reach universities' libraries, lecture notes, different ideas and opinions in the home environment."

T12 *"There are negative aspects in the development of organizational skills, because situations such as group work can sometimes be difficult. There is a negative aspect in the development of organizational skills, because different situations can occur."*

If we look at the opinions that distance education does not contribute to the assessment skills of metacognition;

T10 *"I cannot clearly say that it contributed to the development of my assessment skills, because we have the chance of one-to-one active learning at school, our assessment opportunities increase, but in distance education, assessment can inevitably be interrupted."*

T16 *"I don't think it is very effective in evaluating myself, because there is a little bit of it, and it creates a different learning environment. I did not see much of the effect on myself."*

T45 *"Assessment did not affect the development of my skills much, because there weren't that many classes and I couldn't participate actively."*

T50 *"It did not contribute to the development of my assessment skills, because it did not help in the light of more concrete information."*

3.9. Development of Social Skills: They stated that synchronous and asynchronous courses do not contribute to the development of social skills. If we look at the views that distance education does not contribute to social skills taking joint responsibility;

If we look at their opinions that distance education does not contribute to the development of my social skills with the help of different internet applications (WhatsApp, Facebook, etc.);

T3 said, *"With the help of different internet applications (WhatsApp, Facebook, etc.), it did not contribute to the development of my social skills, and I was even more bored with social media applications. I am not someone who likes to spend a lot of time on social media, but because we do something through social media and we talk about lessons and*

assignments from different wp groups all the time, the messages are both mentally exhausting and I have turned into a person who cannot drop the phone from his hand."

T28 *"The contribution to the development of my social skills is insufficient with the help of different internet applications (WhatsApp, Facebook, … etc.), because I cannot establish the relevance of these applications for the purpose of the lesson."*

If we look at their views on the fact that distance education does not contribute to the development of mutual information exchange skills in the social dimension;

T1 *"There are negative aspects in information exchange, because it is more difficult to get feedback compared to the classical course."*

T3 *"We were lacking in information exchange with our teachers, but we were able to establish it with our friends. The questions we would ask our teacher sometimes came to our minds later, and we could rarely reach them, but we were able to communicate with our friends."*

If we take a look at their views on the fact that distance education does not contribute to social development through peer assessment;

T1 *"Peer assessment is insufficient, because we are not in the same environment."*

T36 *"Peer assessment was insufficient, because individuality was at the forefront."*

If we take a look at their opinions that distance education does not contribute to the socialization process through written communication;

T20 *"It didn't work for me to socialize through written communication, because it is not as effective as face-to-face communication."*

T24 *"It did not contribute to my socialization through written communication, because it is very difficult to communicate in writing without speaking."*

If we look at the opinions that distance education does not contribute to the development of communication skills in the dimension of socialization;

T10 *"In terms of communicating with my friends, the opportunity to reach is interrupted due to the lack of internet and other tools. If there is internet and other tools, we can find*

the opportunity to reach, but if there is not, our chance of reaching may be a little interrupted."

T35 *"It caused some difficulties in communicating with my friends rather than face-to-face training, because sometimes our hours during the day did not fit each other and we had difficulties in communicating."*

3.10. Ensuring Active Participation: They stated that the synchronous and asynchronous courses do not contribute to the active participation process. If we look at their views on the fact that distance education does not contribute to active participation;

T11 *"There is a problem in active participation, because not everyone has the opportunity to study in this way, some do not have an android phone and some do not have a computer. That's why there is not much active participation."*

T18 *"Because I think that access opportunities in online education are not equal for everyone."*

T23 *"..we had friends who could not create suitable tools and environments to enter this system. I can't say that we had a very productive distance education process and there was no situation to work together."*

T41 *"It enabled the active participation of my classmates, because some of our friends have no internet connection in the places where they live, or they do not have a computer or smart phone to access online education and do their homework, and some of our friends do not fulfill the necessary responsibilities despite having all the opportunities."*

3.11. Ensuring Effective Communication with Faculty Members: They stated that synchronous and asynchronous courses do not contribute to effective communication with faculty members. If we look at their opinions that distance education does not contribute to effective communication with faculty members;

T1 *"Instructors are weak in recognizing their students, because there is no face-to-face meeting and there are many students who want to reach the instructors, it takes time to get feedback."*

T35 *"I had some difficulties in reaching the instructors, because some instructors did not respond to my personal e-mails or responded late. It did not help much for the lecturers to get to know their students."*

3.12. Functional Progress of the Learning-Teaching Process: They stated that the synchronous and asynchronous courses do not contribute to the functional progress of the learning-teaching process. If we take a look at their views on the fact that distance

education does not contribute to the functional progress of the learning and teaching process of the courses;

T2 *"The e-course system provided was not sufficient, because the communication problem was too much and inefficient. There was a system that was not settled yet."*

T12 *"Distance education does not contribute to the use of different materials in different courses, because it is not possible to use too many materials."*

T38 *"I don't think it is as effective as normal education, because generally the notes shared by the teachers were not careful and sufficient. There were also great difficulties while logging into the system."*

4. Conclusion

When the opinions obtained are evaluated, it is seen that the elements that prospective teachers think the effectiveness of the teaching-learning process of emergency distance education application increase development of metacognition skills, development of social skills, active participation, effective communication with faculty members and functional progress of the learning-teaching process. On the other hand, under the same themes, prospective teachers also stated that emergency distance education practices are not an effective factor in increasing the effectiveness of the learning-teaching process.

The factors that have a negative impact on the emergency distance education process are the increasing homework load that can be addressed within the same themes, insufficient explanation of educational tasks, problems caused by the pandemic, internet-related problems, systemic-technological problems, inadequacies in gaining metacognition skills, and uniformity in methods and techniques expressed. So much so that in this process, it has become a necessity to prepare teachers and students for the online education model, as WEF (2020) stated, in order to remove the emergency distance education from uniformity. Considering that the epidemic process negatively affects the whole world, it is obvious that the education programs and technology supports in the education systems of the countries constitute an important dimension in the implementation of the emergency action plans.

In such a process, metacognition processes and skills emerge as one of the elements that increase the effectiveness of the learning-teaching process by emergency distance education applications. Metacognition process is the process of learning to learn, which appears as the knowledge and control of the person about himself / herself and the knowledge and control of the teaching process, in which the individual's self-management and self-control skills can be considered as an important feature. The fact that learners have the skills of learning to learn, self-management and self-control in the emergency distance education applications that have been activated in many countries and in our

country during the Covid-19 pandemic process will contribute to this process in a more desirable way. I

Instructional design modules which will be prepared especially for emergency distance education applications, will prevent the formation of ineffective cognitive load in learners, which will contribute to the formation of metacognition, planning, organization, supervision and evaluation skills in learners. As a matter of fact, it has been beneficial in the development of my planning skills in the planning dimension of prospective teachers' metacognition *" because I need a certain plan in order to complete the assignments on time, has partially contributed to the development of my organizational skills, because of my visa assignments. I had to work in an organized way all the time. In addition, it is very good in terms of repeating the information because there is an opportunity to listen to the lesson again.T25"*

It is faster in accessing information, *"because the computer and the phone are always active Ö29"* and *"It contributed to my self-evaluation in the evaluation dimension, because it allowed me to see my missing parts in class and doing homework. In addition, my educational development has improved through distance education. With the assignments given, we learned more information and ways to gain knowledge. Ö24"* In fact, studies say that emergency distance education practices contribute to the development of a learner's metacognition skills (Holmberg, 1995; Chelo de Andrés Martínez, 2012; Saadati, Zeki & Barenji, 2021; Song & Kim, 2021) support the results of the research.

On the other hand, some of the prospective teachers stated in the interviews that emergency distance education applications do not contribute to the planning, organization and evaluation skills of metacognition and metacognition. As a matter of fact, prospective teachers stated that *"It has a negative effect on the development of my planning skills in the planning dimension of metacognition, because we were in a more programmed state at school. I'm having a hard time creating a work schedule, because there is no working environment at home. I have difficulty in determining my learning purpose correctly, because I can't concentrate at home. I have difficulty in maintaining motivation, because I can't provide my motivation, Ö13"* has not been effective in the development of my organizational skills, because face-to-face communication is more effective for organization.

"It is not enough to reach different sources, university libraries, lecture notes, and it is more difficult to reach different ideas and opinions in the home environment Ö9" and *"I cannot clearly say that it contributed to the development of my assessment skills. Because we have the chance of one-to-one active learning at school, our assessment opportunities increase, but in distance education, assessment can inevitably be interrupted, Ö10"* emphasizes this.   In particular, instructional design modules and technological inadequacies that were not prepared in accordance with the emergency distance education

process may be the reason for the students who reported negative opinions to state that their metacognition skills did not develop.

As a matter of fact, Çetin (2020) stated in his study that the creation of instructional technologies and instructional design modules in an organized structure is an important variable in distance education. Gülnar (2008) determined that one of the reasons why students do not use the distance education system is that the students do not have internet access. Another skill that prospective teachers think increases the effectiveness of the learning-teaching process of emergency distance education applications is the field of social skills. As a matter of fact, prospective teachers emphasized that emergency distance education practices contribute to different dimensions of social skills. *"It contributed to taking responsibility with my classmates, because we did some of our homework by forming groups and taking the same responsibility, T24"*, it contributed to the development of my social skills with the help of different internet applications (WhatsApp, Facebook, etc.) .

"Because we had the opportunity to communicate with friends in areas other than our own, T50". Similarly, we were able to establish a contribution to the development of mutual information exchange skills with our friends, because the questions we were going to ask to our teacher sometimes came to our minds later, and we could reach them very rarely, but we were able to communicate with our friends T3", *"It has been effective in peer assessment, because we had difficulties in the same subjects as our other friends and we saw how close our levels"* were, T6 said, *"in it's contribution to the socialization process through written communication"*, T10 said, "*It helps me to socialize through written communication, because I think it will contribute to socialization to some extent by making use of the Internet and mobile networks,"* and emphasized its value. On the other hand, there are teacher candidates who stated that emergency distance education does not contribute to the development of social skills. E.g;   T24 *"It was weak in terms of communicating with my friends, because I think face-to-face communication is healthier and more effective"* and T32 *"It was not very effective in peer assessment, because I can't evaluate a person too much before I come face to face".* Therefore, they stated that prospective teachers have both positive and negative effects on the development of social skills.

According to Holmberg (1995), distance education is a process that has the dimensions of planning, teaching and guidance, and in this process it provides the social guidance dimension to the learners through different materials. The fact that students and teachers receive this guidance without having to be in the same environment will also make a positive contribution to the development of their social skills. In addition, when the studies on the emergency distance education system are examined in the literature, there are different studies that conclude that the system has both positive and negative aspects in terms of social skills (Popyk, 2021, Doğan, 2020; Eroğlu & Kalaycı, 2020; Karakuş et al., 2020, Zarzycka, Krasodomska, Mazurczak-Mąka & Turek-Radwan, 2021). Therefore, the

inclusion of social awareness projects, which will include hybrid models in the emergency distance education process, in the instructional designs to be prepared, the creation of joint study groups that will consist of heterogeneous groups, and the provision of the necessary guided learning support to the students as much as possible will have a positive effect on the development of the social skills of the learners.

Another dimension that teacher candidates think that emergency distance education applications increase the effectiveness of the learning and teaching process appears as active participation. Prospective teachers expressed both positive and negative views on this dimension. As a matter of fact, some of the positive opinions are; *"T6 contributed to your active participation, because some of them showed how responsible they really are, T8 "It provided the active participation of my classmates. Because everyone is aware that it is a difficult period and that we need to help our friends who cannot participate",* while some of the negative opinions are *"T11 There is a problem in active participation. Because not everyone has the opportunity to study in this way, some do not have an android phone and some do not have a computer."*

That's why there is not much active participation, T18 says *"Because I think that access opportunities in online education are not equal for everyone".* Active participation is an important dimension for the learner to better internalize the learning process. In fact, it is seen in many studies that individuals learn most of what they learn by doing and living, more permanently. Providing learners with the opportunity to do and live in the emergency distance education process with different instructional design models on digital platforms will contribute to the formation of more permanent learning in learners. As a matter of fact, Popyk (2021) stated in their research that instructional design modules that are functionally included in emergency distance education contribute to the more active participation of students in the teaching process. Another dimension that teacher candidates think that emergency distance education applications increase the effectiveness of the learning-teaching process is the provision of effective communication with faculty members. In fact, although the prospective teachers mostly emphasized the acceleration of communication with the instructors and the supportive attitudes and competencies of the instructors in their positive opinions, they expressed both positive and negative opinions in this dimension. Some of the positive comments are; *"T12 is considered good in the problem-solving proficiency of the instructors. Because they help most of the time*, T14 *"It is effective in getting support from the instructors. Because we get returns easily. It is effective in getting feedback from instructors. Because our teachers carefully give feedback"*, while some of the negative opinions are " T1 is weak in getting to know the students of the instructors. Because there is no face-to-face meeting and there are many students who want to reach the lecturers, it takes time to get feedback. T23 *"It is not effective for the lecturers to get to know their students. Because it is online, not every student can enter. They do not help with the problem-solving competence of the instructors. Because this is not possible in the online environment."* In this process, teachers who maintain

effective communication with their students, especially their technological knowledge, competence in their skills, and getting to know the students contributed to the effective execution of the process.

However, some of the prospective teachers stated that the effective communication process was not carried out in a very desirable way, especially inadequacy of technological opportunities, screen fatigue and the lack of effective instructional design planning may be some of the reasons for this. Another dimension that teacher candidates think that emergency distance education applications increase the effectiveness of the learning-teaching process is the functional progress of the learning-teaching process. Prospective teachers expressed both positive and negative views on this dimension. Some of the positive comments are; *"T3 Distance education contributed to the use of different materials in different courses. Because we used social media, T4 Distance education contributed to the use of different materials in different lessons. Because different materials were used than on the online way",* while some of the negative opinions were *"T2 The e-course system provided was not sufficient. Because the communication problem was too much and inefficient and there was a system that was not settled yet, T12 Distance education does not contribute to the use of different materials in different courses. Because it is not possible to use too many materials".* In this dimension, especially teacher candidates; The positive features in increasing the effectiveness of the learning-teaching process are the findings such as the availability of course records and materials, being economical in terms of time-money-labor, homework preparing students for the lesson/preventing the lesson, feedback given to the instructional tasks, ease of access to resources, and opportunities to participate in various online trainings. evaluated as. As a matter of fact, Zarzycka et al. (2021) mentioned the positive effect of emergency distance education on the functional progress of the learning-teaching process in his study. However, in this dimension, prospective teachers have opinions stating that emergency distance education has a negative effect on the functional progress of the learning and teaching process.

5. Discussion and Suggestions

As a matter of fact, as Pinar (2021) stated, the epidemic process revealed all the deficits and deficiencies of the education systems and brought about the re-examination of the concepts of rich, poor, sufficient and insufficient on the basis of countries (Gettleman and Raj 2020). In such a process, the differences between the privileged group's easier access to technological opportunities and the poor people's use of technological resources in the digital divide show negative reflections on the functional progress of the learning and teaching process. It is also seen in the studies that Pinar, W (2021) discussed in his article, that the epidemic revealed all the deficits and deficiencies of the education systems and expressed the necessity of re-examining the concepts of rich, poor, sufficient and insufficient on the basis of countries. While many in rich countries complained about online

learning, hundreds of millions of children in poorer countries lacked this privilege without computers or internet access. These children have completely lost their access to education. Not just in poorer places: New York City failed to provide internet access to nearly 111,000 children living in homeless shelters; online learning was also not an option for these children (Gettleman and Raj 2020). Again, Pinar evaluated the epidemic process, which greatly affected the differences between societies, in the context of past and present. A hundred years ago, it was radio, not Zoom, that stood for "online" learning. Later, it left its place to TV and today's technology is now equipped with technological tools such as Ipads and computers. It fell to the position of a basic need for a house and prices created a huge gap. Just before the epidemic, while technological devices were at reasonable levels, a small webcam was not found even for 10 times more money. It negatively affected the education system not only in terms of education but also as opportunism. Some students lived in rural areas and had to support their families. Moreover, there was no internet facility where they lived, and they had to commute to the nearest town. They could not come to school because they had to be isolated, and they were forced to take public transport. Because lectures and assignments were online. Since the beginning of the epidemic, so much research has been done that the concern of being a priority in the literature has revealed the need to bring quality to the fore. Researchers offer many suggestions, the most important thing to consider here is to be prepared for bad days. In our society, the understanding of preparation for winter is largely at the forefront, and there is still money to talk about for bad days in the countryside, food prepared for hard winter days. In the world, those who have plans prepared for these bad days, survived more easily and turned to the future in a stronger way. As a matter of fact, this situation was also reflected in the opinions of prospective teachers who had internet, physical and technological difficulties. University administrations have great responsibilities in eliminating these problems arising from the differences in technological, physical and teaching materials between the socio-economic status of teacher candidates.

The fact that some of the students live in rural areas and have difficulties in accessing the internet in this process reflects negatively on the students' views on the functional progress of the teaching process. While the world focuses on applications that will take students from the screen, families who have to force their children to sit in front of the screen and teachers who try to motivate students in front of the screen and involve them in the lesson have come to the fore.

In such a process, it is obvious that the effective instructional design modules included in emergency distance education will make positive contributions to the development of prospective teachers' metacognition and social skills, to improve the communication between the student and the teacher, to ensure the active participation of the student in the process, and to the functional progress of the learning and teaching process. For this reason, great responsibilities fall on curriculum and instruction specialists, instructional technologists and university administration. This research is important in terms of

presenting the current situation of teacher candidates and giving feedback on making the necessary arrangements in practice.

The suggestions that we can consider in parallel with the results of the research are;

-Creation of instructional design modules for teacher candidates that can be used in emergency distance education by field experts,

- Providing supportive services for the psychological and social dimensions of teacher candidates by relevant experts,

-Include additional arrangements (eg artificial intelligence applications, attention focusing tools etc.) as much as possible, which will ensure active participation of teacher candidates in the lesson.

-The necessity of developing instructional design modules based on projects for distance education, which will contribute to the development of social and metacognition skills of teacher candidates, and

-Updating studies that can be handled on the basis of 21st century learner-teacher competencies should be included. Especially in terms of high-level cognitive skills, studies can be made by associating them with the concepts of competence in terms of features such as critical thinking, problem solving, and communication skills.

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An example appendix

Authors including an appendix section should do so after References section. Multiple appendices should all have headings in the style used above. They will automatically be ordered A, B, C etc.

Example of a sub-heading within an appendix

There is also the option to include a subheading within the Appendix if you wish.