

Research Paper

Students' Views Regarding Instruction during the Pandemic Process

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ABSTRACT

The aim of this study was to determine the views of secondary and high school students regarding the distance education activities carried out during the coronavirus disease 2019 (COVID-19) pandemic, the blended learning activities conducted afterwards, and the post-pandemic back-to-school process. The study consisted of 982 students and was conducted utilizing the descriptive survey method, one of the quantitative research methods. Data were collected using the "Scale of Evaluating Instruction in Pandemic Process". The findings indicated that most of the students used smartphones alone for distance education during the pandemic process and most of them participated in distance education only via live lessons. In addition, no significant difference was found between genders with regard to students' satisfaction with the distance education process and their expectations. On the other hand, most of the students did not receive sufficient psychological and academic support during this process. It was also noted that the students with internet access were more satisfied with the instruction activities in this process and that their access to the internet and technologies were higher than the students without internet access. Based on our findings, we recommend that students should be provided with academic and psychological support, security precautions should be tightened in schools to minimize the effects of the pandemic, and equal opportunities should be provided to students regarding hardware and internet support.



INTRODUCTION

During the coronavirus disease 2019 (COVID-19) pandemic, schools have remained closed and strict measures have been taken to maintain instruction during the pandemic in many countries. Additionally, numerous countries have decided to continue their educational activities through distance education. In line with the technological capabilities of the countries, distance education has continued with printed teaching materials, educational radio, and television broadcasts, and online and offline activities (Viner et al., 2020). In Turkey, effective as of March 16, 2020, nationwide distance education began to be implemented at all educational levels, and education activities were carried out in a similar way to the practices in the world. Most of these distance education activities were conducted using the system known as Eđitim Biliřim Ađı (EBA; meaning *Education Information Network*) and EBA TV. By making such a decision, the Turkish government aimed to minimize the negative effects of the pandemic as well as the learning loss by maintaining the educational and instruction processes (Ayđın, 2020).

Although there are no large-scale studies on the effectiveness of these measures, it has been reported that students who are disadvantaged in various aspects are more affected by the adverse consequences of school closures and thus the dropout rates among such students may increase significantly (Bozkurt et al., 2020). In addition, it has also been emphasized that long-term closure of schools may cause disruption of essential school-based services such as immunization, school feeding, mental health, and psychosocial support (Brooks et al., 2020; Sahu, 2020) and that the lack of face-to-face communication may cause stress and anxiety (Cao et al., 2020; Krtnc & Kurt, 2020).

School closures pose unprecedented challenges to governments, teachers, students, and parents to ensure continuity of learning (Chang & Satako, 2020). Additionally, the unique and critical role played by schools make them a priority to stay open in order to ensure that students receive both academic education and support as well as critical services. While some of the schools are reopening for face-to-face education, others continue to operate with a blended teaching model consisting of face-to-face and distance (online) learning. According to UNESCO (2020), as of September 21, 2020, schools were fully reopened in 91 out of the 210 countries and partially reopened in 41 countries. Moreover, it was reported that schools were closed during the holidays in 26 countries and fully closed in the remaining 52 countries. In October and November, 2020, the number of countries with fully or partially open schools all over the world increased, while the number of countries where schools were closed decreased. In Turkey, make-up education initiated via distance education on August 31, 2020 and face-to-face education activities were started for kindergartens and first grades with a diluted and gradually eased education system on September 21, 2020. On October 12, 2020,

the number of classes performing face-to-face education was increased. Yet, parents were still concerned about whether it would be safe to send their children to school during the pandemic (Ben-Joseph, 2020). This concern primarily stemmed from the idea that a vaccine would not be available for many students in the following academic year. However, as is commonly known, maintenance of public health during the pandemic depends largely on the success of schools in following the COVID-19 treatment and prevention guidelines, though studies have shown that reopening schools for face-to-face education does not cause a significant increase in the transmission of the virus in the society (American Academy of Pediatrics, 2021).

To date, numerous studies have been conducted on the back-to-school process. Among these, the study conducted by UNICEF (2020) made recommendations to teachers, administrators, and parents regarding the safety of returning to school, measures to be taken by schools, possible solutions to compensate for the education lost during the lockdown periods, and the measures to be taken against students' resistance to return to school. Another study that was conducted by Bayındır (2021) aimed to determine teachers' perceptions of resilience after the pandemic and reported that teachers were mostly worried about contracting the disease during their back-to-school process and that they were expecting institutional solutions. Based on these findings, the author suggested that necessary support should be provided periodically to reduce the anxiety levels of teachers and to maintain their well-being. Another study suggested that there would be no problems for children returning to school, also noting that they would not be adversely affected by the disease since their infection status was remarkably low compared to adults. The authors also stated that children can return to school after all the necessary measures have been ensured (Munro & Faust, 2020). By contrast, in a study conducted with 355 participants, it was reported that all the stakeholders in the school experienced social and emotional problems in coping with emotions such as anxiety, anger, and uncertainty and it was also noted that the students had problems in focusing on their educational activities and in controlling themselves during the online education process (Bulut, Çakıcı, & Yazgan, 2020).

In line with the notions presented above, it can be asserted that during the process of reopening schools, the expectations of the community from politicians and school administrators include elimination of educational inequalities, minimization of individual and parental risks associated with returning to school, maximization of the educational potential in schools, and the prioritization of the benefits of returning to school for the psychological well-being of children (Woodland et al., 2020). In the schools reopened within the scope of the new norms, both the level of meeting these expectations and whether the measures taken are sufficient, whether they can be applied as desired, and the comparison of the distance education activities conducted in the spring term and the current blended learning activities are considered important issues in terms of helping the education policymakers (Can, 2020). To this end, the present study aimed to investigate the views of secondary and high school students towards the distance education activities (TV broadcasts, live lessons) carried out during the COVID-19 pandemic period, the blended learning (distance and face-to-face education) activities carried out afterwards, and the post-pandemic back-to-school process. For this purpose, answers to the following research questions were sought in the research:

- RQ1. How and with which information tools do high and secondary school students participate in distance education?
- RQ2. What are the views of secondary and high school students regarding the instruction conducted during the pandemic?
- RQ3. Do students' views differ according to gender?
- RQ4. Do students' views differ according to educational level?
- RQ5. Do students' views differ according to the status of internet connectivity?
- RQ6. Do students' views differ according to the mode of participation in distance education (e.g. TV broadcast, live lesson)?
- RQ7. Is there a difference in student views with regard to the number of students simultaneously participating in distance education in the same house?
- RQ8. Is there a difference in student views with regard to the student's city of residence?

METHOD

The research was conducted utilizing the descriptive survey method. Description is a quantitative research method used for describing and explaining a situation or phenomenon (Sönmez & Alacapınar, 2013). Survey, on the other hand, is a research design that is widely used in descriptive research and is carried out on large groups, in which the opinions and attitudes of individuals in the group are queried regarding an event or phenomenon and related events and phenomena are described (Karakaya, 2014). By choosing this method, it was aimed to determine the views of students on the distance and blended education activities (TV broadcast, live lesson) and the post-pandemic back-to-school process during the COVID-19 pandemic period.

Participants

The study included 982 students (234 secondary school students and 748 high school students) studying in the provinces of Giresun, Bayburt, Diyarbakır, and Elazığ, which were selected using the convenience sampling method. Convenience sampling is a sampling method in which individuals or groups that can easily be researched for the subject to be studied are preferred. The reason for choosing this method was that it allows the researchers to personally take part in the data collection process and to collect convenient data in a relatively shorter time (Sönmez & Alacapınar, 2013). Demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic characteristics

| | Secondary School | | High School | | Total |
|--------------|------------------|------------|-------------|------------|------------|
| | Male (n) | Female (n) | Male (n) | Female (n) | |
| Diyarbakır | 23 | 20 | 138 | 298 | 479 |
| Bayburt | 41 | 33 | 111 | 141 | 326 |
| Giresun | 59 | 54 | 0 | 0 | 113 |
| Elâzığ | 2 | 2 | 53 | 7 | 64 |
| Total | 234 | | 748 | | 982 |

Data Collection

Data were collected using the “Scale of Evaluating Instruction in Pandemic Process” developed by Tural et al. (2021). The scale consisted of three parts: the first part probed participants’ demographic characteristics, the second part consisted of five-point Likert-type items (“Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree”), and the third part involved four-point Likert-type items “Never, Rarely, Occasionally, Often, Always”. The Exploratory Factor Analysis (EFA) indicated eight dimensions (Satisfaction, Precautions, Accessibility, Expectations, Evaluation, Support, EBA TV & Service desks, and Time) and 39 items. Additionally, the CFI, NFI, and NNFI scores in the Confirmatory Factor Analysis (CFA) were 0.95, 0.92, and 0.95, respectively. It was also revealed that the 8-factor structure determined in Exploratory Factor Analysis (EFA) was confirmed by CFA. On the other hand, the Cronbach’s Alpha reliability coefficient was found to be 0.893 for the scale. Finally, the scale was administered to the participants by using “Google Forms”.

Data Analysis

Data were analyzed by using both descriptive and predictive analyses. In the descriptive analysis, mean, standard deviation, frequency, and percentage were utilized. In the predictive analysis, since the data were not normally distributed according to the Kolmogorov-Smirnov Test, non-parametric tests including Mann Whitney U-Test and Kruskal Wallis H-Test were used. For the current study the Cronbach’s Alpha reliability coefficient of the scale was found to be 0.93. A p value of <0.05 was considered significant in all sub-dimensions.

RESULTS

In this section, the findings are presented in sub-headings in accordance with the research questions.

Tools and Modes of Participation

The information technologies used by the students while participating in teaching activities during the pandemic process were examined and the results of the analysis were presented in Table 2.

Table 2. Information technologies used by students during the pandemic process

| Information technologies | f | % |
|-------------------------------------|-----|------|
| Smartphone only | 513 | 52.2 |
| TV only | 147 | 15.0 |
| Computer only | 102 | 10.4 |
| Tablet only | 59 | 6.0 |
| Computer + Smartphone | 54 | 5.5 |
| TV+ Smartphone | 29 | 3.0 |
| Tablet + Smartphone | 20 | 2.0 |
| TV + Computer + Tablet + Smartphone | 20 | 2.0 |
| TV + Computer + Smartphone | 14 | 1.4 |
| Computer + Tablet + Smartphone | 12 | 1.2 |
| TV + Tablet + Smartphone | 5 | 0.5 |
| Computer + Tablet | 5 | 0.5 |
| TV + Computer | 2 | 0.2 |

As seen in Table 2, most of the students used smartphones only (52.2%), followed by television only (15%), and computer only (10.4%). In addition, some students used more than one tool, whereby the combination of computer + smartphone was the most commonly used method (5.5%).

Table 3 presents the modes participation utilized by the students for the distance education process conducted during the pandemic.

Table 3. Modes of participation in the distance education during pandemic

| Participation type | <i>f</i> | % |
|----------------------------|----------|----|
| Live lesson | 635 | 65 |
| TV broadcast | 187 | 19 |
| TV broadcast + Live lesson | 160 | 16 |

As is clear in Table 3, most of the students (65%) participated in the distance education only through live lessons, while the remaining students utilized TV broadcast (19%) and a combination of TV broadcast and live lesson (16%).

Students’ Views on Instruction during the Pandemic Process

The average scores obtained for each of eight dimensions (Satisfaction, Precautions, Accessibility, Expectations, Evaluation, Support, EBA TV & Service desks, and Time) are presented in Table 4.

Table 4. Means and standard deviations of students’ views on instruction during the pandemic process
SD: Standard deviation

| Dimensions | Items | \bar{X} | <i>sd</i> |
|----------------------|---|-----------|-----------|
| Gladness | 1. I think I learned the subjects that were processed in the distance education process. | 2.49 | 1.21 |
| | 2. I am glad about the teaching of the lessons I take through distance education. | 2.66 | 1.24 |
| | 3. I look forward to participating in distance live lessons. | 2.76 | 1.27 |
| | 5. I can communicate healthily with my teachers in the distance education process. | 3.15 | 1.27 |
| | 6. I can communicate healthily with my friends during the distance education process. | 2.96 | 1.29 |
| | 7. I can express my thoughts effectively in live lectures conducted through distance education. | 2.90 | 1.25 |
| | 8. The distance education process has positively influenced my thoughts about my learning process. | 2.62 | 1.21 |
| | 9. The distance education process positively affected my thoughts about the learning environment (student-centered, individual learning, inquiry-based, collaborative, etc.). | 2.72 | 1.16 |
| | Overall | | 2.78 |
| Precaution | 16. At my school, safety precautions related to COVID-19 are adequate. | 3.41 | 1.28 |
| | 35. The school administration monitors whether students comply with COVID-19 precautions. | 3.79 | 1.32 |
| | 36. Teachers monitor whether students comply with COVID-19 precautions. | 3.92 | 1.24 |
| | 37. Students at my school adhere to precautions related to COVID-19. | 3.34 | 1.34 |
| | 38. Teachers at my school adhere to precautions related to COVID-19. | 4.21 | 1.10 |
| | 39. Administrators at my school adhere to precautions related to COVID-19. | 4.15 | 1.15 |
| Overall | | 3.80 | 1.02 |
| Accessibility | 4. I quickly use the technologies necessary for distance education. | 3.17 | 1.36 |
| | 26. I participated in distance education activities during the pandemic through live lectures. | 3.47 | 1.32 |
| | 32. I can easily access the internet connection required for distance education. | 3.29 | 1.44 |
| | 33. I can easily access the technologies required for distance education (mobile phone, tablet, computer). | 3.20 | 1.47 |
| Overall | | 3.28 | 1.16 |
| Expectation | 10. I would be happy to start face-to-face instruction. | 3.79 | 1.35 |
| | 11. In the process of back- to-school, I feel a sufficient sense of commitment to the school. | 3.62 | 1.24 |
| | 12. In the process of back- to-school, I feel a sufficient sense of commitment to my friends. | 3.60 | 1.20 |
| | 13. After the process of back-to-school, I would like to continue my education in a hybrid model. | 3.29 | 1.29 |
| | 15. I believe that schools will open fully to face to-face instruction. | 3.13 | 1.38 |
| | 21. I can be more successful at school with blended learning. | 3.37 | 1.26 |
| Overall | | 3.47 | 0.96 |
| Evaluation | 14. I had trouble getting used to face-to-face instruction during the process of back-to-school. | 2.68 | 1.28 |
| | 17. My communication with the teacher in live lessons is more qualified than in face-to-face classes. | 2.32 | 1.27 |
| | 18. In live lessons, the in-class discussion environment is more effective than in face-to-face classes. | 2.39 | 1.24 |
| | 22. Distance education is more motivating than face-to-face instruction. | 2.21 | 1.29 |
| | 27. I want courses to continue this year with distance education only. | 2.49 | 1.60 |
| Overall | | 2.42 | 0.89 |
| Support | 28. I get psychological support from my family during the distance education process. | 3.01 | 1.49 |
| | 29. I get academic support from my family during the distance education process. | 2.96 | 1.45 |
| | 30. I get technological support from my teachers at school during the distance education process. | 2.07 | 1.34 |

| | | | |
|------------------------------------|--|------|------|
| | 31. I get psychological support from my teachers at school during the distance education process. | 2.40 | 1.36 |
| | Overall | 2.61 | 1.07 |
| EBA TV & Support Points | 34. I utilize EBA support points. | 2.21 | 1.31 |
| | 23. In the distance education process, EBA TV broadcasts contribute to my learning about the relevant subject. | 2.60 | 1.23 |
| | 24. In the distance education process, EBA TV broadcasts are enough for me to learn the relevant subject. | 2.12 | 1.08 |
| | 25. I participated in distance education activities during the pandemic from TV broadcasts. | 2.28 | 1.13 |
| | Overall | 2.30 | 0.85 |
| Time | 19. I spend more time preparing for distance education courses than face-to-face courses. | 2.82 | 1.20 |
| | 20. After distance education courses, the time I spend doing homework, repeating courses, research, etc., is more than face-to-face classes. | 2.87 | 1.25 |
| | Overall | 2.85 | 1.08 |

As clearly seen in Table 4, the students' satisfaction was at a moderate level (range, 2.49-3.15) and students were not highly satisfied with the learning of the subjects covered (X=2.49) and with the teaching activities (X=2.66). About the COVID-19 precautions, students had above-average opinions (range, 3.41-4.21), whereby teachers (X=4.21) and administrators (X=4.15) were found to show greater compliance with the precautions compared to students (X=3.34). It was also determined that students' views regarding accessing and using the internet and necessary technologies for distance education and participating in live lessons during the pandemic process were at a moderate level (X=3.28). On the other hand, students had below-average opinions about receiving psychological and academic support from their families and teachers and benefiting from EBA Service Desks during the pandemic process. Accordingly, it can be asserted that students did not receive the support they expected during this process. In addition, it was determined that the students did not consider watching EBA live broadcasts sufficient to learn the subjects in the lessons and that the students did not spend more time for online activities such as pre-class preparation and post-class activities when compared to face-face instruction.

Comparison of Students' Views on Instruction during the Pandemic Process according to Gender

When students' views on instruction during the pandemic process were examined in terms of gender, a significant difference was found only in three sub-dimensions including Precautions, Expectations, and Evaluation (Table 5).

Table 5. Mann Whitney-U test results for the comparison of students' views on online instruction according to gender

| Variables | Group | N | Mean Rank | Sum of Ranks | U | Z | p |
|------------------------|--------|-----|-----------|--------------|-----------|--------|------|
| Satisfaction | Female | 555 | 486.14 | 269809.50 | 115519.50 | -.675 | .499 |
| | Male | 427 | 498.46 | 212843.50 | | | |
| Precautions | Female | 555 | 518.70 | 287876.50 | 103398.50 | -3.374 | .001 |
| | Male | 427 | 456.15 | 194776.50 | | | |
| Accessibility | Female | 555 | 487.01 | 270293.00 | 116003.00 | -.566 | .571 |
| | Male | 427 | 497.33 | 212360.00 | | | |
| Expectations | Female | 555 | 511.43 | 283842.00 | 107433.00 | -2275 | .012 |
| | Male | 427 | 497.33 | 198811.00 | | | |
| Evaluation | Female | 555 | 475.65 | 263984.00 | 109694.00 | -2001 | .045 |
| | Male | 427 | 512.11 | 218669.00 | | | |
| Support | Female | 555 | 489.24 | 217529.50 | 117239.50 | -.285 | .776 |
| | Male | 427 | 494.43 | 211123.50 | | | |
| EBA TV & Service Desks | Female | 555 | 489.67 | 217765.00 | 117475.00 | -.232 | .817 |
| | Male | 427 | 493.88 | 210888.00 | | | |
| Time | Female | 555 | 500.38 | 277710.50 | 113564.50 | -1.132 | .258 |
| | Male | 427 | 479.96 | 204942.50 | | | |

As revealed in Table 5, females had a significantly higher score (Mean rank=518.70) compared to males (Mean rank=456.15) in the dimension of Precautions [U=103398.50, p<0.05]. Similarly, in the dimension of Expectations, female students had a significantly higher score (Mean rank=511.43) compared to male students (Mean rank=497.33) [U=107433.00, p<0.05]. However, in the dimension of Evaluation, males had a significantly higher score (Mean rank=512.11) compared to females (Mean rank=475.65) [U=109694.00, p<0.05].

Comparison of Students' Views on Instruction during the Pandemic Process according to Educational Level

An analysis of students' views on teaching during the pandemic process with regard to educational level indicated a significant difference in all sub-dimensions except for Evaluation (Table 6).

Table 6. Mann Whitney-U test results for the comparison of students' views on online instruction according to educational level

| Variables | Group | N | Mean Rank | Sum of Ranks | U | Z | p |
|------------------------|------------------|-----|-----------|--------------|----------|--------|------|
| Satisfaction | Secondary School | 234 | 651.39 | 152425.50 | 50101.50 | -9.88 | .000 |
| | High School | 748 | 441.48 | 330227.50 | | | |
| Precautions | Secondary School | 234 | 603.45 | 141207.50 | 61319.50 | -6.93 | .000 |
| | High School | 748 | 456.48 | 341445.50 | | | |
| Accessibility | Secondary School | 234 | 663.87 | 155344.50 | 47182.50 | -10.67 | .000 |
| | High School | 748 | 437.58 | 327308.50 | | | |
| Expectations | Secondary School | 234 | 578.99 | 135482.50 | 67044.50 | -5.41 | .000 |
| | High School | 748 | 464.13 | 347170.50 | | | |
| Evaluation | Secondary School | 234 | 472.37 | 110534.50 | 83039.50 | -1.18 | .236 |
| | High School | 748 | 497.48 | 372118.50 | | | |
| Support | Secondary School | 234 | 616.95 | 144366.00 | 58161.00 | -7.77 | .000 |
| | High School | 748 | 452.26 | 338287.00 | | | |
| EBA TV & Service Desks | Secondary School | 234 | 602.52 | 140990.50 | 61536.50 | -6.88 | .000 |
| | High School | 748 | 456.77 | 341662.50 | | | |
| Time | Secondary School | 234 | 589.19 | 137868.00 | 64659.00 | -6.10 | .000 |
| | High School | 748 | 460.94 | 344785.00 | | | |

As shown in Table 6, a significant difference was found in favor of secondary school students in all sub-dimensions except for Evaluation (Satisfaction [U=50101.50, $p<0.05$], Precautions [U=61319.50, $p<0.05$], Accessibility [U=47182.50, $p<0.05$], Expectations [U=67044.50, $p<0.05$], Support [U=58161.00, $p<0.05$], EBA TV & Service Desks [U=61536.50, $p<0.05$], Time [U=64659.00, $p<0.05$]).

Comparison of Students' Views on Instruction during the Pandemic Process according to the Status of Internet Connectivity

In terms of the status of internet connectivity, a significant difference was found in the sub-dimensions of Satisfaction, Accessibility, Support, and Time (Table 7).

Table 7. Mann Whitney-U test results the comparison of students' views on online instruction according to the status of internet connectivity

| Variables | Group | N | Mean Rank | Sum of Ranks | U | Z | p |
|---------------|----------------------|-----|-----------|--------------|----------|--------|------|
| Satisfaction | No internet access | 296 | 383.26 | 113444.50 | 69488.50 | -7.86 | .000 |
| | Have internet access | 686 | 538.20 | 369208.50 | | | |
| Precautions | No internet access | 296 | 473.50 | 140156.00 | 96200.00 | -1.309 | .190 |
| | Have internet access | 686 | 499.27 | 342497.00 | | | |
| Accessibility | No internet access | 296 | 225.84 | 66848.50 | 22892.50 | -19.32 | .000 |
| | Have internet access | 686 | 606.13 | 415804.50 | | | |
| Expectations | No internet access | 296 | 480.74 | 142300.00 | 98344.00 | -.782 | .434 |
| | Have internet access | 686 | 496.14 | 340353.00 | | | |
| Evaluation | No internet access | 296 | 483.85 | 143220.00 | 99264.00 | -.556 | .578 |
| | Have internet access | 686 | 494.80 | 339433.00 | | | |
| Support | No internet access | 296 | 413.82 | 122491.50 | 78535.00 | -5.65 | .000 |
| | Have internet access | 686 | 525.02 | 360161.50 | | | |
| | No internet access | 296 | 473.81 | 140247.00 | 96291.00 | -1.289 | .197 |

| | | | | | | | |
|------------------------|----------------------|-----|--------|-----------|----------|--------|------|
| EBA TV & Service Desks | Have internet access | 686 | 499.13 | 342406.00 | | | |
| Time | No internet access | 296 | 438.57 | 129817.00 | 85861.00 | -3.887 | .000 |
| | Have internet access | 686 | 514.34 | 352836.00 | | | |

As noted in Table 7, students with internet access (Mean rank=538.20) had a significantly higher score than students without internet access (Mean rank=383.20) with regard to Satisfaction [U=69488.50, $p<0.05$]. Similarly, in terms of Accessibility, students with internet access (Mean rank=606.13) had a significantly higher score than students without internet (Mean rank=225.84) [U=22892.50, $p<0.05$]. Additionally, students with internet access (Mean rank=525.02) had a significantly higher score than students without internet access (Mean rank=413.82) with regard to Support [U=78535.00, $p<0.05$]. In the same manner, students with internet access (Mean rank=514.34) had a significantly higher score than students without internet access (Mean rank=438.57) with regard to Time [U= 85861.00, $p<0.05$].

Comparison of Students’ Views on Instruction during the Pandemic Process according to the Mode of Participation

In terms of the mode of participation, a significant difference was found in all sub-dimensions except for Evaluation (Table 8).

Table 8. Kruskal Wallis-H test results the comparison of students’ views on online instruction according to the mode of participation

| Variables | Group | N | Mean Rank | X ² | sd | p | Difference |
|------------------------|------------------|-----|-----------|----------------|----|------|------------|
| Satisfaction | TV | 187 | 346.22 | 93.33 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 496.86 | | | | |
| | TV+ Live Lesson | 160 | 640.02 | | | | |
| Precautions | TV | 187 | 461.68 | 22.19 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 476.20 | | | | |
| | TV + Live Lesson | 160 | 587.08 | | | | |
| Accessibility | TV | 187 | 198.34 | 252.86 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 549.15 | | | | |
| | TV + Live Lesson | 160 | 605.33 | | | | |
| Expectations | TV | 187 | 466.62 | 17.82 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 477.17 | | | | |
| | TV + Live Lesson | 160 | 577.47 | | | | |
| Evaluation | TV | 187 | 481.69 | 0.28 | 2 | .869 | - |
| | Live Lesson | 635 | 493.49 | | | | |
| | TV + Live Lesson | 160 | 495.06 | | | | |
| Support | TV | 187 | 394.41 | 41.06 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 495.60 | | | | |
| | TV + Live Lesson | 160 | 588.72 | | | | |
| EBA TV & Service Desks | TV | 187 | 531.30 | 81.94 | 2 | .000 | 3>1>2 |
| | Live Lesson | 635 | 437.91 | | | | |
| | TV + Live Lesson | 160 | 657.67 | | | | |
| Time | TV | 187 | 428.50 | 27.54 | 2 | .000 | 3>2>1 |
| | Live Lesson | 635 | 486.43 | | | | |
| | TV + Live Lesson | 160 | 585.24 | | | | |

As seen in Table 8, students mostly participated in distance education only via live lesson (N=635), followed by TV only (N=187) and TV + live lesson (N=160). When the sub-dimensions of the scale were examined in terms of the way students participate in distance education, a significant difference was determined in favor of students who attended both TV and live lessons in all sub-dimensions (Satisfaction [X²=93.33, $p<0.05$], Precautions [X²=22.19, $p<0.05$], Accessibility [X²=252.86, $p<0.05$], Expectations [X²=17.82, $p<0.05$], Support [X²=41.06, $p<0.05$], EBA TV and Service Desks [X²= 81.94, $p<0.05$], and Time [X²=27.54, $p<0.05$]), except for Evaluation.

Comparison of Students' Views on Instruction during the Pandemic Process according to the Number of People Participating in Distance Education in the Same House

A significant difference was found in the dimensions of Satisfaction, Accessibility, and Time with regard to the number of people participating in distance education in the same house (actively using it as a teacher or student) apart from the student participating in the study (Table 9).

Table 9. Kruskal Wallis-H test results comparison of students' views on online instruction according to the number of people participating in distance education in the same house

| Variables | Group | N | Mean Rank | X ² | sd | p | Difference |
|------------------------|----------------------------|-----|-----------|----------------|----|------|------------|
| Satisfaction | Single Participant | 231 | 535.44 | 9.461 | 2 | .009 | 1>2>3 |
| | Student + 1 Participant | 330 | 495.31 | | | | |
| | Student + ≥ 2 Participants | 421 | 464.41 | | | | |
| Precautions | Single Participant | 231 | 500.27 | 1.752 | 2 | .416 | - |
| | Student + 1 Participant | 330 | 474.70 | | | | |
| | Student + ≥ 2 Participants | 421 | 499.86 | | | | |
| Accessibility | Single Participant | 231 | 541.91 | 43.619 | 2 | .000 | 2>1>3 |
| | Student + 1 Participant | 330 | 544.05 | | | | |
| | Student + ≥ 2 Participants | 421 | 422.65 | | | | |
| Expectations | Single Participant | 231 | 494.82 | .296 | 2 | .862 | - |
| | Student + 1 Participant | 330 | 484.59 | | | | |
| | Student + ≥ 2 Participants | 421 | 495.10 | | | | |
| Evaluation | Single Participant | 231 | 492.11 | .021 | 2 | .989 | - |
| | Student + 1 Participant | 330 | 489.66 | | | | |
| | Student + ≥ 2 Participants | 421 | 492.60 | | | | |
| Support | Single Participant | 231 | 510.10 | 3.076 | 2 | .215 | - |
| | Student + 1 Participant | 330 | 501.29 | | | | |
| | Student + ≥ 2 Participants | 421 | 473.62 | | | | |
| EBA TV & Service Desks | Single Participant | 231 | 490.89 | .971 | 2 | .616 | - |
| | Student + 1 Participant | 330 | 503.15 | | | | |
| | Student + ≥ 2 Participants | 421 | 482.71 | | | | |
| Time | Single Participant | 231 | 498.61 | 7.367 | 2 | .025 | 2>1>3 |
| | Student + 1 Participant | 330 | 520.25 | | | | |
| | Student + ≥ 2 Participants | 421 | 465.06 | | | | |

In statistical analysis, a significant difference was determined with regard to three sub-dimensions including Satisfaction (X²=9.461, p<0.05), Accessibility (X²=43.619, p<0.05] and Time [X²=7.367]), p<0.05]). Accordingly, it can be asserted that students who attended distance education at home alone were more satisfied than students who had more than one user (e.g. sibling, parent) at home.

Comparison of Students' Views on Instruction during the Pandemic Process according to the City of Residence

When the views of students on instruction during the pandemic process were examined, a significant correlation was found between the cities of residence (Bayburt, Diyarbakır, Elazığ and Giresun) and the sub-dimensions except for Evaluation (Table 10).

Table 10. Statistical comparison of students' views according to the city of residence

| | Satisfaction | Precautions | Accessibility | Expectations | Evaluation | Support | EBATV & Service Desks | Time |
|-------------|--------------|-------------|---------------|--------------|------------|---------|-----------------------|--------|
| Chi-Square | 98.668 | 38.952 | 225.269 | 18.056 | 6.538 | 63.574 | 22.520 | 36.692 |
| df | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Asymp. Sig. | .000 | .000 | .000 | .000 | .088 | .000 | .000 | .000 |

a. Kruskal Wallis Test

b. Grouping Variable: City of Residence

As seen in Table 10, there were significant differences between the cities and all sub-dimensions except for Evaluation.

DISCUSSION AND CONCLUSION

In this study, it was aimed to determine the views of secondary and high school students on the distance education activities (TV broadcast, live lessons) carried out during the COVID-19 pandemic and the blended learning activities carried out during the post-pandemic back-to-school process. For this purpose, the "Scale of Evaluating Instruction in Pandemic Process" was applied to the students and the obtained data were analyzed in terms of different variables such as gender, educational level, status of internet connectivity, modes of participation, number of people participating in distance education in the same house, and the city of residence.

Within the scope of the study, it was revealed that most of the students participated in distance education using a single device, with the most widely used device being smartphone, followed by TV and computer, respectively. In contrast, the number of students using more than one device was relatively lower. This finding could be due to the fact that smartphones are both economically accessible and also available with most of the students and families (Kaysi, Yavuz, & Aydemir, 2021; Talan, 2021). These results are consistent with the results of studies conducted by Öz Ceviz et al. (2020), Pala (2018), Serçemeli and Kurnaz (2020), and YÖK (2020). In addition, in the study carried out by Altuntaş Yılmaz (2020), the device preferences of the students were examined according to gender and it was concluded that female students mostly used smartphones and male students, unlike in this study, mostly used computers to participate in distance education.

In the statistical analysis, it was revealed that the students had above-average opinions on the security precautions taken at school. Since the beginning of the pandemic process, the Turkish Ministry of National Education has notified school administrators about all the measures that need to be taken in schools and thus the efforts of school administrators and teachers to obtain the "Clean School Certificate" may be the reason for the positive opinions about security precautions. On the other hand, the students' satisfaction about the process, accessing and using the internet as well as information technologies for distance education, and participating in live lessons were at a moderate level. However, students had below-average opinions about receiving psychological and academic support and benefiting from EBA & Service Desks. Of note, while the support received from the families was above the average, the support received from the teachers was below the average. This finding emphasizes the active role of families in this process. Similarly, Başaran, Dogan, Karaoğlan, and Şahin (2020) also stated the students did not receive enough psychological and academic support during this process. Additionally, Türker and Dünder (2020) obtained similar findings for EBA live broadcasts. In the same study, it was determined that the students had below-average opinions regarding the use of EBA TV & Service Desks. Based on this finding, the authors recommended that both teachers and students should be encouraged to use EBA effectively and efficiently. However, the authors noted that the students did not consider EBA TV broadcasts to be sufficient for learning and that this may be one of the reasons why students mostly preferred smartphones to attend live lessons.

Factors such as psychological, demographic, or physical opportunities affect student satisfaction in distance education. Additionally, access to technological resources may be related to the socioeconomic status of families (Balaman & Hanbay-Tiryaki, 2021; Talan, 2021). The fact that Turkey, as in the whole world, was unprepared for this process (Demir & Özdaş, 2020) may be the reason for the items in which students had below-average opinions, the lack of teacher-student interaction in face-to-face education can be shown as the reason for students' views about EBA TV (Karpenko, 2008). In a similar way to our study, the studies conducted by Eren, Korkmaz, Yıldırım, and Avcı (2021) and Qazi et al. (2020) indicated that the students were satisfied with the distance education method. However, Buluk and Eşitti (2020) stated that male students were more satisfied with the distance education process, while Karadağ and Yücel (2020) stated that students' satisfaction levels did not show a significant difference between genders. Similarly, the study conducted by Paechter, Maier, and Macher (2010) concluded that there was no significant difference between the two genders with regard to students' satisfaction levels and expectations. In a similar way to our study, it was revealed that female students had higher expectations than male students regarding the distance education conducted during the pandemic process and it was also noted that they considered the precautions to be sufficient and they were satisfied with the precautions taken at school. In a similar manner, the studies conducted by Adnan and Yaman (2017), Korkmaz et al. (2015), and

Kaynar, Kurnaz, Doğrukök, and Barışık (2020) reported that while the students' expectations from distance education did not differ between genders, the average score of male students was relatively higher than that of female students. These results are inconsistent with the results of our study.

It was observed that the satisfaction and expectations of the secondary school students regarding the instruction activities carried out in this process were higher than those of the high school students. In addition, it was also revealed that secondary school students had higher levels of accessing and using the internet and other technologies and getting support from different sources such as family and school than high school students. The study conducted by Eygü and Karaman (2013) indicated a significant difference between the ages of the students and their satisfaction with distance education. By contrast, the study by Terzi, Akalın, and Erdal (2020) found no significant difference between age and satisfaction, contrary to the results obtained in this study.

Our findings also indicated that students with internet access were more satisfied with the instruction activities in this process. Additionally, it was revealed that students with internet access received more support from different sources such as family and school and also the time they spent on the instruction was higher when compared to other students. These findings could be attributed to the fact that the level of technical support provided to the students is directly proportional to students' access to technology (Adnan & Yaman, 2017). In addition, the students that watched live lessons on EBA TV alone indicated that this method was their only choice, in which they could not participate actively and the teachers could not obtain feedback. By contrast, another study reported that even though the students who participated in distance education via EBA Live lessons received partial feedback, satisfactory results could not be obtained and thus both the students and teachers complained about the ineffectiveness of the lessons (Can, 2020). On the other hand, some other studies reported that the students in public schools had greater problems in accessing distance education compared to students in private schools and it was also noted that students who could easily access distance education and did not have connection problems had more positive views regarding distance education than those who had connection problems (Kaynar, Kurnaz, Doğrukök, & Barışık, 2020).

Since the transition to distance education during the pandemic period, online environments and TV broadcasts have been actively used in this process in many countries (Stojanovic, El-Khatib, Brandic, & Maalouf, 2020). In our study, students who participated in distance education using both TV and live lessons were more satisfied with the instructional activities, had higher expectations, had easier access to technology, and received more support compared to students who participated only by using TV or live lessons. One reason for this could be that the students who participated in distance education with TV alone had little or no interaction, could not participate in discussion and Q&A activities, and could not ask any questions to the teachers when compared to students both participating in live online lessons and watching TV broadcasts. Moreover, reasons such as the teacher's inability to establish eye contact and not being able to monitor the students continuously in distance education make it difficult for students to attain a high level of participation in the lesson (Gürer, Tekinarslan, & Yavuzalp, 2016). A study by Özdoğan and Berkant (2020) presented similar findings. Another study also noted that the students could not attend distance education courses due to the fact that the lessons on EBA TV were broadcasted at an early hour, the number of siblings attending distance education simultaneously was remarkably high, and there was only one television available in the house (Başaran, Dogan, Karaoğlan, & Şahin, 2020).

Our findings also showed that students who had no other family members (e.g. sibling, mother, father) participating in distance education at home apart from themselves were more satisfied with the teaching activities compared to other students. Meaningfully, the students had greater accessibility to the internet and technological devices and also spent more time for distance education compared to other students. Similarly, the study by Başaran, Doğan, Karaoğlan, and Şahin (2020) also noted that the high number of siblings participating in distance education simultaneously was one of the reasons for not participating in distance education, which was primarily caused by the insufficient number of devices for each family member. This finding, as noted by Özdoğan and Berkant (2020), Ramos-Morcillo et al. (2020), and Salman (2020), could be ascribed to the inequality of opportunities associated with the socioeconomic status of the people living in the regions where this study was conducted. Additionally, these studies also emphasized that students in rural areas are in a more disadvantaged position than students in urban areas.

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