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*November 2021*

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**THE  
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OF  
EDUCATIONAL  
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## A Comparative Study of Students' Listening Comprehension Taught through Captioned Video and Audio

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### ABSTRACT

The aim of this study is to investigate whether there is a significant difference in students' listening comprehension performance of a foreign language when using two types of modalities (video or audio). For the purpose of this study, 54 male students of different public schools, who studied 7<sup>th</sup> grade of junior high school in Shahreza, Isfahan, were randomly selected and divided into two groups. While the control group listened to the audio files, the experimental group watched the video file of the same topics. The results were analyzed by SPSS24. The results show that there is no significant difference between using videos and audios in terms of listening comprehension, so the researchers discuss the reason behind the effectiveness of audio formats.

### INTRODUCTION

There have been two major theories about language components; some believe that language is a system consisting of four skills i. e. listening, speaking, reading, and writing (Harmer, 1991). Others consider language as a whole system. based on child's first language acquisition, the order of second language learning is considered to be listening, speaking, reading, and writing (Isik and Yilmaz, 2007), and as Machado (2010, p.242) says the success of children's in three other skills depends on their listening ability. So, listening skills are vital in foreign language learning (Hamouda, 2013) and listening is the most fundamental skill (Oxford, 1993, p.205). In contrast to its importance, learners think that listening is difficult. Vandergrift (1999, p.167) says:

[Listening] is a complex, active process in which the listener must discriminate between sounds, understand vocabulary and grammatical structures, interpret stress and intonation, retain what was gathered in all of the above, and interpret it within the immediate as well as the larger sociocultural context of the utterance. Coordinating all of this involves a great deal of mental activity on the part of the listener. Listening is hard work, and deserves more analysis and support. (p.168)

However Brown (1954) argued how instruction can help developing listening skills in a good way. Audio materials were used for teaching listening skills for many years, but due to the development in terms of technology, the inefficiency of audio materials for listening instructional purposes was argued (Chen et al., 2014). Scholars have various ideas regarding the use of these two modalities for teaching listening skills. For instance, Barker and Trott (1985) are against using video modalities since it has visual distractions. Also some believe that using videos is more expensive than using audios (White et al., 2000), however, some are among the proponents because of different reasons. For instance Wilson (2008) believes that videos are better since they are contextual and show body language. Harmer (2001) emphasizes that the main advantage of video over audio is that learners can both listen and see the language. Ur (1984) points out that through using videos, learners can concentrate on both verbal and nonverbal information, so they will be motivated for improving their listening habits. Although both have some advantages and disadvantages, one of the best ways to encounter students with authentic input is using videos, since they are the combination of three mediums i.e. aural, visual, and textual (Ogasawara, 1994). Another effective way for instructing listening skills is using video Captioning especially in countries such as Iran that English is considered as a foreign language, so as a result students have limited chance for exposure to real spoken and written language (Gowhary et al., 2014). Captions present extra linguistic features like gestures and facial expression that may help learners listening comprehension (Chapple and Curtis, 2000).

The current study investigated the effects of using captioned videos in students' listening comprehension scores.

Accordingly, this study is going to answer the following questions:

1. Is there a significant difference between teaching listening to EFL learners using audios and captioned videos?
2. Which format (audio or captioned video) is more beneficial for EFL learners and teachers?

To answer the research questions, researchers raise the null hypotheses that there is no significant difference in students listening comprehension performance by using captioned video formats and audio formats.

### THE STUDY

This study included 54 male students ranged in age from 12-14 who were selected among 7<sup>th</sup> grade students from various public junior high schools in Shahreza, Isfahan. In order to have homogeneous groups, they were randomly divided into two groups (control and experimental).

For this study, five topics were extracted from GoGo educational cartoon series for both experimental and control groups. The chosen topics were colors, fruits, food, clothes, age, and dates because they corresponded to their textbook topics. Also a multiple choice test including 17 items was designed for both groups. The internal reliability of the test was calculated by Cronbach's Alpha which came out to be 0.53.

This research is a quantitative one with two group control and experimental design which was administered in the second half of academic year of 2020-2021. The students were informed about the purpose of the study in advance. To have homogeneous groups, the participants were randomly assigned to two groups to receive treatments. Although both groups had the same teacher, the first group i.e. control group listened to the audio files, while the experimental group watched the video format of the same files with English captions. After the presence of treatment, a multiple choice test including 5 topics with 17 questions was distributed to the participants.

To evaluate the difference between two groups, two measures of central tendency i.e. mean and percentage and two measures of variability i.e. standard deviation and standard error mean were calculated. The results were analyzed by using Statistical Package for Social Science (SPSS).

### FINDINGS

This study sought to investigate the difference in students' achievement to find out which type of the media i.e. audio or captioned video was the best.

**Table 1.** Comparison of scores

	format	N	Mean	Std. Deviation	Std. Error Mean
score	video	27	14.3704	2.15100	.41396
	audio	27	13.3704	1.80060	.34653

Tables 1 presents the comparison of scores in both groups. the mean of experimental group was 14.37 whereas the mean of control group was 13.37.

**Table 2.** Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
score	Equal variances assumed	1.392	.243	1.852	52
	Equal variances not assumed			1.852	50.438

**Table 3.** Independent Samples Test

		t-test for Equality of Means			95% Confidence Interval of the Difference
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower
score	Equal variances assumed	.070	1.00000	.53985	-.08330
	Equal variances not assumed	.070	1.00000	.53985	-.08410

**Table 4.** Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
score	Equal variances assumed	2.08330
	Equal variances not assumed	2.08410

To investigate whether the difference between the means of control and experimental group was significant, the independent- sample t-test was used. In a t-test, the difference between the two means is significant if the significance level (sig. 2-tailed) is less than 0.05 (Pallant, 2005, p.281). As presented in Tables 2, 3, and 4 since the significance level was 0.07 which is more than 0.05, the null hypotheses was accepted i.e. there is no significant difference in students' listening comprehension scores by using captioned video or audio formats.

## CONCLUSION

This study investigated the effect of using audio and captioned video on learners' listening comprehension. As the result shows since 0.07 is more than  $\alpha = 0.05$ , so there is no significant difference in students' achievements by using these two modalities (audio, and captioned video), therefore a question arises about the fact that why audio formats are as effective as video ones. The researchers assume that animated cartoons in video formats may distract Learners' attention, but when they are encountered with audio formats, their only choice is listening and concentrating on the presented material. Due to these minor differences in using audio and video formats, it is financially reasonable to use audio formats in Iranian public Schools, especially since its counterpart is time consuming for teachers.

Since the results of this study is not conclusive ,the researchers have some suggestions for future researchers in this topic .First, the results will be more reliable if the research is done on both males and females. Second, the participants of this study were 7th grade students of public junior high schools who study Prospect 1 as their English textbook. It is a good idea to conduct further researches on other levels i.e. students who study newly developed textbooks like Prospect 2, 3, and Vision 1 and 2.

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## A Convergent Parallel Mixed-Method Research into Blended Learning via Video Streaming Websites in Teacher Education: Classroom Engagement Levels and Opinions of Prospective Teachers

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### Abstract

The aim of the study was to analyze the use of blended learning via video streaming websites in teacher education. The research examined the classroom engagement levels in and the opinions of prospective teachers about blended learning via video streaming websites. Thus, the study was designed as a convergent parallel mixed-method research in which both quantitative and qualitative methods were used simultaneously. Blended learning was conducted at activity level during spring semester in 2019-2020 academic year, and the application lasted for 7 weeks, 14 hours. YouTube was preferred among other video streaming websites by the researcher/instructor because it is one of the most popular video streaming websites and contains numerous educational videos. 27 volunteer prospective teachers taking curriculum development in education course at a faculty of education at a state university in Turkey constituted the study group in quantitative part of the research while 10 volunteer prospective teachers participated in the qualitative part of the research. Classroom engagement level of prospective teachers was determined via “Classroom Engagement Inventory” developed by Wang, Bergin, and Bergin (2014) and adapted to Turkish by Sever (2014). The data about opinions of prospective teachers were collected via unstructured and conversational focus group interview. Descriptive analyses were used to determine the classroom engagement levels in quantitative part of the research, and content analysis was used to analyze the opinions of the prospective teachers in the qualitative part of the research. The findings of quantitative data revealed that prospective teachers were *often* engaged affectively, they were *always* engaged behaviorally and compliant, they were *often* engaged behaviorally and effortful, they were *often* engaged cognitively, and they were *never* disengaged in the classroom. The findings of qualitative data showed that the application had both positive and negative aspects. Positive aspects included *being prepared for the classes beforehand*, *reinforcing the topics*, *active participation*, *studying regularly and systematically*, and *the opportunity to use the notes in the future*. On the other hand, negative aspects included *being time-consuming*, *being bored*, *inability to identify key points*, and *problems about the Internet*. Based on the conclusions of the study, teacher educators are also recommended to create and use their own short videos each of which covers one single learning objective as a pre-lecture activity to enable prospective teachers have a firm understanding of the materials.

**Keywords:** Blended learning, video streaming websites, YouTube, classroom engagement, opinions, prospective teachers.

### INTRODUCTION

The advancement in information and communication technology and the students belonging to generation Z, who are now digital natives, have led instructors and universities to change their behaviors and mindsets. A basic characteristics of generation Z, who were born after 1997, is the keenness for technology, especially for the Internet and social media. For generation Z, technology is a crucial element in all aspects of their lives. Johnson, Adams Becker, Cummins, Estrada, Freeman and Hall (2016) emphasized that “Students today would appear to be more digitally literate than previous generations because many have grown up immersed in technology-rich environments” (p.24). Therefore, universities are trying to improve academic performance and engagement of their students as well as giving them enjoyable learning experiences. In order to achieve it blended learning has been applied all over the world since 2000s with the development of educational technologies (Warren, Reilly, Herdan & Lin, 2021). Poon (2014) asserted that blended learning is likely to become the leading teaching approach in the 21<sup>st</sup> century, and Long (2014) expressed that blended learning is becoming the standard approach for most of the undergraduate students.

Blended learning has been defined differently in the literature. Thorne (2003) identified it as a mixture of e-learning technologies, such as video streaming, virtual classes, and online text animation combined with face-to-face classroom applications. While Shroff and Vogel (2010) defined it as a delivery program that utilizes more than one method to provide information to students, Yaman and Graf (2010) described it as a hybrid learning concept that integrates traditional classroom applications and e-learning elements to combine the benefits of both types.

According to Torrisi-Steele (2011), blended learning is “enriched, student-centered learning experiences made possible by the harmonious integration of various strategies, achieved by combining face to face interaction with information and communication technology.” Graham, Allen and Ure (2003) summarized the three most commonly used definitions as combining (a) instructional modalities/delivery media, (b) instructional methods, and (c) face-to-face and online instruction. In this study, blended learning is used as a combination traditional/face-to-face learning and e-learning/online methods (Ho, Nakamori, Ho & Lim, 2016).

Blended learning provides students opportunities to learn timely, continuously and flexibly (Prasad, Maag, Redestowicz & Hoe, 2018; Zhang, Cao, Shu, & Liu, 2020). It improves interaction and social communication at university settings, it helps students gain deeper knowledge increasing learning quality, it encourages self-directed and collaborative learning, it improves aptitude, self-reliance and critical thinking (Bailey, Ifenthaler, Gosper, Kretzschmar, & Ware, 2015; Al-shami, Aziz, & Rashid, 2018; Baragash & Al-Samarraie, 2018). Briefly, it is generally used to create a self-paced, flexible and student-centered approach (Tang & Chaw, 2016). Blended learning not only emerges as a crucial model in order to minimize the negative effects of both the face-to-face learning and online learning (Kristanto, 2017) but also includes more opportunities for authentic activities (Gikandi, Morrow, & Davis, 2011). Improvement in academic achievement, student engagement and satisfaction are among the positive outcomes of blended learning (Tsai, Shen & Tsai, 2011; Martínez-Caro & Campuzano-Bolarín, 2011; Fulton, 2012; Smith, Groves, Bowd & Barber, 2012; Baepler, Walker & Driessen, 2014; Gilboy, Heinerichs & Pazzaglia, 2015).

Blended learning can be applied at four levels which include activity, course, program and institutional levels. Instructors or designers are more involved in blending at course and activity levels while students’ discretion is more important in blending at program and institutional levels (Graham, 2006; Caner, 2012). Activity-level blended learning occurs when an activity includes online and face-to-face components. The use of technological tools when carrying out an activity in the classroom makes the activity more original. Activity-level blending may contain online emails, discussion forums, or other web-based communication tools in the actual classroom. Course-level blended learning is the most comprehensive type of blended learning, and it includes online activities in addition to face-to-face activities as a part of the course. Course-level blending may engage students in different circumstances, and support online and face-to-face activities that overlap over time, or may eliminate the time block to be brought chronologically without overlapping each other. Program-level blended learning usually requires two models. In the first model, students choose a combination of online courses and face-to-face courses while in the second model, the program determines the mix of courses. In institution-level blended learning, institutions make a commitment to blend face-to-face courses and online courses. Many companies, as well as higher education institutions, create models at institutional level (Graham, 2006; Caner, 2012).

Traditional lecturing still seems indispensable for teaching large groups; however, if the lectures are not well-planned, teaching content-driven and difficult subjects via lectures may cause cognitive overload on students (Merrouche, 2017; Hadie, Hassan, Ismail, Ismail, Talip, & Rahim, 2018). Simply put, courses with abstract and heavy content can be difficult to learn for students. Therefore, trying new and innovative instructional approaches to provide prior knowledge and to prepare students to integrate and apply knowledge in more student-centered learning environments will provide alternatives for teaching, and blended learning is among these alternatives. Blending can be achieved by encouraging students to watch videos or read texts that are directly related to the material to be discovered in subsequent courses as pre-lecture activities (Davies, Dean & Ball, 2013). Having become an important part of higher education, videos are the cornerstone of many blended and online courses as well as traditional courses (Brame, 2016; Choe et al., 2019).

Pre-lecture activities help students to be more self-regulated and autonomous, because these activities are usually handled before students attend face-to-face classes. Structured pre-lecture activities can be done providing some examination and observation of students’ preparations. Pre-lecture activities should be planned and designed in such a way that it can effectively instill prior knowledge. There are plenty of pre-lecture activities, and online provision of learning materials is one of them which addresses differences in students’ paces and learning styles. In addition, students with prior knowledge have scored better on assessment tasks than students with little or no prior knowledge. It has been proven that the use of web-based resources and e-learning tools help students build prior knowledge. Video streaming websites are examples of these tools as they are easily accessible for students. Moreover, students can learn at their own pace because they can stop, start and replay the videos when they need (Kinsella, Mahon & Lillis, 2017).

When the recent literature was reviewed, it was observed that there was a variety of research about blended learning. Çakıt and Karadeniz (2020) investigated the effect of blended learning environments on the development of basic skills in handball in a quasi-experimental design and found out that experimental group had improved

more in terms of handball basic skills. The students in experimental group performed better and satisfied more than the students in control group. Dikmen and Ocak (2020) analyzed the opinions of students about blended learning environment prepared for mobile programming and concluded that it contributed to student learning, the students did not encounter any problems, they wanted to learn different courses and subjects by blended learning, and their expectations were met. Gürdoğan and Bağ (2020) examined the effect of blended learning on academic achievement and motivation for science learning in a quasi-experimental design and revealed that blended learning increased achievement and the motivation towards science learning. Likewise, Kadirhan and Korkmaz (2020) found out in their quasi-experimental study that blended science course contributed to academic achievement and attitudes toward science course.

Blended learning in teacher education research have focused on educational leadership (Ross, Adams, Bondy, Dana, Dodman & Swain, 2011; Adams & Ross, 2014; Namyssova, Tussupbekova, Helmer, Malone, Tajik & Jonbekova, 2019), academic achievement (El-Deghaidy & Nouby, 2008; Jahjouh, 2014), teaching skills and competencies (El-Deghaidy & Nouby, 2008; Collopy & Arnold, 2009; Yeh, 2010; Alayyar, Fisser & Voogt, 2012; Jahjouh, 2014), attitudes (Khine & Lourdusamy, 2003; Lin, 2008), peer-to-peer cooperation (El-Deghaidy & Nouby, 2008), professional knowledge (Turvey, 2010), and educational technology (Demirer & Sahin, 2013).

In Turkey, Sungur Alhan and Şimşek (2020) analyzed the effects of Science Methods Course-II designed with blended learning on prospective teachers' technological pedagogical content knowledge. They revealed that there was a significant difference between experimental and control group in the favor of the experimental group. Yılmaz and Malone (2020) investigated opinions and experiences of prospective teachers at the department of early childhood education about blended learning. They found out that prospective teachers' experiences and opinions about blended learning were generally positive, and that they preferred blended learning to face-to-face or online learning. Sungur Alhan (2020) examined prospective teachers' opinions about blended learning via qualitative research. She revealed that prospective teachers had positive opinions about blended learning, and blended learning could be used at different courses and grades. On the other hand, prospective teachers mentioned about the lack of computer and internet access and the inability to use the keyboard fast as negative aspects.

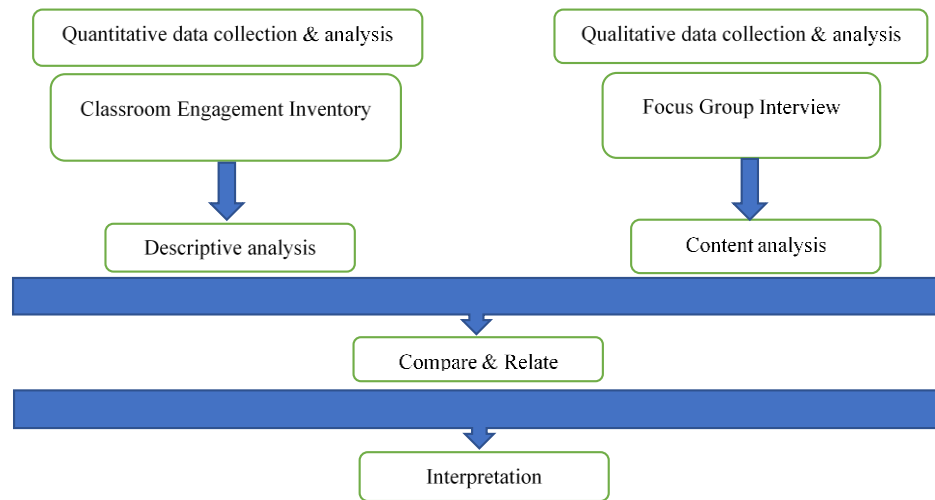
In the current context, curriculum development in education course includes abstract and heavy content, so the researcher/instructor aimed at easing the cognitive load of prospective teachers by the help of pre-lecture activities using blended learning via video streaming websites. YouTube was preferred as the video streaming website since it is the most frequently used web streaming website by the youth, and it includes plenty of educational videos. Moreover, there seems a lack of evidence about the effect of pre-lecture activities on prospective teachers' classroom engagement and opinions. Similarly, the feasibility and applicability of pre-lecture activities using videos under the umbrella of blended learning have not been adequately explored in the context of teacher education. Consequently, the aim of the study was to examine blended learning via video streaming websites in teacher education. In order to achieve this aim, the following research questions were set forth:

1. What are the classroom engagement levels of prospective teachers in blended learning via video streaming websites?
2. What are the opinions of prospective teachers about blended learning via video streaming websites?

## METHOD

### Research Design

A convergent parallel mixed-method research was applied in the study. First of all, both quantitative (classroom engagement inventory) and qualitative data (focus group interview) were gathered. Next, quantitative and qualitative data were analyzed separately. Then, the results from the analyses of both datasets were compared. Finally, the results were interpreted whether the results support or contradict each other (Creswell, Plano Clark, Gutmann, & Hanson, 2003; Creswell & Plano Clark, 2007; Creswell, 2011). The convergent parallel mixed-methods design used in the study was given in Figure 1.



**Figure 1.** The convergent parallel mixed-method design used in the study

### Study Group

27 prospective teachers taking curriculum development in education course at a faculty of education at a state university in Turkey constituted the study group in quantitative part of the research while 10 prospective teachers participated in the qualitative part of the research. Criterion sampling method was preferred in the qualitative part of the study and the sampling criterion was including prospective teachers studying in different departments in order to reflect diverse opinions. Volunteer prospective teachers participated in the research. Demographic features of the study group were given in Table 1.

**Table 1.** Demographic features of the study group

Features		Quantitative Data (f)	Qualitative Data (f)
Gender	Female	21	8
	Male	6	2
Age	19-20	20	7
	21-22	7	3
Department	Preschool Teaching	10	3
	Primary School Mathematics Teaching	6	2
	Physical Education and Sports Teaching	3	1
	Social Sciences Teaching	3	1
	Guidance and Psychological Counseling	2	1
	English Language Teaching	2	1
	German Language Teaching	1	1
Total		27	10

### Instruments

#### *Classroom Engagement Inventory*

Classroom engagement level of prospective teachers was determined via “Classroom Engagement Inventory” developed by Wang, Bergin, and Bergin (2014) and adapted to Turkish by Sever (2014). Classroom Engagement Inventory consists of 23 items, 20 of which were positive and the rest 3 of which were negative. The inventory was graded as “never”, “rarely”, “sometimes”, “often” and “always”, and 3 negative items were reversed in coding only for the total engagement level. The inventory has five factors as “affective engagement”, “behavioral engagement-compliance”, “behavioral engagement-effortful classroom participation”, “cognitive engagement” and “disengagement”. As a result of the adaptation study, Cronbach Alpha coefficients of the factors were found to be .87, .82, .74, .89 and .69, respectively. Values were NNFI=0.97, CFI=0.97 and NFI=0.95 and IFI= 0.97 and model data fit was perfect, which confirmed 5-factor structure of the inventory (Sever, 2014). In this study, Cronbach Alpha coefficients of the factors were .81 for affective engagement, .74 for behavioral engagement-compliance, .70 for behavioral engagement-effortful classroom participation, .72 for cognitive engagement, .69 for disengagement, and .78 for the overall inventory.

### ***Focus Group Interview***

The data about opinions of prospective teachers were collected via focus group interview. Focus group interviews are often used to understand the elements related to students' thoughts and behaviors. In addition, as opposed to personal interviews, participants can think aloud and feel free to say what they think, discuss with the others about counter-arguments, and change their opinions as the discussion proceed like in informal life settings in focus group discussions (Krueger & Casey, 2000). Due to the social interaction among the participants, the information is deeper than personal interviews (Yıldırım & Şimşek, 2011). The focus group interview made in the study was unstructured and conversational. The prospective teachers were asked to express their demographic features at the beginning of the interview. Then, they were asked to share their opinions and experiences about blended learning via video streaming websites.

### ***Procedure***

Blended learning enriching face-to-face learning was conducted at activity and course levels in this study as in Graham (2006)'s classification. At activity and course levels, instructors are more likely to be involved in planning and designing blended learning (Graham, 2006; Caner, 2012). Both online and face-to-face elements are included in activity-level blending in the classroom. In enriching learning, new applications rather than radical changes are added to the learning environment. Different resources and supporting materials were added to traditional face-to-face learning in the study. Therefore, in this study, blending at activity and course levels were used because the instructor has had the initiative to design the course at these levels. In addition, the application was designed after the agreement of the prospective teachers.

In the first week of curriculum development in education course, which was two hours a week, the course content was explained to prospective teachers, and they were offered two options. The first one was to conduct the course in a traditional way using course books and lecture notes as the main sources. The second option was to conduct the course by blended learning using video streaming website YouTube. YouTube was preferred among other video streaming websites by the researcher/instructor because it is one of the most popular video streaming websites and contains numerous educational videos (Chorianopoulos, 2018). In addition, mobile network operators provide special tariffs for students in Turkey, in which they have unlimited quota on YouTube, and students prefer YouTube to other video streaming websites. In line with positive opinions of the prospective teachers, it was decided to carry out the course applying blended learning via video streaming website YouTube. The instructor informed the prospective teachers about some YouTube contents and let them to decide one of the contents because in blended learning, forcing learners to use a pre-determined content or ignoring their content preferences may create obstacles in achieving expected learning outcomes (Ash, 2012). The prospective teachers examined YouTube contents during the week and discussed the contents on the WhatsApp group, which included the instructor, and decided the YouTube content to be followed.

The prospective teachers were asked to watch the video(s) related to the topic each week, to take notes in their own handwriting, to deliver the notes they took to the instructor after face-to-face courses, and to create a portfolio containing their notes. The prospective teachers' weekly notes were evaluated by the instructor and returned to them the following week. In addition, the prospective teachers were asked to take notes about what they did not understand and prepare questions while watching the video(s) in order to ask in face-to-face courses.

The prospective teachers had got preliminary information about the topics when they attended the classes. In face-to-face courses, the issues that were not understood and the questions prepared while watching the video(s) were explained by other students or the instructor. Then, the topics were summarized with the participation of all the prospective teachers; and thus, the topics were reinforced. Moreover, since prospective teachers have to take public personnel selection examination to be appointed as a teacher after graduation, the courses were mostly covered with sample questions related to public personnel selection examination and questions included in the previous public personnel selection examinations. To illustrate, after the review of each topic, the instructor shared a link of an online quiz on the WhatsApp group during face-to-face courses. The quizzes included the questions in previous public personnel selection examinations and some sample questions about the topic. When the quiz period was over, the results were shared with the prospective teachers immediately, and the answers were discussed. In other words, face-to-face courses were completed by analyzing questions related to public personnel selection examination and discussing the answers. As the prospective teachers attended the courses after watching the video(s) and taking notes, they had the opportunity to analyze more questions and explain the reasons for the correct/incorrect answers in face-to-face courses, which also reinforced the topic. Although blended learning via video streaming website YouTube was planned to be applied during the whole spring semester in 2019-2020 academic year, it could only be carried out during first half of the semester because of COVID-19 pandemic as all schools and universities were shut down in the second half of the semester not only in Turkey but also in other countries. Therefore, the application lasted for 7 weeks, 14 hours.

### Data Collection

Due to COVID-19 pandemic, quantitative data were collected via an online survey system, and the link was shared with the prospective teachers on the WhatsApp group. It was verbally stated that the prospective teachers' participation in this study was on a voluntary basis, and that the data to be obtained would only be used for scientific purposes and evaluated collectively. Quantitative data were collected between 6<sup>th</sup> and 26<sup>th</sup> April 2020. 27 prospective teachers participated in the quantitative part of the research voluntarily.

For the qualitative part of the research, prospective teachers were informed that the interview would be recorded and the transcript would be produced. 10 prospective teachers approved to participate in the qualitative part of the research voluntarily. The communication about determining the date and time of the meeting was made on the WhatsApp group. Qualitative data were collected by focus group interview (a 40-minute Zoom meeting) on 10<sup>th</sup> May 2020, and the interview was recorded.

### Data Analysis

So as to analyze quantitative data, the data were checked whether they provide normal distribution. After finding the realization of normal distribution, mean and standard deviation scores were determined. Class width formula (class range/number of classes) recommended by Tekin (2002) was used in the evaluation of mean scores. Class width was calculated by dividing the difference between the highest (5) and lowest score (1) by the number of classes (5). Class width levels used in the evaluation of the research findings were given below:

1-1.80	Never
1.81-2.60	Rarely
2.61-3.40	Sometimes
3.41-4.20	Often
4.21-5.00	Always

Content analysis was used to analyze qualitative data about opinions of the prospective teachers. Content analysis is considered as an attempt to uncover the consistencies and meanings of the qualitative data (Patton, 2014), and helps the researcher to reveal the hidden facts within the data (Yıldırım & Şimşek, 2011). The answers given by the prospective teachers were transcribed. After the answers were examined in general, similar opinions were coded and grouped into categories. Direct quotations were included in order to reflect opinions of the prospective teachers more accurately. While giving direct quotations, the letter "PT" for prospective teacher, numerical codes such as 1, 2, 3, 4 ... for the order of speech in the interview, and the letters "F" and "M" to indicate their gender were used. For example, the code "PT1F" was used for a female prospective teacher who talked at first in the interview. Then, the researcher invited the prospective teachers who participated in the interview to a Zoom meeting, shared the findings of the qualitative data, and they confirmed the findings. The aim of the second meeting was to get confirmation of the participants and ensure the reliability of the study. According to Lincoln and Guba (1985) reliability can be assured in qualitative studies using some strategies such as confirmation of participants (cited in Yıldırım & Şimşek, 2011). So as to ensure the validity of the qualitative part of the research, data coding and data analyses process were explained in detail. Sample sentences from explanations of the prospective teachers were selected to represent each category in the best way and included in the findings. Related studies were reviewed to ensure consistency and discussed in discussion (Yıldırım & Şimşek, 2011).

## FINDINGS

### 1. What are the classroom engagement levels of prospective teachers in blended learning via video streaming websites?

Classroom engagement levels of prospective teachers in blended learning via video streaming websites were analyzed and the findings were given in Table 2.

**Table 2.** Classroom engagement levels of prospective teachers in blended learning via video streaming websites

Factors	Items	X	S.D.	Level
Affective Engagement	1. Feeling interested.	4.48	.50	Always
	2. Feeling proud.	4.11	.89	Often
	3. Feeling excited.	4.30	.77	Always
	4. Feeling happy.	4.11	.97	Often
	5. Feeling amused (smile, laugh, have fun).	4.00	.96	Often
	6. Not wanting to stop working at the end of the class.	3.93	.87	Often
Overall Affective Engagement		4.15	.60	Often
	7. Listening very carefully.	4.11	.64	Often
	8. Paying attention to the things they are supposed to remember.	4.59	.50	Always

<b>Behavioral Engagement-Compliance</b>	9. Completing their assignments.	4.59	.50	Always
	10. Getting really involved in class activities.	4.41	.50	Always
<b>Overall Behavioral Engagement-Compliance</b>		4.42	.31	Always
<b>Behavioral Engagement-Effortful Classroom Participation</b>	11. Forming new questions in their minds as they join in class activities.	3.41	.69	Often
	12. Actively participating in class discussions.	3.70	.86	Often
	13. Working with other students and learning from each other.	4.07	.61	Often
<b>Overall Behavioral Engagement-Effortful Classroom Participation</b>		3.72	.47	Often
<b>Cognitive Engagement</b>	14. If they make a mistake, trying to figure out where they went wrong.	4.48	.50	Always
	15. Asking themselves some questions as they go along to make sure the work makes sense to them.	4.00	.78	Often
	16. Thinking deeply when they take quizzes in this class.	4.22	.75	Always
	17. Searching for information from different places and thinking about how to put it together.	3.78	.69	Often
	18. If they are not sure about things, checking their book or using other materials like charts.	4.33	.62	Always
	19. Trying to figure out the hard parts on their own.	4.19	.83	Often
	20. Judging the quality of their ideas or work during class activities.	3.96	.85	Often
	<b>Overall Cognitive Engagement</b>	4.13	.24	Often
<b>Disengagement</b>	21. Being “zoned out”, not really thinking or doing class work.	1.48	.70	Never
	22. Letting their mind wander.	1.44	.50	Never
	23. Just pretending like they are working.	1.52	.84	Never
<b>Overall Disengagement</b>		1.48	.40	Never
<b>Overall Classroom Engagement</b>		4.18	.21	Often

As seen in Table 2, prospective teachers were *often* engaged affectively in the classroom ( $X=4.15$ ,  $SD=.60$ ). When the items were analyzed, they *always* felt interested ( $X=4.48$ ,  $SD=.50$ ) and excited ( $X=4.30$ ,  $SD=.77$ ). They *often* felt proud ( $X=4.11$ ,  $SD=.89$ ), happy ( $X=4.11$ ,  $SD=.97$ ), amused (smile, laugh, have fun) ( $X=4.00$ ,  $SD=.96$ ) and did not want to stop working at the end of the class ( $X=3.93$ ,  $SD=.87$ ).

They were *always* engaged behaviorally and compliant in the classroom ( $X=4.42$ ,  $SD=.31$ ). When the items were examined, they *always* paid attention to the things they were supposed to remember ( $X=4.59$ ,  $SD=.50$ ), completed their assignments ( $X=4.59$ ,  $SD=.50$ ) and got really involved in class activities ( $X=4.41$ ,  $SD=.50$ ). They *often* listened very carefully ( $X=4.11$ ,  $SD=.64$ ).

They were *often* engaged behaviorally and effortful in classroom participation ( $X=3.72$ ,  $SD=.47$ ). When the items were analyzed, they *often* formed new questions in their minds as they joined in class activities ( $X=3.41$ ,  $SD=.69$ ), actively participated in class discussions ( $X=3.70$ ,  $SD=.86$ ), worked with other students and they learned from each other ( $X=4.07$ ,  $SD=.61$ ).

They were *often* engaged cognitively in the classroom ( $X=4.13$ ,  $SD=.24$ ). When the items were examined, they *always* tried to figure out where they went wrong if they made a mistake ( $X=4.48$ ,  $SD=.50$ ), thought deeply when they took quizzes ( $X=4.22$ ,  $SD=.75$ ) and checked their book or used other materials like charts if they were not sure about things ( $X=4.33$ ,  $SD=.62$ ). They *often* asked themselves some questions as they went along to make sure the work made sense to them ( $X=4.00$ ,  $SD=.78$ ), searched for information from different places and thought about how to put it together ( $X=3.78$ ,  $SD=.69$ ), tried to figure out the hard parts on their own ( $X=4.19$ ,  $SD=.83$ ), and judged the quality of their ideas or work during class activities ( $X=3.96$ ,  $SD=.85$ ).

They were *never* disengaged in the classroom ( $X=1.48$ ,  $SD=.40$ ). When the items were analyzed, they were *never* “zoned out” ( $X=1.48$ ,  $SD=.70$ ), they *never* let their mind wander ( $X=1.44$ ,  $SD=.50$ ) and pretended like they were working ( $X=1.52$ ,  $SD=.84$ ). Finally, their overall classroom engagement was at *often* level ( $X=4.18$ ,  $SD=.21$ ).

## 2. What are the opinions of prospective teachers about blended learning via video streaming websites?

Opinions of the prospective teachers about blended learning via video streaming websites were analyzed and the findings were given in Table 3.

**Table 3.** Opinions of prospective teachers about blended learning via video streaming websites  
**Opinions of prospective teachers about blended learning via video streaming websites**

<b>Positive Aspects</b>	• Being prepared for the classes beforehand
	• Reinforcing the topics
	• Active participation
	• Studying regularly and systematically
	• The opportunity to use the notes in the future
<b>Negative Aspects</b>	• Being time-consuming
	• Being bored
	• Inability to identify key points
	• Problems about the Internet

As seen in Table 3, opinions of the prospective teachers about blended learning via video streaming websites were grouped into two categories as positive and negative aspects both of which included different codes. Being prepared for the classes beforehand was expressed as a positive aspect of the application. To illustrate, PT7F explained it by saying *“Since we attended the classes after watching videos, we have understood better what was explained. We have consolidated the knowledge. We listened to the instructor or our classmates deliberately, not idly. Since we already knew the topic, we reviewed it deeply in the classes.”* Likewise, PT10F stated *“It helped me reinforce the topics I learned. Attending the classes preparedly, having a certain knowledge beforehand and participating the classes actively were the positive aspects.”*

Another code was reinforcing the topics. PT8F expressed *“The fact that we had some ideas about the topics covered during the classes reinforced our knowledge even more. In other words, we attended the classes preparedly, and it reinforced what we learned. I think I have understood better.”* In addition, PT2M stated *“It reinforced what I learned. I studied without congestion of topics.”*

Active participation was also coded as a positive aspect as PT2M declared *“We were active every week, and it was student-centered. It was a good experience for me, because it was far from the system we were used to. I think it contributed me a lot.”* Furthermore, PT8F expressed *“Watching the videos helped me be more active and improve myself.”*

Studying regularly and systematically was another code as PT1F stated *“The most positive aspect was to be able to ask when I was confused. I determined and took notes what stuck in my mind, so I could ask them in the classes.”* Similarly, PT6F expressed it as *“It provided permanent learning because we watched videos and took notes every week.”*

The most important positive aspect was the opportunity to use the notes in the future because almost all the prospective teachers mentioned about it. To exemplify, PT7F declared *“While preparing for the exam, we didn’t have to take notes because we had notes.”* In the same vein, PT3M expressed it as *“I think my notes will be effective in public personnel selection examination in the future. I think it also contributed me a lot now.”* Moreover, PT6F stated *“Our notes became documents both for the exam and the future. Normally notes taken for the exams were thrown away after the exams, but we can put them aside and use them in the future.”*

In terms of negative aspects, being time-consuming was the most mentioned code. PT3M expressed it by saying *“Watching videos every week caused problems in terms of time, which was the downside.”* PT7F said *“It limited our time as we have to study for other courses.”* PT10F simply declared *“It was a very time-consuming application.”* PT4F stated her opinion by expressing *“Since this model was applied every week, it could not be advantageous in terms of time. I think the model was useful for learning the topics, but I do not think it was advantageous in terms of time.”*

Another negative code was being bored. To illustrate PT8F explained it in details by saying *“Watching videos every week was a little boring. Because we sometimes had homework/assignments in other courses, and, frankly, I had difficulty in arranging my time in those weeks. I even quickly watched some of the videos in order to do the assignment without understanding it on the last day, which was a very negative feature. It was a very good application, I have understood better, but as I said, I sometimes couldn’t catch up with my other assignments and I watched them at the last moment and took notes quickly without fully understanding. It would be great if there was no shortage of time.”* Similarly, PT9F stated *“It was a good system, it worked but I was sometimes tired of watching videos and taking notes.”*

Inability to identify key points was also declared as one of the negative sides by one of the prospective teachers. PT1F said “*It was sometimes hard for me to distinguish what was more important.*”

Finally, problems about the Internet were a negative aspect mentioned by one of the prospective teachers. PT5F declared “*I had some trouble with the Internet. I had access and connection problems.*”

## DISCUSSION AND CONCLUSION

The aim of the study was to analyze blended learning via video streaming websites in teacher education. The research examined the classroom engagement levels in and the opinions of prospective teachers. Thus, the study was designed as a convergent parallel mixed-method research in which both quantitative and qualitative methods were used simultaneously.

The findings achieved from quantitative data revealed that prospective teachers’ overall classroom engagement was at *often* level. They *often* engaged affectively in the classroom. In terms of affective engagement, they *always* felt interested and excited. They *often* felt proud, happy, amused (smile, laugh, have fun) and did not want to stop working at the end of the class. These findings are consistent with the findings of the qualitative data in the study since most of the prospective teachers declared that they *studied regularly and systematically in the course*. In the same vein, in a recent study applied in mathematics, blended learning increased academic self-efficacy and enhanced student experience (Warren, Reilly, Herdan & Lin, 2021).

The next finding showed that prospective teachers were *always* engaged behaviorally and compliant in the classroom. When behavioral engagement-compliance was examined, they *always* paid attention to the things they were supposed to remember, completed their assignments and got really involved in class activities and, they *often* listened very carefully. Another finding was that prospective teachers were *often* engaged behaviorally and effortful in classroom participation. In scope of behavioral engagement-effortful classroom participation items, they *often* formed new questions in their minds as they joined in class activities, actively participated in class discussions, worked with other students and they learned from each other. Similarly, the findings of the qualitative data in the study displayed that they *actively participated in the courses*. In parallel with these findings, Vaughan (2014) pointed out that blended learning provides ways to improve “how we deal with content, social interaction, reflection, higher order thinking, problem solving, collaborative learning, and more authentic assessment in higher education, which could potentially lead to a greater sense of student engagement” (p. 248).

Another finding of the study reflected that prospective teachers were *often* engaged cognitively in the classroom. In terms of cognitive engagement, they *always* tried to figure out where they went wrong if they made a mistake, thought deeply when they took quizzes and checked their book or used other materials like charts if they were not sure about things. They *often* asked themselves some questions as they went along to make sure the work made sense to them, searched for information from different places and thought about how to put it together, tried to figure out the hard parts on their own, and judged the quality of their ideas or work during class activities. Likewise, the findings of the qualitative data in the study revealed that prospective teachers were *prepared for the classes beforehand*, they *studied regularly and systematically*, they *actively participated in the courses*. In addition, Vaughan, Cleveland-Innes and Randy Garrison (2013) emphasized that what is learned cannot be separable from how it is learned. Thus, the most important issue is to design instructional processes that will enable students in collaborative and purposeful activities enhancing reflection and discourse. Based on these findings and the literature, blended learning applied in the study can be considered to be designed effectively.

Finally, the study found out that prospective teachers were *never* disengaged in the classroom. For disengagement, they were *never* “zoned out”, they *never* let their mind wander, or pretended like they were working. Similarly, in a quasi-experimental study, the students in experimental group were more successful and satisfied (Çakıt & Karadeniz, 2020). These two findings embrace each other that blended learning helps students engage in the classroom, perform better, and thus, satisfy more. Moreover, in this study, the issues that were not understood and the questions prepared while watching the video(s) were explained by other students or the instructor, which may have provided the prospective teachers with an opportunity to develop their reflective and critical thinking skills, to broaden their horizons, and to learn better.

The findings of qualitative data showed that the application had both positive and negative aspects. Positive aspects included *being prepared for the classes beforehand*, *reinforcing the topics*, *active participation*, *studying regularly and systematically*, and *the opportunity to use the notes in the future*. These aspects can be interpreted to lead to higher motivation and achievement. Thus, these findings are consistent with the recent findings in the literature in that blended learning increased attitude, motivation and academic achievement of students (Kadirhan & Korkmaz,

2020; Gürdoğan & Bağ, 2020). The findings echo that blended learning helps students express their learning, as well as testing the knowledge they have acquired (Aguti, Wills & Walters, 2014).

As negative aspects, prospective teachers declared that blended learning via video streaming websites was *time-consuming*, they sometimes got *bored*, and they had problems in *identifying key points*. Similarly, in a study in Kyrgyzstan, 78% of computer engineering students stated that the optimal video length should be 20 minutes or less, and only 6.4% of them did not mind the length of the videos (Jumabaeva, Sait kyzy, Baryktabasov & Ismailova, 2020). Another study also concluded that most of the students did not watch all the videos due to the length of the videos (Brame, 2016). These findings repeat one of the most significant features of generation Z because they are described with their impatience about time, and they want to get what they desire immediately. Based on these conclusions, teacher educators are recommended to create and use their own short videos each of which covers one single learning objective as a pre-lecture activity to enable prospective teachers have a firm understanding of the materials and not to let them get bored. Although mentioned one of the prospective teachers, problems about the Internet was another negative aspects. Likewise, the lack of computer and internet access and the inability to use the keyboard fast were expressed among the negative aspects of blended learning by prospective teachers (Sungur Alhan, 2020).

These findings of the study also revealed that some of the prospective teachers were not autonomous and self-regulated enough to benefit from the advantages of blended learning. It was an expectable conclusion because it was the first time for the prospective teachers who participated in this study experienced blended learning. Caner (2012) explained that workload of instructors when designing blended learning is discouraging since designing and developing online elements as well as planning face-to-face elements is really time-consuming. Constructing environments for blended learning needs studious instructors and they should be fond of technology and acquainted with possible challenges. In this respect, the same is true for prospective teachers. They are already keen on technology, so if they are more enthusiastic and have familiarity in time, they will easily get rid of these negative aspects and be more successful students. There are some research findings that negative opinions of prospective teachers changed to positive after the application of blended learning (Dikmenli & Eser Ünalı, 2013; Marangoz, 2016; Sungur Alhan, 2020). These findings may result from the fact that prospective teachers are accustomed to traditional methods, and they are unfamiliar with recent applications (Turan & Göktaş, 2015). Moreover, if they get more opportunities as students, they will get the instruction practically, and they will effectively use blended learning in their own teaching practice in the future. As a consequence, teacher educators may be recommended to blend face-to-face courses with online courses or at least with online activities to help prospective teachers become familiar with common practices in their profession, to learn these instructional approaches practically, and to connect theory and practice.

Yoon and Lim (2007) pointed out that blended learning should be designed as a long-term project and the designers should consider long-term objectives of the course or the program in addition to possible institutional requirements. Blended learning also provides flexibility for both the instructor and students, enhances personalization, increases student outcomes, promotes the development of autonomy and self-learning, creates opportunities for professional learning, provides cost-effective qualifications, increases communication between the instructor and students (Spring, Graham & Hadlock, 2016; So & Brush 2008; Singh, 2003). Providing efficient pedagogical applications, blended learning enhances student-centered peer-to-peer learning strategies in addition to active learning strategies (Graham, Allen, & Ure, 2003). Therefore, this sample application may shed light on the issue that how prospective teachers can be supported to get used to blended learning during their studies before they begin to practice at schools, which may be particularly challenging for them whose main mode of study is traditional/face-to-face.

The current study has some limitations. First of all, the study was conducted in curriculum development in education course. Thus, further research may be carried out in other courses in teacher education, and the findings may be compared and contrasted. Second, the researcher/instructor used ready-made YouTube videos as pre-lecture activities, and some videos were longer than 20 minutes. In this respect, the researchers/instructors may record and upload their videos on YouTube, whose lengths will be 20 minutes or less. Although blended learning via video streaming website YouTube was planned to be applied during the whole spring semester in 2019-2020 academic year, it could only be carried out during first half of the semester because of COVID-19 pandemic as all schools and universities were shut down in the second half of the semester, which may be considered as another limitation. A whole semester application may reveal different conclusions since prospective teacher may think differently after they have got used to the application in time.

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## A Review on the Children's Novel Named Oğuz Dede of Yahya Akengin

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### INTRODUCTION

Children's literature is expressed as a child-like literature that is carried out in order to contribute to the growth and development of children, their imagination, feelings, thoughts and sensitivities, and to have fun while dealing with their tastes (Şirin, 1998, p. 9). Ataseven & İnandı (2000), defines a children's book as a book that meets the needs of individuals between the ages of 2-14; according to Oğuzkan (1987), a children's book; These are oral and written works aimed at the dreams, feelings and thoughts of people in childhood as the target audience. In line with these definitions, it can be said that children's books are literary works that appeal to children's dreams and thoughts and provide them with pleasure. Today, there are many writers who produce works of high educational value for children. One of these authors is Yahya Akengin. In this study, The children's novel named "Oğuz Dede" of Yahya Akengin, who has undertaken the duty of pedagogue with her works, has been evaluated.

Yahya Akengin born in Bayburt in 1946, graduated from the Literature Department of the Erzurum Educational Institute and continued his teaching career at the Gazi Educational Institute and METU, where he started his secondary education in 1967. He worked as the Chief Counselor of the Ministry of Culture in 1979, as an expert in TRT Ankara Radio Theater and Entertainment Broadcasting Directorate and TRT Television Department in 1985. Fifteen works of the author have been published in the genres of poetry, novel and theater. Winner of nine awards, Akengin served as the chairman of the Professional Association of Owners of Scientific and Literary Works of Turkey and the Turkish World Writers and Artists Foundation. Her works were handled as undergraduate thesis at various universities. The author, who participated in many international meetings on behalf of Turkey, has many published radio theater works and screenplays.

### Narrator

The narrator conveys the events taking place in the fiction of the novel, the heroes, the feelings and thoughts of the hero, the place where the event taking place in the fiction takes place, the time it takes place. The author determines a type of narrator suitable for his/her purpose in his/her work. Demirdağ (2015) emphasizes that it is the perspective that determines the situation and position of the narrator in the story and novel. The narrators are divided into the hero point of view, the observer point of view, the pluralist point of view and the omniscient point of view. When the narration of the events is done in the first person, it is called the hero's point of view, and when the transfer is made by the third person, it is called the observer's point of view. In the omniscient point of view, just as in the observer's point of view, the transfer is made through the third person; however, in the omniscient point of view, the narrator includes the feelings and thoughts of the hero as well as his observations about the hero. The type of narrator in which more than one narrator is used together is called plural narrator.

It is seen that more than one type of narrator is used in Oğuz Dede novel. While Akengin used the heroic point of view of Oğuz Dede's childhood and youth, he benefited from the omniscient point of view when he helped Mahmut and his friends: *"Mahmut's color had changed. He looked ahead, thinking. His father might not care about his mother's complaints. But if the headmaster really wrote things like that, things would turn around. He lifted his head, looked at the headmaster's face, he was very serious. Would he do what he said? There was no escape route for him then. Already, his neighborhood friends were not paying much attention to him in these last days. Because he could not act as they wanted, he did not participate in the games much. Only Orhan was close to him. But Orhan was the laughing stock of all. What if they start making fun of him too?"* (p. 50).

*"We reached the city in two days. The location of the current Yıldız Palace was a square. We spent the night there. The next day, we stood in line with those who wanted to buy grain seeds. But a little later they announced that the grain was over. We were so upset."* (p. 83).

One of the elements that form the backbone of the genre in the analysis of the novel is the transfer method used in the novel (Güven, 2007). Different methods are used to convey the events in the novel to the reader. One of these methods is the flashback technique. The purpose of this technique; It is to give information about the past about the character or event in the novel. Akengin uses this technique, which details the background of the events, to reveal the reasons why Oğuz Dede helps people at every opportunity. Oğuz, whose father was martyred, takes all

the responsibility of the family and has received great favor from both his master and teacher in this process. He did not forget the good he saw and spent his life trying for the well-being of other people: “Meanwhile, he scolded me in a very fatherly way:

-“Come on, let me see your eyes. I won't see it again. You are no longer a child. You are the son of a martyr. Today we have work, power, shop, people shopping here. We all owe this to martyrs like your father. The society that does not support the child of the martyr cannot survive. And won't you and tomorrow do to others what I have done?” (p. 102).

### Transfer Method

One of the elements that form the backbone of the genre in the analysis of the novel is the transfer method used in the novel (Güven, 2007). Different methods are used to convey the events in the novel to the reader. One of these methods is the flashback technique. The purpose of this technique; It is to give information about the past about the character or event in the novel. Akengin uses this technique, which details the background of the events, to reveal the reasons why Oğuz Dede helps people at every opportunity. Oğuz, whose father was martyred, takes all the responsibility of the family and has received great favor from both his master and teacher in this process. He did not forget the good he saw and spent his life trying for the well-being of other people: “He scolded me in a very fatherly way, by the way:

-Come on, let me see your eyes. I won't see it again. You are no longer a child. You are the son of a martyr. Today we have work, power, shop, people shopping here. We all owe this to martyrs like your father. The society that does not support the child of the martyr cannot survive. And won't you and tomorrow do to others what I have done?” (p. 102).

### Contents

#### Subject and Theme

The subject is the content of the work. It is the tool used by the author for the message he wants to convey. Çetin (2009) states that the subject can be either concrete or abstract. Each and every topic told concerns the general society or a group of people (Günay, 1995). The author shapes the concrete or abstract subject he chooses according to himself. When we look at the subject of the work, Halil Usta's son Mahmut, who works as a worker in Germany, chooses the wrong friends and treats his mother and siblings badly. Thereupon, Oğuz Dede's efforts to show the truth to Mahmut, his friends and Kahveci Hasan are told by describing the years of mobilization, war and famine. The theme corresponds to the main purpose targeted in the work. When the theme of the work is examined, Oğuz Dede was written in order to draw attention to the mistakes made in the upbringing of children and to show that moral values should be given by showing patience and not hurting them. While the sub-units that make up the theme are called motifs, the main idea is supported and revealed with repeated motifs. “(...) -You are our Oğuz dede, whom this neighborhood, not only the neighborhood, but all our butchers, everyone who knows you, believed, trusted, loved and respected. Your mind works, you speak, you know the truth, you tell the truth... You show the way, you bring those who have gone astray to the path. In my most difficult time, you were the cure for my troubles again.” (p.31-32). These and similar expressions not only form the main theme of the novel, but also make Oğuz Dede the representative of values such as good morals and righteousness, whose word is listened to and valued in society. With these features, Oğuz Dede transforms Dede Korkut of the society he lives in. Akengin focuses on the moral values that a good person should or should not have through the character of Oğuz Dede from the beginning to the end of the novel. It is revealed that people should stay away from beating and violence when faced with any problem in their bilateral relations, and that more rational ways should be used in solving problems.

In educational psychology, beating and violence are not accepted as a solution. In Turkish culture, too, “One should warn those who do not settle with advice; The right of those who do not get well with warning is beating. “Beating is seen as a last resort with the words: “—But Dad, my brother beats me while you are away... —He is your brother... He is doing it for your upbringing.” (p. 11).

The situation of not valuing girls, which exists in some sectors of society, is one of the frequently discussed topics in the novel. Due to the influence of the environment, people do not want to send their girls to school and do not look forward to sending their girls to school: “(...) Refika was in the middle and senior year this year. Elif was going to read the fourth grade of primary school. Halil Usta was not in favor of his eldest daughter's education after secondary school.” (p. 12). With the influence of the society, the father from the parents can see the boy as superior to the girl and give him more value: “(...) —But our girls... Don't you love them?

—Wouldn't I love it, Fatma. How does he promise? But this boy is our hearth's only hope... The girls will pass.” (p. 14).

“(...) I see this world with my son Fatma.” (p. 15).

Respect for elders and parents is one of the characteristics of good people. It is necessary to value them and take into account their thoughts. Oğuz Dede values the owner and master of the place where he worked during his childhood. He tries to win the favor of his master: “(...) *In the first days of my apprenticeship as a shoemaker, I was cleaning the shop and carrying tea to customers. Also, I was going to the places my master sent, taking what I said to take, bringing what I said to bring. I kept looking into my master's eyes.*” (p. 97).

Children should show due respect not only to their fathers, but to all family members. Even when they don't get what they want, they shouldn't show disrespect towards those who are older than themselves: “(...) *—But his father, shouldn't Mahmut listen to my word too? Sometimes they are outraged, and it makes me very sad that they treat both their sister and brother unnecessarily harshly.*” (p. 12).

It is not acceptable for children to disrespect their elders: “*—And you? Your father also waits for the grain until the evening. Naci replied immediately:*

*—That's none of your business. You only interfere with your own son. The man was stunned by this statement:*

*—Is that so? So a child in this town can say such things. He can give such rude replies.”* (p. 32).

The basic rule of social life is mutual love and respect. Turkish society has adopted social solidarity as a principle in every phase of life in line with this basic rule. The love and respect to be shown to the elderly today will reduce our worries about the future and will enable all individuals, regardless of their age, to look at life with confidence. Old age, which has a different meaning and importance for each person, is a very special period of life. Our elderly people are our most valuable assets that build bridges between yesterday and today and enable us to carry our culture and values to the future. Old age requires dignity, and it is also a debt of gratitude: “(...) *First, we were going to prepare the food for the elderly people in my car.*” (p. 60).

Akengin shows that there are people who treat the elderly poorly, through those who criticize Oğuz Dede's efforts to raise children: “(...) *—Everyone is staring at this man in the neighborhood.*

*—He puts everyone to sleep with his tales.*

*—What sleep deceives.*

*—Even if we die, we are dried...*

*—The senile...”* (p. 91).

Akengin frequently gives place to the transfer of cultural elements. People express their respect for one another in a variety of ways. Kissing the hands of elders is an expression of respect in Turkish culture. Those who do not kiss the hands of elders are condemned: “(...) *—Welcome, Oğuz Dede... Give me a kiss. He did not kiss her hand:*

*—Thank you, son. May there be many who kiss hands...”* (p. 38).

Fairy tales, which are of great importance in the child's imagination, are important in the transfer of culture. Tales that make a great contribution to the education of the child should be told to children: “(...) *Sıtkı laughing:*

*—Oğuz Dede tells you a tale too.*” (p. 10).

In Turkish culture, great importance is given to the guest, and it has overlapped with Turkish culture so much that a concept called Turkish hospitality has emerged. Regardless of whether they are big or small, the guest is respected and treated: “(...) *—Here's another tea...*

*—I... I don't drink tea, don't bother, said Mahmut.*

*—You are my guest, my son, is it any trouble? Drink something else if you want, let me tell you soda.”* (p. 51).

Language is important in cultural transmission. Culture transfer is ensured through language-based products. One of these products is folk songs. Folk songs are an important part of our culture. Our pain, our joy, our longing, etc. It is a means of transmission of our emotions. It is like the translator of what we cannot say. People can benefit from folk songs at every moment of their lives: “(...) *The one who overcomes knows the back of the snowy mountain/The one who pulls knows the pain of separation...”* (p. 58).

When people are in trouble, they can get ideas from people who are older than themselves and consult them: “(...) *—I mean that my Oğuz Dede is the mother of a benevolent son. My son Mahmut is about to become a victim of bad friends. He neither listens to my words, nor loves his brother, nor respects his sister. His little heart hardens.”* (p. 29).

The choice of friends is important in the education of the child. Children can be influenced positively or negatively by their peers. The child can acquire harmful behaviors and habits under the influence of the wrong friends he chooses: “(...)—*Tell me, my child, what did Orhan say, where is your brother going?*  
—*To coffee, to play. He's also a mercenary.*” (p. 18).

Children may choose the wrong friend. This wrong choice negatively affects the future of the children: “(...)Naci continued as if begging:

—*Think well, Mahmut... We are lifelong friends. But if you won't come, help us. Give us our fare.*” (p. 79).

Individuals can show unexpected negative reactions and damage people and things in order to prove themselves under the influence of the conditions they are in: “(...) *They came in front of Oğuz Dede's shop. All three of them started attacking. The windows were slamming down. Then they attacked inside with bigger stones.*” (p. 34).

Sharing and helpfulness are among the important values. Individuals help each other when needed. There are also people who do sharing and benevolence for free: “(...) *He said to me one day:*

—*Look, Oğuz, sometimes people can be harmed because of the good deeds they do and the love they carry. But let our conscience tell us that you suffered a loss because you did not repay your evil...*” So let our loss be because of our good deeds. Isn't this more beautiful? ” (p. 110).

People share their values, assets and belongings with other people in need. He knows the importance of sharing: “(...)—*I have seen many people who are starving, but I have not met anyone who died of pain until now, my son, he said. Allah is great, humanity is not dead. If a hungry person comes to your door, won't you share your bread with him?*” (p. 68).

One of the important value judgments in Turkish society is patriotism. As individuals love their homeland, every Turkish youth who reaches the age of twenty is obliged to do his military service. In order to protect the homeland, individuals fulfill their military duty and reach the level of martyrdom, even risking death for the sake of it when necessary. Martyrdom is the most beautiful level that can be reached in the world. We are grateful to these people who gave their lives for us for their country. Of course, there will be no price for what they did, but the family that the martyr left behind is valued in order to pay off his debt of loyalty: “(...) *He was middle-aged, but he was handicapped. He was not drafted because he was a teacher. It was then. Otherwise, his age was always at the front.*” (p. 56).

“( ... ) *I have learned from what has been said: those who died while emigrating in order not to surrender their property, life and honor to the enemy were also considered martyrs.*” (p. 62).

“( ... ) *we have work, power, shop, people who shop. We owe this to martyrs like your father. And tomorrow, won't you do to others what I have done?*” (p. 100).

Harmful habits for the physical, psychological and mental healthy development of individuals; can affect negatively. For this reason, parents should inform their children about harmful habits. Gambling is also a harmful habit: “(...) —*What is gambling, mother? Is it such a bad thing?*

—*And what a bad thing, my daughter... May God keep us away from the houses.*” (p. 21).

—*But my son, the game of giving and taking money is a gamble. How much your spending has increased in recent days.*” (p. 24).

It is very important in terms of honesty that individuals remain faithful to their promises. Despite being in a difficult situation, the promise made must be kept: “ (...) —*What if they find it?*

—*Then what can we do?*

—*We have to say that, Mahmoud.*

“*No, I promised I wouldn't tell anyone.*” (p. 92).

There are people in the society who are role models for other individuals and guide them in order to lead them to the good and the right. Oğuz Dede is also worried about other children in the neighborhood, he thinks more about other members of the society and dedicates himself to them: “(...) *Daddy, come and stop this wrong. Close this shop, devote all your time to your worship and rest...* Oğuz Dede:

—*I cannot live away from the troubles of this neighborhood. My children... Try to understand.*” (p. 37).

Another guide in society is teachers. Teachers' word is valued and respected in Turkish society: “(...) *My mother broke her silence:*

—If you call something good, it is good, Hodja Effendi. I believe in you, I trust you, you think of my son and us as yourself.” (p. 88).

Every individual in society has certain responsibilities. Individuals must fulfill their responsibilities. Instead of fulfilling his responsibilities by helping Mahmut's family, he wanders outside: *“Refika and her mother were trying to get the wood piled up in front of the house before it got wet. Elif was also trying to help with her little form. Fatma Hanım resents Mahmut's disappearance at such a time.”* (p. 16).

Time and circumstances may impose a responsibility on children beyond their age. The responsibility of the family can be left to the children: *“—How are you a big brother? You are the man of the house, you will not look for your father. You will protect your brother from now on.”* (p. 57).

One of the ways to establish healthy communication between individuals is to be able to empathize. People should empathize: *“—No, son, he said. Don't you share the pain of others? For a moment, I put myself in their shoes. Then I understand their pain better.”* (p. 66).

One of the effective points in healthy communication is to forgive individuals who make mistakes when necessary. In some cases, people can forgive those who hurt them: *“(…)—They have done no harm to me. They have done themselves a disservice. The Commissioner asked Oğuz Dede: —Are you complaining? ”* (p.35).

Individuals who cannot achieve academic achievement can be directed to different arts and crafts in line with their interests. Craft is valuable. It is an important virtue that not everyone can have. *“You can all be a member of parliament, a minister... You can even become a president. But you cannot be an artist.”* Atatürk also emphasized the importance of art and craft: *“My teacher understood: —Sister, if you ask me, this would be better for Oguz. It's good to have a craft. It's like a gold bracelet.”* (p. 88).

Individuals should not hesitate to tell the truth even when they are in a difficult situation; should not try to hide the facts: *“(…) We wrote you a letter, didn't you get it? Fatma Hanım's face turned white. —No, brother, nothing like that came. —Understood. So your child finds a way to take over what we write and destroy it.”* (p. 25).

It is not right to make fun of people and to give nicknames to individuals. Such actions should be avoided. In the individual sense, it is necessary to work for the development of individuals and societies and to reach certain stages. Instead of making fun of hard-working people, their achievements should be appreciated. In the novel, Sıtkı makes fun of hardworking people by calling them cows: *“(…) Sıtkı sarcastically: “There's nothing to say to your pleasure, either. Are you satisfied with her working like a cow like you? Well, tell me, what is he talking to you?”* (p. 92).

People may have to change places in their life circumstances. In this case, it is not right to make fun of them and to call them nicknames. It should not be forgotten that even our Prophet was a Muhajir. It is not clear what life will bring to people: *“The natives of the village used to call us 'muhacir'. In other words, an immigrant... I was started to be called the 'child of immigrants'. This hurt me a little.”* (p. 63).

Children may be jealous of others and therefore may not value success and education. He may try to mock: *“(…) Naci went against Orhan: —You have a "good" degree among us, but everything is not possible with a degree, my lion.”* (p. 7).

## Time

Time is the time period during which the events in the work occur. Time is needed for the formation of the fictional world. For this reason, time is one of the important elements of the novel (Can, 2013). Çetin (2009) states that time in the novel is divided into three as objective, case and narration time; The objective time is the real time depending on the calendar, the event time is the time when the event in the objective time, and the narration time is the time when the events in the work are transferred to the reader. When the existence of objective time in the novel is examined, it is understood that Akengin uses historical facts as a narrative tool. The first striking finding in the novel about social time is *“(…) your father is leaving tomorrow. And all the way to Germany... On an evening like this, one should sit and talk well with his father...”* This expression is understood as the case time of the novel in the 1960s, when Turkish worker migration to Germany was experienced.

When the case time of the work is examined, it is understood that the events continue in their normal course, but there are sometimes flashbacks in time with some connotations and references. While doing this, Akengin uses diachronic participation. Narlı (2002) states that diachronic participation is done by cutting or skipping at the time of the case. In Oğuz Dede, the diachronic presentation is seen as follows: Oğuz Dede tells about his childhood experiences while helping Mahmut with his homework: *"I will never forget that day. Two gendarmes came to the village. They talked to the elders and returned immediately. After the gendarmes left, everyone was in a state of panic, fear and excitement... The women were talking among themselves:*

- The enemy is coming...
- Ours was defeated...
- Defeated on the front...
- Wow, what happened to us..." (p.57).

In the section where Oğuz Dede tells about his childhood experiences, the withdrawal of the Russians he used and the return of the immigrants to their homes indicate the years of the 1st World War. Again in the novel, the women in the village knitting socks to be sent to the front also indicates the period when the Tekalif-i Milliye orders accepted in 1921 were implemented: *"When the day came, the headman started collecting the aid made in every house. I took the socks that my mother had knitted. We would also have one's finger in the pie. I was walking straight."* (p.87).

Narrative time is when the narrator conveys the event to the reader. Telling time, which appears in three ways; It is divided into describing the events that have happened, describing the current events, and describing the events to be experienced. Akengin has narrated the events that have happened as time to tell.

### 3. Space

The place is the element that affects the heroes of the novel or the events in the novel. It is one of the elements that add dimension to the novel. According to Narlı (2002), space is the decor of events. It is a mirror of the social and cultural characteristics of the period in which the novel takes place. So much so that it is possible for the place to form the basis of the fiction of the novel. Çetin (2009) divides the space of the novel into two as concrete and abstract. Imaginary spaces far from realism; While it is abstract, the real places where the fiction of the novel takes place are concrete. Concrete space is open space if it includes other spaces. Indoor space is covered by open spaces. Akengin did not directly mention the open place where the event took place in the novel; sensed the open space. The first and most powerful of these hints is "Yıldız Palas". Although Yıldız Palas is located in several provinces of our country, the expressions used by Oğuz Dede in the section where he tells about his childhood experiences, the withdrawal of the Russians and the return of the immigrants to their homes, evokes the people who had to immigrate from the Black Sea Region at that time. With the intersection of space and time, it can be said that the environmental space in the novel can be a village of Bayburt. Although the events basically take place in the village in question, the places in Germany and Istanbul, which are not directly related to the essence of the work from time to time, are mentioned in the novel as names.

The effect of environmental space on the heroes is seen in the novel. History teacher Tahsin Bey attributes the reason for the village children's actions that are not necessary for their age, to the early maturation of all village and town children. Again, Mahmut's father, Halil Usta, worked as a worker in Germany, which is associated with the fact that the people of the town have one foot in the door of a foreign country. There are meanings that people attribute to environmental spaces. Germany; It is expatriation, emigration, longing, and economic salvation. Istanbul, on the other hand, is the first escape stop for those who cannot find shelter in the village.

When the place description in Oğuz Dede is examined, it is seen that the place description is mostly not detailed, but the places that are observed from time to time are described in detail. Subjectivity predominates in the detailed descriptions: *"After leaving the bazaar and crossing the streets of one or two neighborhoods, the fields would begin. The fine rustle of the poplars that lined the sides of the arc after sunset was like a deep, silent song. Sometimes long barks returning from his field and harvesting were mixed with this song."*, *"There was a special beauty of watching the lights of the town from here. The mountains, which were getting lost in the bosom of darkness, were like castle walls that guarded the town."* (p.7-8).

### Cast of Characters

The cast of characters are the cadres that direct the events that play a large or small role in the events and situations in the series. Çetin (2009) divides the characters in the novel as central person, type, character, auxiliary people, fictional person, imaginary figures, and item figures.

The main hero of the character of his novel is Oğuz Dede, who is the representative of characteristics such as tolerance, benevolence, self-sacrifice, wisdom and hard work. He is the main protagonist of the novel. Aktaş (1991) defines the main hero of the novel as the person who makes the first dramatic intervention to the event, the main hero or thematic power of the work. Other people are around the main person and act accordingly. Oğuz Dede, the main hero or thematic force of the work, is a smart person who knows the truth as a hero. He is a humble personality who guides people in difficult times, leads those who have gone astray, and helps them in difficult times. With these features, Oğuz Dede is almost today's Dede Korkut. Dede Korkut is the spiritual leader of Turkish society. He enlightens the society, guides individuals with his advice, and guides them. In this respect, Dede Korkut is one of the most important examples of the wise type. Erus (2012) considers it necessary to represent a certain group or ideal in order for the person to be accepted as a type in the novel. It can be thought that Akengin attributes a similar meaning to Oğuz Dede in his novel. When Fatma came to seek help from Oğuz Dede regarding her son, she emphasizes the wisdom of Oğuz Dede: “(...)–You are our Oğuz grandfather, who is believed, trusted, loved and respected by this neighborhood, not only by the neighborhood, but by all our butchers and everyone who knows you. . You lose your mind, you speak up, you know the truth, you tell the truth... You show the way, you bring those who have gone astray to the way. In my most difficult time, you were the cure for my troubles again.” (p.31-32).

Akengin attributes some meanings to some of the names he chose for the people in the presentation of the staff. It is not a coincidence that he used the name Oguz for the main hero of the novel. Oguz means a good-natured person (TDK, 2011). Oğuz Dede, who has two brothers and the child of a martyr, is one of the popular names of the neighborhood. Oğuz Dede is helpful, tolerant, self-sacrificing and patient. All of these are the characteristics of good-natured people. Oğuz writes the meaning of his name, gives it over his history teacher Şükrü Bey. Şükrü Bey states that "Oğuz", contrary to the negative meaning in society, means the one who does good and loves without return, which is quite suitable for Oğuz Dede, the thematic power of the novel.

It is seen that Akengin prefers not to make a detailed physical or psychological description of the cast in the novel. Although there are few in number, there are parts where he gives a physical description of the cast: *"A sweet, emotional smile spread over Oğuz Dede's luminous face. He took his right hand to his beard and stroked it, as if a little embarrassed."* (p.31).

Akengin uses the internal analysis technique while conveying the feelings and thoughts of the people in the novel: *"Kahveci Hasan's eyes were shining. He was also thinking. Could someone really be this benevolent? The man had shared himself in the profits of his ready-made business. Now he was talking about leaving the shop to himself. So what would be his benefit from it? Or... Yes, or was this closeness a trap for him?"* (p.52).

Oğuz Dede works as a shoe repairman in the bazaar. Oğuz Dede, who is the father of two children, is someone who is believed, trusted, loved and respected by the neighborhood and everyone who knows him. He devoted himself to the people in the village: *"Daddy, come and quit this job. Close this shop, devote all your time to your worship and rest. Look, does it suit you to deal with children younger than your grandchildren? Let them see what they are (...)"*

*–I cannot live away from the troubles of this neighborhood, my children... Try to understand. Even if I can't do anything, I listen to your troubles; they feel relieved and relieved. I love them."* (p. 39).

Oğuz Dede, who is estimated to be in his sixties, and whose childhood is known to have passed in poverty and misery, attaches great importance to earning money through halal means, science and education: *"As a result, I say that there are people who have grown up from this school and run to great services. They are a source of pride for our town with their success in high positions or in business life."* (p. 44).

Apart from Oğuz Dede, there are also heroes who can be idealized with their various characteristics in the character of the novel. The first of these is Orhan, who does not fit into his group of friends and goes to school regularly and studies. Orhan; Unlike Naci and Mahmut, Sitki is a hardworking student. Orhan, who is eleven or twelve years old, wants to go to secondary school. He is responsible, respectful to his family and elders. They don't go out of their word. He tries to guide his friends to the good and right by warning them: *"I don't want it, Orhan said. What if I said we're coming home. Why are you all suddenly pushing me?"*

*–We have nothing to do with babies, said Naci... Sitki spoke sarcastically:*

*–You go and spend these holidays studying, you will be in the eyes of the teachers in secondary school, you will get good results..."* (p.11).

Mahmut is the person who plays a role in revealing the characteristics of Oğuz Dede. He is the only son of Halil Usta, who works with Fatma in Germany. Mahmut, the middle of three siblings, has graduated from primary school. He is a student who does not care much about lessons even though he is thinking of going to secondary

school. He lives with the dream of the shop that his father will open for him: *“Are you not going to go to secondary school? Mahmut replied indifferently:*

*-I will go, I will go, but I have no intention of slouching in class... My father also says that you can read as much as you can... It is not necessary for you to be a civil servant. My father will open a store for me, the store...” (p.12).*

Mahmut, who is eleven or twelve years old, is easily influenced by his friends and spends the money his father earns in Germany uncontrollably. He lends money to his friends and plays at the coffee house for money: *“Mother, Mahmut hasn't been to school for days. Fatma Hanım was stunned:*

*-What? Not coming to school?*

*As if taking courage from her sister's speech, Elif spoke:*

*-Big brother Orhan told me recently that your brother is going to... Their mother's eyes were full of tears.*

*-Tell me, my dear, what did Orhan say, where is your brother going?*

*-Coffee, playing games. He's also paralyzed.” (p.21).*

Mahmut is cruel enough to hurt his mother and loved ones when he does not want it: *“As soon as Mahmut entered the house, taking advantage of her mother's absence at that moment, he slapped Elif and tried to intimidate her:*

*“Are you ever going to tell my mother anything about me again?” she shouted. (p.25).*

Sitki, who is eleven or twelve years old, is Mahmut's friend; Hamal is the son of Yakup. He does not go to school and spends time gambling with the money he borrowed from Mahmut. He has a character who will do anything in line with his interests. He is constantly flattering Mahmut because he takes money from Mahmut. His mind is in the air: *“After thinking for a while, Sitki asked:*

*-What if Mahmut doesn't give money... Or if he doesn't have it?*

*-Isn't it possible, Sitki? Mahmut is our good friend... What is more than money for him?” (p.77).*

Hamal Yakup, who is in his thirties, makes a living by being a porter. Its economic situation is not very good. He is Sitki's father. It gives importance to education. He is a person who loves his child and can make all kinds of sacrifices for him: *“After the day they stoned Oğuz Dede's shop and went to the police station, Sitki's father had made a decision. He would run Sitki. He took a rope from the bazaar and gave it to him.*

*-You will carry a load like me,” he said. Since that day, he has not left his son with him. They got a job together in the bazaar, the heavy ones were carried by his father, and the light ones were carried by Sitki.” (p.75).*

Naci, who is eleven or twelve years old, is the son of Alaftar Osman Efendi, who works in grain. His financial situation is better than Sitki: *“Alaftar Osman Efendi's situation was better than Hamal Yakup. He used to buy and sell barley, wheat, oats, rye, bulgur and lentils from the villagers in the form of grain.” (p.75-76).*

Naci; does not value education and training, gives importance to money and showing off. Although he does not want to go to school, he tries to trick his father into going to school: *“Naci was also going to the movies from time to time, meeting with other friends and talking. His father wanted him to stop by from time to time and at least try to learn about shopping. But Naci was loafing around by saying that he would go to school next year, even though he had no intention at all.” (p.76).*

He has a character who will do anything in line with his interests. He is cruel enough to slap a small child like Elif: *“Naci is very bored. She ran to her friends. Naci called out harshly this time. But Elif did not come. Naci could not contain his anger. He went to her. He slapped Elif. Then he walked away.” (p.79).*

He spends time gambling with the money he borrowed from Mahmut. He is constantly flattering Mahmut because he takes money from Mahmut: *“Orhan was angry this time. He exited without waiting for Naci to finish:*

*-Because you couldn't pay the money you borrowed from Mahmut, you are flattering him.” (p.11).*

Alaftar Osman Efendi, who is in his forties, works as a grain. He has a nervous nature. He has a tendency to violence when necessary: *“Alaftar Osman Efendi came out of the coffee shop quickly. He found his son a short time later. He was beaten up a lot in his angry state. The people around barely rescued Naci from his father's hand.” (p.25).*

Fatma, who is twenty-five or thirty years old, is Halil Usta's wife; Mahmut is the mother of Elif and Refika. He loves his children very much and treats them fairly; She is angry and upset when her husband treats her son differently: *“(…) Why am I suffering from this foreign country? Isn't it for him?*

*-But our girls... Don't you love them?*

*-Wouldn't I love it, Fatma. How does he promise? But this boy is the only hope of our hearth... The girls will pass away, he will keep our lineage alive... My dear, this is the boy, let him grow up a little comfortably and freely." (p.17).*

He strives for his children to be good, honest and educated people: *"Tell me, my daughter, if at least I know who you're dealing with, I'll try to understand what you're after. Tell me, who are his friends at school, what is it?"*

*-From outside.*

*-Well?*

*-There's Naci and Sitki...*

*-Ha, now I get it. So he falls with them again. With the naughty people... I'll come to school tomorrow and meet with them..." (p.20).*

Halil Usta, who is thirty-five forty years old, is Fatma's wife and father of Mahmut, Refika and Elif. He works as a worker in Germany and comes to the village once a year. Although she loves all of her children, she separates Mahmut from the girls and loves him more. In order to protect the psychology of the children, parents are expected to treat all their children in the same way and to do justice: *"-But dad, my brother beats me while you're away..."*

*-He is your brother... He is doing it for your upbringing. Refika brought the tea tray, placed it in front of her father, and interrupted.*

*-I'm older than him, he even beats me, Mahmut, dad...*

*-It's for your own good too, girl. When I'm gone, the man of our house is Mahmut. Their mother intervened:*

*-I won't beat you up, girl. Now don't talk like that and upset your father. Halil Usta laughed:*

*-How did our boy intimidate them... My Mahmut will be a good man, my man..." (p.15).*

Halil Usta separates Mahmut from the girls and is so unfair to his daughters that he will not send his eldest daughter to school; whereas, according to Article 26 of the Universal Declaration of Human Rights, every person has the right to education. Everyone, regardless of male or female, must complete compulsory education: *"You will start secondary school this year, son. Take care of your sister... I'm not making a noise that you're going to go to school this year anyway. She became a big girl. Oh ha, don't let it spread out like that, talk about this and that." (p.15).*

Refika, who is fourteen and fifteen years old, is the daughter of Halil Usta and Fatma. She is the older sister of Mahmut and Elif. She is the eldest child of the family. He goes to secondary school and wants to be successful: *"Halil Usta interrupted his wife:*

*-Didn't the neighbors condemn us because we gave Refika to secondary school? But she also wanted secondary school very much." (p.17).*

He is respectful to his parents. She wants to help her mother in everything: *"Refika was going to school soon. But she was making an extraordinary effort to lighten her mother's work before she left." (p.19).*

Elif, the youngest child of the house, is the daughter of Halil Usta and Fatma; She is the sister of Mahmut and Refika. She is not going to school yet, she. She is five or six years old. She is attached to her family and loves them very much: *"She went somewhere with her friends, mother, she was able to say. Elif sensed that her mother was distressed and kept running as if she wanted to prevent her from getting more upset..." (p.20).*

Kahveci Hasan Efendi, who is middle-aged, earns money by gambling with younger students in the cafe he runs. He uses children for his personal interests: *"-Hey shameless man, it means that you are playing games with children as much as your hand. Be ashamed of your age! Don't you know that the gain you make in this way is poison dodge? Naci, Sitki and Mahmut froze at the table they were sitting at. In the face of the scolding he heard, the coffee shop took an aggressive attitude:*

*-What shall we do, master, should I turn off the coffee so that your child does not come? This is my bread door, he said... Porter Yakup got even more angry:*

*- Earn your bread the halal way, man! There has never been anyone in this town running a trading place that instills such malice on children." (p.34).*

The school principal, whose name is not mentioned in the work, is in charge of the school where Mahmut, Orhan, Sitki and Naci go. It gives importance to the healthy growth of generations. He is forty-five fifty years old. It is sensitive to the problems of its environment. He tries to help people: *"Now, here's something that makes me think about these children: If you notice, they are in an attitude that is not necessary for their age." (p.42).*

*"Manager:*

*-Me too... Working together, we can save our children from getting worse. Oguz Dede." (p.45).*

Tahsin Bey, who is twenty-five and thirty years old; He is the History teacher of the school where Mahmut, Orhan, Sıtkı and Naci attend. It gives importance to the healthy growth of generations. He is a teacher who is sensitive to the problems of his environment. He tries to help people: *"Thank you, my son. May you kiss many hands. Get me to see the history teacher of this school. They said he was a young man. It's new. What is it name?"*

*-Tahsin Bey, history teacher... Yes, he is young. He is young but good. Shall I call you from the teachers' room?" (p.41).*

*"Yes, yes, sir," said Tahsin Bey, especially after primary school, the children here consider themselves grown up and educated. What do you say, Grandpa, why don't the children here know their children?" (p.42).*

Bekir; He is the peer of Mahmut, Naci, Sıtkı and Orhan. He is twelve thirteen years old. After being expelled from school, he went to Istanbul from the village. Bekir, whose immorality is heard even in the village, is a person who drinks and wanders around with vagrants: *"-they were going to go to Bekir..."*

*-Bekir's? Then it's worse... Haven't you heard of Bekir's vices? Don't look at him coming and showing off around here. My uncle told me... He even drinks. Bekir was expelled from school... Not only because of his moral status... He was walking around with vagrants. What and what did my uncle tell..." (p.98).*

Şükrü Bey is in his thirties. He is the history teacher that Oğuz Dede met in his youth. He is a good person to do good to those who do him bad: *"One day he said to me:*

*-Look, Oğuz, sometimes people can be harmed because of the good deeds they do and the love they carry. But let our conscience tell us: You suffered damage because you did not repay the evil. So let it be because of our good deeds at our loss. Isn't this better?" (p.112).*

He tries to do good and help people. He has an investigative personality. He is quite knowledgeable about history: *"I replied:*

*- That's right... Şükrü Bey is doing research on the Oghuz Turks in this region. He is preparing a book on this subject." (p.110).*

Elif is Oğuz Dede's sister. He is the child of a martyr. His infancy was spent with famine and the pain of mobilization.

Oğuz Dede's mother, whose name is not mentioned, is in her thirties during the years of the War of Independence. She is a responsible mother who protected her children during the famine and mobilization years, tried not to make her children feel the absence of their father, and loves her children: *"Oğuz, are you sleepy, my child? Oh boy, you fall out of the car. Allah bless you baby. Come on, resist a little longer, we'll stop a little later. You're hungry, we'll fill your stomach, you can sleep until morning." (p.63).*

Hodja, whose name is not mentioned, is a person who lived through the famine and mobilization of the War of Independence, kept the people together in this state of poverty, guided them, was full of patriotism, and gave importance to education and raising new generations. It is estimated that he was twenty-five or thirty years old in those years: *"The teacher was comforting us. He stroked my hair.*

*-You are the son of a martyr, my child. Your father died for religion, for the state, for the country. Many, like your father, were martyred on this road. If you cry too much, his soul will be hurt. May Allah give you life... Later on, the teacher always took care of us. When winter came, I started writing lessons. He was giving me some books. I was taking it home and reading it." (p.85).*

## Editing Technique and Elements

### 1. Title of Novel

The name of the novel is very effective in making sense of the novel and revealing its content. For this reason, the title of the novel should be suitable for its content and should evoke important details about the content. The name of the novel is based on Oğuz Dede, who is the leading person in the character of the novel. It is seen that oguz, which means good-natured, meets the characteristics of the leading character of the novel such as benevolence, tolerance, self-sacrifice and patience. On the other hand, the Oghuz is a large Turkish tribe that is the ancestor of today's Turkmen, Azeri, Gagauz and Turkish Turks. As the history teacher Şükrü Bey conveyed in the work, the Oghuzes did not leave the justice and did not separate the people under their rule from their own people in order to make the lands won by the war their homeland. In addition, he tried to help them at every opportunity and in every way in order to win the hearts of these people. All of these are the characteristics of Oğuz Dede, who worries about the problems of people in the village and tries to help them. Considering all these, it can be said that the title of the novel is compatible with the content.

## 2. Summary

The summary is to reveal the basic lines of the fiction of the novel. The summary highlights the main points without going into details:

Halil Usta works as a worker in Germany. His wife Fatma lives in the village with their children Refika, Elif and Mahmut. Mahmut, the only boy in the house, takes strength from his father's pampering, describing him as the only hope of our hearth, and starts to spend excessive money traveling with the wrong friends. No matter how much Fatma warns her husband, Halil Usta continues to pamper Mahmut instead of warning him. It is time for Halil Usta to return to Germany. When Halil Usta returns to Germany, Mahmut changes completely. He begins to disobey his mother, to oppose his sister and to mistreat his brother. Not content with that, Mahmut starts gambling with his friends Naci and Sıtkı at the cafe. Learning about this situation, Fatma warns her son. Mahmut, on the other hand, scolds his mother. Fatma, who goes to school, learns that Mahmut has not been to school for fifteen days and that Mahmut destroyed the letter sent to her about this and is devastated. Thereupon, he goes to Oğuz Dede, who has a shop on the side of the neighborhood close to the bazaar, and asks for help to save Mahmut from this situation. Oğuz Dede starts to work by meeting with the father of Naci and Sıtkı and asks them to calm down. Learning that Oğuz Dede has gone to their house, the three friends stone Oğuz Dede's shop. They are caught by the guard; but Oğuz Dede does not complain. Then Oğuz Dede goes to the children's school to look for a solution. Oğuz Dede, who goes to school, meets with the school principal and the History teacher. He explains the situation of the children and says to the History teacher for a solution, give Mahmut such an assignment that he has to come to me and talk to me. Kahveci Hasan, whose business has deteriorated as the children move away from coffee, comes to Oğuz Dede's shop and says I lost my job because of you, five children at home, what do they eat? Thereupon, Oğuz Dede hires him, saying that if he wants to earn money from halal way, he can work for him. Receiving the threat that we will send a letter to your father from the school principal, Mahmut feels obliged to do his homework to meet with a man who lived through the years of the War of Independence and the troubles after the Independence, given by his History teacher. Realizing that the old man with whom she can do the homework can be none other than Oğuz Dede, she goes to Oğuz Dede even though she does not want to. Through Mahmut's homework, Oğuz Dede tells Mahmut and Kahveci Hasan about the mobilization, war and famine years, the troubles he suffered in those years, how he looked after his family, Şükrü Bey, who has an important place in his life, and the meaning and importance of the name Oğuz to Mahmut and Kahveci Hasan. Thanks to the homework, Mahmut realizes his mistake and becomes a student appreciated by everyone. Sıtkı is also affected by these events and decides to start school. The novel ends with Oğuz Dede going to look for Naci, who fled to Istanbul with Alaftar Osman Efendi.

## 3. Plot

The plot is formed by arranging the cases in a determined order by the author. According to Şahin (2007), the time, place and cause-effect relationships between events are effective in the formation of the plot. In the plot investigations, the course of the beginning and the end of the events should be revealed, and if any, forward or backwards should be explained. The plot used in the novel consists of a straight line plot. He writes in the plot that proceeds in the order of the series, the node, the solution; Depending on the fiction of the novel, he sometimes goes back to the past and makes use of the "flashback" technique. In the plot, which proceeds in a straight line, the events that Oğuz Dede, who is the leading character of the novel, lived in his childhood are told: *"We children were talking among ourselves. Honestly, we also enjoyed going on the road. We would migrate. Our elders used to say to the west. But my mother was always brooding. He was coughing all the time... One of our two oxen seemed sick. The ox cart had not been repaired for many years, it was broken. It was falling apart."* (p.58).

Akengin basically created a text ring in the novel and developed inner case rings connected to this ring. He connected the rings to each other by establishing a cause-effect relationship between the rings he developed. The starting point of the inner case circles is Oğuz Dede. Akengin unites his inner circle of events on Oğuz Dede and deepens the events by expanding them over Oğuz Dede. Through Oğuz Dede, people are advised to be tolerant and help each other without expecting anything in return.

## 4. Event Integrity

The integrity of the event, which corresponds to the path followed in the creation of the cases in the plot, is divided into "state change pattern, first state, second states, final state and quest journey pattern" (Çetin, 2009). The effort to seek the desired is the equivalent of the quest journey pattern and is staged as "wanting, leaving, struggling, finding and returning". The novel Oğuz Dede shows the characteristics of the quest journey pattern as an event integrity. The stages of the quest journey pattern in the novel are as follows:

Demanding: Oğuz Dede wants to do justice to his name with the influence of his childhood and youth. He wants to help everyone in the neighborhood without expecting anything in return, especially after he learns from his

history teacher Şükrü Bey that his ancestors, the Oghuz, treated everyone with dignity and helped them in every way. The Search: Oğuz Dede decides to guide the families of the children in order to get rid of the negative attitudes and behaviors of Mahmut and his friends. Struggle: First, their families ask them to stay calm. Then he goes to the school and asks for help from the school principal and the history teacher in order to guide the children. After telling the school principal about the children's situation, he asks the history teacher to give Mahmut homework. Thus, he states that Mahmut will come to the shop and that he can guide him. Finding and Returning: Oğuz Dede, guided by homework, Mahmut reads his homework in front of the school. Awarded by the manager. Applause from all students. Sıtkı wants to go to secondary school. Oğuz Dede and Naci's father, Alaftar Osman Efendi, decide to go to Istanbul when it is heard that Naci is going to Bekir's place in Istanbul.

The arrangement of events in relation to the event unity of the novel is in wave form. For all events, there is one main event. The nested events related to this main event follow the main event. While Oğuz Dede's effort to help Mahmut and his friends is the central event, the events of Oğuz Dede's childhood and youth are related to the main event.

### 5. Elements of Tension

In the novel, the author keeps the element of curiosity alive with conflict or knot, provides drag and connects the reader to the novel by influencing them. The element of conflict in the novel can be with the hero of the novel as well as between the hero and the society (Özot, 2014). Rather than conflict, Akengin tried to provide suspense with the tension, fear and curiosity he created in the novel. While providing this, he made use of the knots in the novel. The main point of the Oğuz Dede novel is whether Oğuz Dede can help Mahmut and his friends, whose behavior is getting out of control. However, Akengin also included intermediate nodes in the form of supporters that feed the main node from time to time in the novel. Oğuz Dede's getting the support of the school principal and history teacher in order to attract the children with him, Mahmut going to Oğuz Dede's shop regularly for homework in this process, the coffee maker breaking into Oğuz Dede's shop because the children did not come to the cafe, Oğuz Dede The news of the martyrdom of his father in his childhood and youth and the process of complaining about Mr. Şükrü also constitute the intermediate nodes.

### 6. Last

It is another component in the final novel fiction. The last part of the novel is very important in terms of memorability. Çetin (2009) states that the endings of the novels can be "surprising, tragic and open-ended". There is uncertainty in the open-ended ending or leaving the ending to the imagination of the reader. It can be said that Akengin prefers the open-ended ending in Oğuz Dede's novel. Oğuz Dede, who learns that Naci has gone to Istanbul at the end of the novel, decides to go to Istanbul with Naci's father, Alaftar Osman Efendi. Akengin's novel "He was a 'Pure Oguz', he came and went like this." ends with the sentence. Although the sentence reveals that Oğuz Dede will continue to help people, this is ambiguous for the final reader.

### 7. Intertextual Relations

One of the techniques in the fiction of the novel is intertextual relations. Writers; In order to enrich the content of his works, support or add a different dimension to the work, he can benefit from different texts in the fiction of the novel. Çetin (2009) states that intertextual relations can be by putting a text into a novel as it is or by transforming an existing text. Akengin has benefited from intertextuality, albeit a little, in the novel. After Oğuz questions Şükrü Bey about being nice to those who complain about him, Şükrü Bey reads a poem from Yunus Emre. Akengin inserts two verses from Yunus Emre's poetry into the work.

### Language and Wording

#### 1. Language

Language and wording is another of the fictional elements of the novelist's work. According to Çetin (2009), while examining the language of the work, the language elements of the work, language deviations, sentences and vocabulary should be examined. In order to fully understand and interpret the works, it is necessary to understand the language used in the texts (Güney, 2013).

The number of unknown words used in children's literature products should be suitable for the level of the child. When we examine the work in terms of the number of unknown words, the number of unknown or upper level words is almost non-existent. In the work, it is seen that the word "Nodul", which means goad with a pointed iron at the end, is used in a way that the meaning of which may be difficult to be known by the target audience.

It is recommended that the number of words in the sentence should not exceed ten in children's literature products. In this context, when the sentences in the work are examined, it is seen that Yahya Akengin brings fluency, vitality and diversity to the narrative by using short sentences and dialogues in this work. The fact that there are very few

language mistakes in the work and the use of a language that is fluent and does not make it difficult to understand contributes to Turkish learning.

When the language features of the novel *Oğuz Dede* are examined, it is seen that Akengin often resorts to idioms: "to avoid the taste" (p. 10), "to keep an eye on" (p. 15), "to bear the sin" (p. 18), "to attract attention" (p. 78), "to have one's finger in the pie" (p. 87), "to ignore the mind" (p. 108), "to value" (p. 109) etc.

It is seen that in the work written in a fluent language, rhetoric is frequently used. In this respect, it can be said that there is an artistic expression in the work. Akengin frequently makes use of the art of simile as a narrative feature in his *Oğuz Dede* novel. She compares Fatma Hanım's smile to the sun: "She has recovered. What were the crimes of Refika and Elif? It shouldn't upset them. He laughed like the sun that spreads after the rain." (p. 23).

It has been seen that the art of exaggeration is also used as a narrative feature in the work: "That's big Istanbul, my son. No one can find us. Didn't you ever listen, even going from one end to the other is not everyone's job. We go and find our Bekir first. He helps us." (p. 77).

Again, Akengin sometimes resorts to personification as a narrative feature in his novel *Oğuz Dede*: "After a while, it would become inaudible in folk songs, and the cool highland wind would start to caress the leaves of the poplars a little more vividly." (p. 7).

## 2. Wording

Wording is the author's style of expression. The wording, which differs according to the author of the novel, bears distinct traces from the author's view of the world. Çetin (2009) states that "common, conscious movement, dramatic, thought, mythical, critical, epic, satire, rhetoric, metaphorical, humor, objective description, artistic, analytical, plain wording" can be used as a wording type.

The expression wording used in children's literature products should be appropriate for the level of the target audience. A descriptive and expressive wording is dominant in the work. The depictions are lively and the wording is not boring. Especially, while the years of the War of Independence were told, both the historical facts were illuminated and the war environment and the troubles experienced were visualized in the eyes of the reader.

There are also poems and folk songs in the work. We come across folk songs such as "The one who overcomes knows the back of the snowy mountain, the one who pulls the pain of separation...". These uses not only contribute to the child's vocabulary, but also enrich the child in a cultural sense, and also contribute to the four basic language skills.

Akengin used some childish elements in the work from time to time: *Orhan's other friends made fun of him as a baby when he was late for home* (p. 8), *and when Fatma Hanım said that she spent a lot of money on her son, Mahmut asked 'When, when?'* (p.12), *after Fatma's words to her son meaning you read first and then think about the store, Mahmut's answer 'Neither for me, after what my father asked...'* (p.13), *Mahmut's absence paper sent by the school principal hiding* (p.23), *drowsy Elif asking her mother to sleep in the car and telling her that she will sleep at home* (p.71).

It can be said that the work named *Oğuz Dede* has generally positive features in terms of language and expression. It can be said that especially the rules of language and expression are well applied in the work, and the chosen subject will set an example for the reader in the age of development and growth.

## Evaluation and Conclusion

The novel *Oğuz Dede*, published by Yahya Akengin in 2004, has been evaluated in terms of external and internal structural elements. The narrator's type, transfer method, subject, theme, time and place features, characters, narration method and elements of the work were examined.

More than one type of narrator is used in *Oğuz Dede* novel. *Oğuz Dede's* heroic perspective on his childhood and youth; In the period when he helped Mahmut and his friends, the omniscient point of view was used. The author tells Mahmut the truth about his friends and Kahveci Hasan by telling *Oğuz Dede's* years of mobilization, war and famine after Mahmut, the son of Halil Usta, who works as a worker in Germany, chose the wrong friends and treated his mother and siblings badly. describes his effort. Akengin wrote his work through *Oğuz Dede* in order to draw attention to the mistakes made in child upbringing, to show that moral values should be given with patience and not to hurt them, and to show that people can be helped without any self-interest.

The plot of the novel consists of a straight line plot. In the plot, which progresses in the order of the plot, the knot and the solution, Akengin used the flashback technique from time to time while conveying the years of Oğuz Dede's childhood and youth in the novel.

Akengin has felt the open space where the event takes place in the novel. When the place description in Oğuz Dede is examined, it is seen that the place description is mostly not detailed, but the places that are observed from time to time are described in detail.

Akengin also makes Oğuz Dede the representative of values such as good morals and honesty, whose word is listened to and valued in the society. He can say that the author points to what should be through the characters he creates, and because he prepares children's literature, he has the aim of bringing good qualities to children. The good family model reflected in the work, the positive features in the relationships in the workplace, the altruistic teacher model are actually rare but desired models in life. In addition, national and spiritual values such as homeland, flag, etc. are also processed in the work. Oğuz Dede's narrative about the years of the War of Independence and the values in question were emphasized. With this feature, the novel can be recommended to individuals in terms of developing four basic language skills and gaining the root values determined in the Turkish Curriculum.

The most important factor that determines whether a work is suitable for children's literature is to capture the child's point of view, to evaluate the events with the feelings and thoughts of the children and to reflect them from their eyes. Apart from the fact that the children in this book, Mahmut, Naci and Sıtkı, exhibit the act of gambling, the work coincides with the child's imagination and child's point of view.

Children's literature products should be suitable for the child's level of understanding and language development. It can be said that the topics covered in the work are suitable for the child's understanding level in many places, but there are also words that are difficult to understand above the level, albeit a little.

Oğuz Dede can be considered as a good example in terms of both his fiction, his ability to reflect the sense of curiosity in the events at a high level, and his use of language.

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## **An Analysis on the Factors Affecting the Decision-Making Process of Prospective Social Studies Teachers on Socio-Scientific Issues**

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### **Abstract**

This study aims to evaluate the factors affecting the prospective social studies teachers' decision-making process on socio-scientific issues, by using a qualitative case study approach. The sample group consisted of 50 prospective teachers (34 female and 16 male) in their final year of study in the Department of Social Studies Education at a public university in the spring term of the 2020/21 academic year. A structured interview form was used as a data collection tool, and the data obtained were analyzed by content analysis strategy. The results indicated that environmental, social and personal aspects are critical factors for prospective teachers' decision-making process regarding socio-scientific issues. It was also concluded that prospective teachers' decisions on socio-scientific issues focused on health, relationships with other people, the rights to property and privacy of life in the personal dimension, while they associated their decisions with the concepts of culture and equality in the social dimension, and with environmental awareness in the environmental dimension. This study also revealed that the activities related to socio-scientific issues were significantly influential on many aspects such as the prospective teachers' extent of knowledge about certain socio-scientific issues, their attitude in decision-making, and their ability to come up with solutions to problems of daily life that concern the society as a whole.

**Key words:** Socio-scientific Issues, Decision-making Process, Prospective Social Studies Teachers

### **INTRODUCTION**

National and international standards have set the aim of quality education as educating scientifically literate individuals who are capable of understanding the relationship between science, technology, and society, in addition to being able to use their knowledge in daily decision-making mechanisms (MEB, 2018, NAS, 2002; NCSS, 2013; NRC, 2013; NSTA, 2003; NSF, 2010; OECD, 2007; Bybee, 2008; Bybee & Fuchs, 2006; YÖK, 1997; 2008). For this reason, scientific literacy has gained considerable importance for educational purposes in recent years. (DeBoer, 2000; Hurd, 2000; Miller, 1998; Yager, 1996). However, an exact and clear definition is still lacking for scientific literacy. Various aspects of scientific literacy seem to be discussed among different groups from different perspectives (Bybee 2008; Miller 1998; Sahamos 1995). Science in social terms includes being literate and making decisions on socio-scientific issues (Sadler, 2004; Topçu, 2015). According to scientific literacy approach, science should interact with other fields in economic, environmental, social, political, and certain moral and ethical aspects (Miller, 1998). This approach is also related to the definition of scientific literacy as a citizen, which regards the need to make decisions on socio-scientific issues as an important element of scientific literacy in the social context (Miller, 1998, Zeidler, 2014, Sadler & Zeidler, 2005; Topçu, 2015; Turgut, 2007; Topçu, Yılmaz-Tuzun & Sadler, 2011).

Citizens who are scientifically literate are needed so that democratic processes can be fulfilled properly within society (Brossard & Shanahan, 2006). Debating over socio-scientific issues plays a guiding role in preparing students in order that individuals in society will become scientifically literate (Ratcliffe & Grace, 2005; Zeidler, 2014). Discussing socio-scientific issues does not often lead to simple conclusions, yet is often analyzed in terms of dilemmas based on different viewpoints and opposing ideas in the moral and ethical dimension (Levinson, 2007; Sadler, 2004; Sadler & Zeidler, 2005). The aim of the education on socio-scientific issues is to come up with appropriate solutions to dilemmas based on the different beliefs, understandings and values of citizens that divide both scientific communities and society (Crik, 1998; Dillon, 1994; Kolsto, 2006; Yager, 1996).

However, some educators make criticisms on the grounds that the knowledge and skills needed to solve problems in socio-scientific issues are very different from the knowledge in the school curriculum (Fensham, 2002, s.17; Jenkins, 1999, p. 705). Studies in the counselling literature argue that social, political, personal and ethical factors are more influential in citizens' decision-making process (Kelly et al., 1993; Shamos, 1995, Kolsto, 2006). In addition, some have supported the opinion that people's personal decisions end up increasing or decreasing social problems (Bybee & DeBoer, 1994; DeBoer, 2000). DeBoer (2000) further defined the rationale behind teaching socio-scientific issues: The first of such issues is related to motivation, suggesting that students will be more likely to be willing to learn about social issues with which they are familiar; the second is

personal relevance, referring to the idea that students feel the need to learn about the angles of science that influence them personally; and the third focuses on the societal benefits. Many educators advocate the necessity of teaching socially meaningful socio-scientific issues. Still, there seem to be ongoing disputes about which of these subjects should be taught. While many educators agree on the reasons for teaching socially meaningful socio-scientific topics, there is much disagreement about which of these topics should be the focus of instruction. Another point which is criticised by educators is the ambiguity of what an ideal teaching environment will be like when teaching socio-scientific issues in the classroom, as well as the obstacles that educators will encounter, and how educational practices will be conducted (Jenkins, 1999, p. 704). In this regard, research has been carried out on different subjects by many researchers related to socio-scientific issues (Ekborg et al., 2013; Walker & Zeidler, 2007; Patronis, Potari & Spiliotopoulou, 1999; Wu & Tsai, 2007; Albe, 2008; Lee & Erdoğan, 2007). Such studies referred to socio-scientific issues as a tool and specified students' critical thinking, argument development, and decision-making skills, as well as moral ethical perspectives in consideration of socio-scientific issues (Evagorou & Osborne, 2013; Sadler & Fowler, 2006; Sadler, Klosterman & Topçu, 2011; Topçu, 2008). The relevant research results showed that there are some factors that affect the decision-making processes of individuals ranging from primary school students to university students as regards socio-scientific issues (Bell & Lederman, 2003; Pedretti, 1996; Zeidler, Applebaum & Sadler, 2011; Lee, 2007; Kortland, 1996; Zo'bi, 2014; Bilen & Özel, 2012; Keçeci, Kırılmazkaya & Kırbağ Zengin, 2011, Öztürk, Eş & Turgut, 2017; Evren- Yapicioglu, 2018). Moreover, the studies in the literature emphasize that decision-making process in socio-scientific issues is an important part of citizenship (Sadler & Zeidler, 2005; Zeidler, Walker, Ackett & Simmons, 2002; Shamos, 1995, Kolsto, 2006). Additionally, one of the important aims of citizenship education is to enable students to reach high-level decision-making skills (Lee et al., 2013, Kaymakçı, 2010; Kolsto, 2006). Socio-scientific issues also play an important role in achieving this goal. Making the necessary emphasis in teaching such subjects is essential in terms of achieving effective citizenship education. However, it is noteworthy that the number of relevant studies is limited in the literature (Kabataş-Memiş, 2014; Nussbaum, 2011; Swartz, 2008; Torun & Şahin, 2016). Considering all these, we believe that evaluating the decision-making processes of prospective social studies teachers on socio-scientific issues and analysing the factors affecting this process will contribute to the field and fill the gap in the literature. In this sense, this study aims to evaluate the factors affecting the decision-making process of prospective social studies teachers on socio-scientific issues.

## METHOD

This study was conducted by employing a qualitative case study design. The purpose of case studies is to define and comprehend the study items in depth (Yıldırım & Şimşek, 2008). The reason for employing a case study design in this study was to evaluate the factors affecting this process by deeply investigating the decision-making processes of prospective teachers about socio-scientific issues.

### Sample Group

This study included a sample of 50 (34 female and 16 male) prospective teachers in their final year of Social Studies Education at a public university in the Spring term of the 2020/21 academic year. For the purpose of the study, the sample was identified according to the purposive sampling method to include prospective teachers in their final year of study in order to obtain more detailed information.

### Implementation Period and Data Collection Process

The study was carried out with the participation of prospective social studies teachers within the scope of the course in which it was conducted. In the first week of the implementation, prospective teachers were offered theoretical presentations about some socio-scientific issues, as well as the importance of these topics and how they are addressed in the curriculum, the relationship between scientific literacy and socio-scientific issues, and current socio-scientific issues.

In the second week, the researcher held a lesson on the *Impacts of the Internet* in order to prepare the prospective teachers for the implementation process and conducted a discussion to ensure the participation of the prospective teachers. The participants expressed their views on the designated socio-scientific issue. At the end of the activity, the prospective teachers were administered a semi-structured opinion form in order to obtain their opinions with respect to the decision-making process on the given socio-scientific issues. In the following weeks, a similar procedure was continued in which the prospective teachers dealt with different socio-scientific issues. The implementation period is presented in Table1.

**Table 1: The Implementation Period**

Informing Prior to the Implementation		
Trial study led by researchers (the impacts of the Internet)		
Content	Learning-Teaching Process	Data Collection
Base stations Access to drugs Genetic disorders Whaling	In-class discussions, use of dilemmas, and role plays.	Semi-structured interview form

### Data analysis

The data obtained from the structured interview forms were analyzed by content analysis. In general, the purpose of content analysis is to explain the data obtained with reference to the opinions of the participants (Yıldırım & Şimşek, 2008). In content analysis, the data is analyzed in four stages: determining the codes, finding the themes, classifying the codes and themes, and interpreting the results (Yıldırım & Şimşek, 2008). First, two researchers read the participants' structured interview forms one by one from the beginning to the end. Then, they first brought together the codes and then the related codes under specific themes. In order to understand the themes and codes and to reveal the relationship between them, the results were presented in tables. In that process, the researchers came together and made the analyses together. Consistency was achieved among the researchers. Themes, codes and example sentences related to the decision-making processes regarding socio-scientific issues within the content analysis are presented in Table 2.

**Table 2: Sample content analysis process**

Subjects	Themes	Codes	Example Sentences
Base Stations	Personal	Health	"Base stations cause both physical and psychological discomfort. As a consequence, it takes away our right to a healthy life. Health always comes first." (S32)
	Social	Equality	"Correspondence and communication as a human right is guaranteed by the phrase 'everyone has the freedom of communication' in the Article 22 of Turkish Constitution." (S25)
	Environmental	Environmental awareness	"Considering the damage of base stations to the environment, we can see that environmental rights are violated." (S46)

In the current study, some principles were adopted in order to boost the validity and reliability of the research. In this sense, the researcher took part in both the implementation and the data collection procedures. The researcher spent a long time with the participants and paid attention to the collection of data in a comprehensive manner. Attention was paid to ensure that the results of the research reflected the participant views and that the research analysis was based on the information given by the participants. To achieve this, moreover, the research data were supported by direct quotations from the answers of the participants. Data analysis was made by two researchers who are experts in the field. The researchers agreed on a common point in the coding of the research data, the creation of categories and themes, and the explanation of the data. This increased the validity of the analyses (Patton, 1999). Further attempts were made to increase the reliability of the study. In this respect, data were collected from the participants at different times and intervals for 4 weeks; the data collected every week was recorded, and the records were regularly analyzed by two researchers without waiting too long. The researchers paid utmost attention to act objectively in the analysis process and to base their judgment on the information given by the participants. For this, the research data were supported by direct quotations from the answers of the participants. These are the factors that increase the reliability of the study (Güler, Halıcıoğlu, & Taşgım, 2013).

### RESULTS

This section presents the findings obtained by evaluating the factors affecting the decision-making process of prospective social studies teachers on socio-scientific issues.

During the research, four activities were carried out with prospective social studies teachers in relation to base stations, genetics, access to drugs, and whaling. After the activities, the factors affecting the decision-making processes of the participants on socio-scientific issues were evaluated. The factors affecting the prospective teachers' decisions on base stations, genetics, access to drugs, and whaling were evaluated under the themes of

personal, social and environmental ethics. Table 3 below shows the distribution of codes and frequencies in these themes.

**Table 3:** Themes, codes, and frequency distribution formed as a result of the evaluation of the factors affecting the decision-making processes of prospective social studies teachers in socio-scientific issues

Themes	Codes	Base stations	Genetics	Access to drugs	Whaling
Personal	Health/Life	36	33	32	-
	Relationships with others people / Communication etc.	30	2	16	-
	The right to work	-	28	-	-
	Autonomy / free will / freedom	-	1	-	-
	Privacy	-	4	-	-
	Property	-	-	12	-
Social	Equality/non-discrimination	1	2	-	-
	Benefiting from public services	-	2	2	-
	Cultural influences	-	-	-	6
Environmental	Environmental awareness	10	-	-	40

The present study presents the codes related to the themes formed as a result of the evaluation of the factors affecting the decision-making processes of prospective social studies teachers in socio-scientific issues and the frequency values of these codes. As the findings were being tabulated, the frequency values of the codes were taken into account and a sequence was followed from the code with the highest frequency value to the code with the lowest frequency value. In this regard, prospective social studies teachers' decision-making processes on socio-scientific issues were examined in terms of personal, social, and environmental dimensions. The prospective teachers associated the subject of base stations with health and life, and relationships with other people from the personal perspective; equality from the social perspective, and environmental awareness from the environmental perspective. With respect to the subject of genetics, it appeared that prospective teachers related their decisions to health/life, the right to work, and privacy from the personal perspective, and to equality and the right to benefit from public services from the social perspective. In addition, regarding access to drugs, the participants seemed to base their decisions on the aspects of life and relationships with other people in terms of the personal dimension, as in the case of base stations and genetics. They also associated the issue of access to drugs with the right to property from the personal perspective. On the other hand, it is evident that the prospective teachers associated whaling with environmental awareness and cultural influences. The findings related to these dimensions are given below under particular headings.

### **Personal dimension**

It is evident in this study that prospective social studies teachers associated decision-making processes on socio-scientific issues with health/life, relationships with other people, right to work, right to property, and right to privacy within the scope of personal dimension.

Most of the prospective teachers pointed out the importance of health and life concerning the personal aspect when making decisions about base stations, access to drugs, and genetics. For example, regarding the base stations, P32 said, "*Base stations lead to both physical and psychological disorders. It, therefore, takes away our right to a healthy life. After all, the importance of our other rights diminishes if we are not healthy enough. 'Health comes first'*", and regarding the genetics, P21 said, "*The right to life is our most basic right and cannot be limited. However, the fact that those with genetic disorders are not embraced everywhere restricts their right to life*", both views drawing attention to the importance of life and health in the decision-making process.

Another factor that the prospective teachers considered important in their decisions on socio-scientific issues in terms of the personal dimension was relationships with other people. Regarding the base stations, P25 emphasized that relationships with other people are connected with the right to communication, by saying, "*Communication is a human right, and guaranteed by the phrase 'Everyone has the freedom of communication' in Article 22 of the Turkish Constitution.*" Furthermore, concerning the subject of genetics, P40 pointed out the importance of socialization in terms of relationships with other people, indicating that "*The right to socialization and communication of sick people is indirectly limited because, when they encounter certain conditions, they will become more introverted and far from socializing.*" Another factor that prospective teachers considered important in terms of personal dimension in their decisions on genetics is the right to work. In this regard, for example, P2 said, "*No matter what, a person should not be kept away from social life. People have the freedom to work, too. No circumstance should be allowed to restrict the fundamental rights and freedoms of a person*

with a genetic disease”, and P16 said, *“First of all, this is a disease that prevents such individuals from entering the business life and socializing, but they want to join business life, but due to being ill, their individual right to work is somehow prevented”*.

Intellectual property right draws attention as a factor that prospective teachers considered important within the personal dimension while taking decisions on socio-scientific issues. P29 mentioned the importance of protecting intellectual property right as regards access to drugs, by saying, *“Even though proprietary rights, intellectual and industrial property rights are important for every industry, these rights are vital for the promotion of innovations in the pharmaceutical industry and for the introduction of original drugs to the market”*, stressing the importance of conservation of such rights.

Furthermore, P14 mentioned that *“Many underdeveloped or developing countries cannot access drugs due to the exorbitant prices resulting from intellectual property and patent rights of drugs. Apart from that, intellectual property rights even prevent the production of generic drugs. What is important here is the necessity of setting a balance between people’s right to health and the intellectual property right of an inventor, and while doing this, the indispensability of people’s right to health must not be ignored,”* highlighting the importance of intellectual property in drug production. On the other hand, P1 said, *“A patent right is an intellectual property right that provides the owner of the invention with a monopoly right to produce, sell and export for a limited period of time. Patent right is older than the right to access essential drugs, yet has still been an issue that stands out in the last quarter of the twentieth century, just like essential drugs”*, referring to the issue regarding the importance of patent right in intellectual property and its effect on drug production.

In this study, the prospective teachers were found to consider the factors of privacy and confidentiality of private life important in the personal dimension while taking decisions on socio-scientific issues. In this respect, P39 called attention to personal freedom in relation to genetics, by saying, *“People with genetic disorders are deprived of the freedom of expression since people with such disease have speech disorders and cannot express themselves clearly”*, representing an attitude that emphasizes personal freedom.

### **Social dimension**

It appeared that prospective social studies teachers evaluated their decision-making processes on socio-scientific issues by associating them with cultural effects, the right to benefit from public services, and equality in the social dimension.

The prospective teachers mentioned the importance of cultural influences with reference to the social dimension while deciding on whaling. As an example, P27 seemed to be of the opinion that whaling is a cultural tradition and that cultural traditions should be respected, saying that *“Even if we think they are doing wrong, people have their own beliefs”*. Similarly, P19 said, *“People’s right to freely use/exploit natural wealth, the right to develop and benefit from natural resources, is directly related to the cultural life and development of indigenous people as there are communities and countries that associate whaling with their culture.”*

While making decisions about genetics and access to drugs, the participants drew attention to the necessity of benefiting from public services within the context of the social dimension. P48 stated that *“Healthy people are not given the opportunity to live a comfortable life because poor countries allocate a large part of their budgets to drugs”*, and that the economic opportunities of the countries affect the opportunities offered to take advantage of public services. Furthermore, the prospective teachers mentioned the importance of equality in the social dimension when making decisions about base stations, genetics, and access to drugs.

Regarding the subject of genetics, P28 said, *“People with genetic disorders should not be discriminated against. There should be no discrimination in any aspect of life, not just in the field of work”*, an expression stressing the concerns about discrimination. P25 drew attention to the fact that disabled people should have equal rights in society with the following statement *“The main thing to do about the rights of people with disabilities is to ensure that the disabled people enjoy equal political, cultural, economic, and social rights without being exposed to discrimination”*, drawing attention to the fact that disabled people should have equal rights in society.

### **Environmental dimension**

The prospective social studies teachers in our study associated their decision-making processes on socio-scientific issues with environmental awareness within the context of the environmental dimension. They mentioned the need to be environmentally-friendly when it came to making decisions about base stations and whaling. As regards base stations, P42 stated that *“Necessary measures should be taken to protect the environment and not to endanger human health, and base stations should be arranged in conformity with human*

life”, implying that base stations should be established, but their damage to the environment should also be identified and prevented. P46, on the other hand, stated that “*Considering the damage caused by the base stations to the environment, we can see that the environmental rights are violated*”, laying stress on the installation of base stations violating the environmental rights.

Most of the prospective teachers mentioned the importance of environmental awareness within the context of environmental dimension when making decisions about whaling. In this respect, emphasizing the necessity of protection and sustainability of nature within the scope of environmental awareness, P25 said, “*Whaling must be stopped in order to maintain the balance of life for a more sustainable ecosystem, and to ensure that animals and people can continue their lives in a healthy way*”. Similarly, P23 said, “*Whaling results in the extinction of whales, depending on which the balance of nature is changing and the ecosystem is starting to deteriorate gradually. Deterioration of the ecosystem means the extinction of all humanity and all living things*”, drawing attention to the fact that animals will face the danger of extinction as a result of changing the balance of nature. In like manner, pointing out to the fact that the balance of nature and the survival of living things in nature are interrelated, P5 said, “*The extinction of animal species will damage the food chain in such a way that it will indirectly threaten human life and nature*”.

### CONCLUSION AND DISCUSSION

This study was carried out with the aim of evaluating the factors to impact on prospective social studies teachers’ decision-making processes regarding socio-scientific issues, four of which were discussed with the participants, whose decisions on the subject were then examined accordingly. The participants completed the necessary preparations within the scope of the particular socio-scientific issue and carried out their in-class discussions in line with these preparations. Following such activities, which were described as ‘implementation’ during the research, the prospective teachers’ decisions on the relevant socio-scientific issues were evaluated.

Research results indicated that social, personal, and environmental effects are of considerable importance in students’ decision-making processes when it comes to socio-scientific issues (Bell & Lederman, 2003; Fleming 1986; Pedretti, 1996; Zeidler & Schafer, 1984; Zeidler, Applebaum & Sadler, 2011). Some study findings in the literature reveal that ethical, moral, and social considerations are also determining factors in students’ decision-making processes regarding socio-scientific issues (Chang Rundgren & Rundgren 2010; Christenson, Rundgren & Höglund, 2012; Eriksson & Rundgren 2012; Eş & Öztürk, 2019; Sadler & Donnelly 2006; Zeidler & Keefer 2003; Topçu, 2008; Türköz & Öztürk, 2020; Rundgren, Eriksson & Rundgren, 2016). In another study, Topçu (2008) concluded that prospective science teachers were influenced by personal experiences, social thoughts, and ethical/moral considerations while thinking about socio-scientific issues and coming to a conclusion regarding a particular socio-scientific issue. In this respect, it can be assumed that a variety of dimensions and situations such as people’s life and experiences will be influential when deciding on socio-scientific issues. Türköz and Öztürk (2020) reported that prospective science teachers take different dimensions into consideration while deciding on socio-scientific issues and try to decide by thinking about the issue in a multidimensional and holistic way in terms of social, economic, ethical, moral and environmental aspects. Such results support the results of the present research. However, some other studies exist in the literature that do not support our research results (Christenson, Rundgren & Höglund, 2012). Christenson et al. (2012) reported that personal, ethical, and moral factors are lowly effective in students’ decision-making on socio-scientific issues. Although individuals’ thinking and decision-making strategies on socio-scientific issues are affected by different contexts and subjects (Crne-Hladnik et al., 2009; Sadler, 2009), it is believed that media tools have the power to change attitudes and traditions (Buluş Kırıkkaya, Bozkurt & İşeri 2013), and that individuals are apt to assimilate the information they have obtained from media tools and easily adapt the information they have learned to their daily lives (İlkörücü Göçmençelebi, 2007). The results of this study can be interpreted in a similar way.

Within the framework of the personal dimension, the prospective social studies teachers in this study seem to associate their decision-making processes on socio-scientific issues with the importance of health and life, relationships with other people, the right to work, property, and privacy. The examination of the socio-scientific issues-related decision-making processes of the prospective teachers, who constitute the sample group of the research revealed that the most important reason for such decisions was ‘health’. The literature shows that there are other studies conducted with prospective teachers on different socio-scientific issues, especially on the GMO foods and nuclear energy, in a way to support the findings of the current research (Eş, Işık Mercan & Ayas, 2016; Sönmez & Kılınç, 2012; Eş & Öztürk, 2019; Türköz & Öztürk, 2020). These results look similar to the results of other studies conducted with different groups (Bilen & Özel, 2012; Keçeci, Kırılmazkaya & Kırbağ Zengin, 2011, Öztürk, Eş & Turgut, 2017). Eş, Işık Mercan and Ayas (2016) concluded that the prospective teachers who had a negative attitude to the establishment of a nuclear power plant with regard to the relevant socio-scientific issue based their reason on the health dimension. Öztürk and Eş (2017), on the other hand,

reported that the reason for prospective teachers having a negative attitude towards the GMO crops was their concern about health. In this study, the prospective social studies teachers were found to associate their decision-making processes on socio-scientific issues with the concepts related to cultural effects, benefiting from public services, and equality under the social dimension. Other studies can be found with results similar to those of this study. Many studies conducted on the effect of ethics on decision-making regarding socio-scientific issues have reported that moral and ethical factors are important for individuals ranging from primary school students to university professors. For example, Sadler and Zeidler (2004) found in their research with university students that the subject of genetic engineering was considered as a moral subject by the students. Similarly, Fleming (1986) conducted a study on genetics with high school students and reported that students turned out to be using the moral dimension while making decisions. Result of the research conducted by Bell and Lederman (2003) with university professors revealed that moral perspective was influential in the decision-making process on socio-scientific issues. Likewise, in a study conducted with university students, Sadler (2004) found out that moral and ethical awareness was influential in the decision-making process about genetic engineering.

In the literature, social emphasis and religious reasons on certain matters related to socio-scientific issues (such as surrogacy, abortion, etc.) are frequently encountered as a dimension that individuals focus on, try to explain, and make sense of (Öztürk & Eş, 2017). In another study, Öztürk and Eş (2017) stated that the reasons of prospective teachers who showed a negative attitude to surrogacy were focused on *religious* and *humanistic* dimensions. In this study, however, the prospective teachers did not make any mention of the religious dimension, which stands out as one of the remarkable results of the research.

It was also apparent in the literature review that prospective social studies teachers associated their decision-making processes on socio-scientific issues with environmental awareness. As an example, Zeidler and Schafer (1984) highlighted that moral perspective was important in university students' decision-making on socio-scientific issues including the environment. Similarly, Doğanay and Öztürk (2017) reported that socio-scientific issues constituted an effective context in the decision-making process on environmental issues. In the literature, studies conducted on socio-scientific issues related to the environment are mainly those focusing on nuclear power plants, hydroelectric power plants, global warming, thermal power plants, genetically modified organisms, and climate change (Akyüz, 2015; Chang-Rundgren & Rundgren, 2010; Evren-Yapicioglu, 2018; Öztürk & Türkoğlu, 2018; Sadler, 2004). From this standpoint, it can be asserted that the participant views on issues related to whaling can create an effective context within socio-scientific issues. Similar to the findings of those studies, Öztürk and Türkoğlu (2018) stated that prospective teachers who presented a negative attitude towards the socio-scientific issue of HEPPs justified their viewpoints by emphasizing *environmental destruction* as a reason. Such results are directly related to the environmental rights (Akyüz, 2015). Such socio-scientific issues have gained importance when considered not only in terms of environmental issues, but also in terms of social, political, and economic aspects as well as human rights (Sadler & Zeidler, 2005).

## RECOMMENDATIONS

As a result of this study conducted with the final year students of Social Studies Teaching, students developed an understanding of the applicability of socio-scientific issues in the classroom. During the implementation process of the research, the students took advantage of the opportunity to discuss a socio-scientific issue from different standpoints and to come to realize varying perspectives on the subject. In order to evaluate the specific factors that inevitably influence the decision-making processes regarding in socio-scientific issues, further studies can be conducted with different student groups in different courses in order to evaluate the factors affecting the decision-making processes in socio-scientific issues.

Another fact supported by the available results is that the study contributed to the development of students' ability to ponder socio-scientific issues at the local, regional, and long-term global level, as well as making decisions about the issues they may encounter in their lives. Indeed, it is important for students to be exposed to different views, and listen and interpret different perspectives, thus they will be given a chance to develop their knowledge on many subjects and to use the decision-making process effectively.

Considering the results of this study, it is hoped that the importance of socio-scientific issues in the social studies education program will be well understood. The use of socio-scientific issues in educational settings requires teachers and prospective teachers to have sufficient knowledge of socio-scientific issues as the implementers of the curricula. To achieve this, it is necessary to attach importance to the adequate and correct comprehension of socio-scientific issues by prospective teachers and to eliminate existing drawbacks. This can also be achieved by incorporating courses containing socio-scientific issues into teacher training programs as well as by reinforcing these subjects with different teaching methods and techniques, thereby educating teachers with sufficient knowledge about these subjects. During the implementation, it was observed that the activities on socio-scientific

issues turned out to have a significant impact on many aspects such as prospective teachers' knowledge about socio-scientific issues, their decision-making, and their ability to come up with solutions to daily life problems concerning the society. In this respect, the use of socio-scientific issues for teaching purposes in the classrooms not only during the undergraduate education of prospective teachers but also when they become teachers, will give them the chance to develop their knowledge on many subjects and to use the decision-making process effectively.

Educators and researchers from different fields and disciplines other than social studies education may consider using the processes included in this study in their activities and studies. As an example, teachers/educators from different disciplines can jointly design the teaching methods for socio-scientific issues and evaluate students' decision-making processes on socio-scientific issues.

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## Examination of the Opinions of Turkish Teacher Candidates on Listening Education Course Conducted through Emergency Distance Education

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### ABSTRACT

Due to the Covid-19 pandemic, face-to-face education practices at all levels of formal education institutions in Turkey were suspended for precautionary purposes, and distance education was started urgently. Many studies have been conducted on this form of education, which has been implemented for a long time and will be replaced by face-to-face education in the 2021-2022 academic year. Among these, there are also those who examined the effectiveness of courses through emergency distance education in listening education during the pandemic period, very few studies could be identified that focused on examining the views or attitudes of teacher candidates in the field of language education towards the development and education of listening skill. Based on the idea that the process should also be addressed from the perspectives of the teacher candidates, this research examines the views of them on the "listening education" course in the Turkish Teaching Undergraduate Curriculum and conducted with EDE. For this purpose, a focus group interview was conducted through a semi-structured form with 17 teacher candidates who were studying at Mersin University Faculty of Education Turkish Teaching Undergraduate Curriculum in the 2020-2021 academic year and selected by criterion sampling method. When the interview data were analyzed, it was determined that the sessions were watched by most of the teacher candidates because they were seen as important, participation in the sessions was mainly hindered by problems with the Internet connection, although not as much as face-to-face sessions, they were seen beneficial in some degree, recordings to be seen beneficial were watched infrequently and to make up for missed synchronous sessions, teacher candidates were of the opinion that more emphasis should be placed on practices. Some suggestions were presented to curriculum developers, distance education platform designers and course instructors at the end of the study.

**Keywords:** Listening education, Covid-19 pandemic, Emergency distance education, Turkish teacher candidate, Turkish education.

### INTRODUCTION

In December 2019, a disease caused by the SAR-COV-2 virus (COVID-19) emerged in Wuhan, China, and this disease spread rapidly around the world. Due to this disease, which has become a pandemic, countries have had to take a series of measures based on social isolation, and education has had its share. In Turkey, where the first COVID-19 case was recorded on March 11, 2020 (Ministry of Health, 2020), it was decided to temporarily close schools after 5 days, distance education (DE) has been urgently adopted at all levels of education (Council of Higher Education, 2020; Ministry of Education, 2020).

The concept of DE can be defined as follows, based on UNESCO's (2020) statements that reveal the common features of different forms of distance learning: It is the use of media and technology to enable communication and interaction despite this separation in the event that the teacher and the student experience a time and/or space separation during the teaching process. This process can be carried out through printed learning materials, one-way and massive broadcasts (TV and radio programs), social media or learning platforms. This form of education provides people with lifelong learning opportunities and meets the individual and social needs of education (Kaya, 2002). The learner's success in DE depends on having a high level of self-directed learning and study skills supported by new teaching, learning and guidance strategies (UNESCO, 2020). This means new responsibilities that the learner has to take.

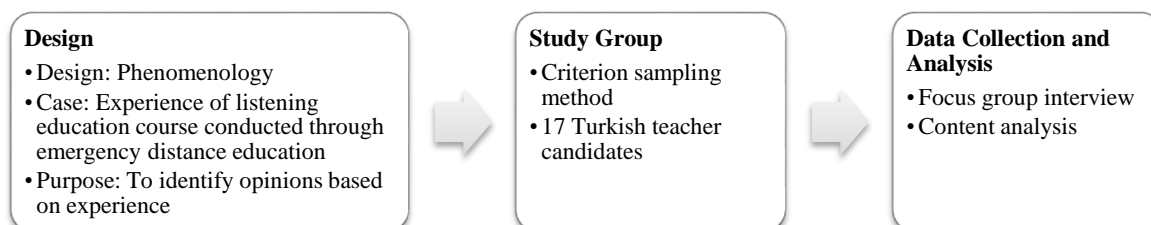
Bozkurt (2020) underlines that the concepts of *emergency distance education* (EDE) and *DE* should be seen separately. According to him, while EDE is the production of temporary solutions for emerging needs in order to keep education alive in times of crisis, DE is to benefit from the option of continuing education with planned and systematic studies by employing theoretical and practical knowledge towards a specific purpose within the scope of lifelong learning. Accordingly, it can be said that the form of education that has been transitioned due to pandemic measures in Turkey is EDE. Therefore, it would be correct to make evaluations about this form of education within the scope of EDE, not DE. In other words, the advantages and disadvantages experienced should be attributed to EDE instead of the other one. The findings and results obtained in this paper are evaluated within this education type.

Many researches have been carried out on this form of education, which lasts longer than expected and was stated by the official authorities (Council of Higher Education, 2021; Ministry of Education, 2021) that it will end in the 2021-2022 academic year by leaving its place to face-to-face education in Turkey. Among these, there are those who examine the courses conducted through EDE in terms of the effectiveness of listening education. However, during the pandemic period, very few studies could be identified that focused on examining the views or attitudes of teacher candidates in the field of language education towards the development and education of listening skill as a result of a search in databases [Elton B. Stephens Company Open Dissertations, ProQuest Dissertations & Theses (PQDT), Higher Education Council Thesis Center, TR Index, DergiPark Academic, Education Resources Information Center (ERIC), Taylor & Francis, Science Direct-Elsevier] with the keywords ‘Listening, Pandemic, COVID-19, Coronavirus’. Although not directly, there are a few studies that examined this issue. Derakhshan (2021) examined the opinions of the participants consisted of 130 Teaching English as a Foreign Language (TEFL) students (teacher candidates) and 40 English Language and Literature students, regarding the role of EDE in acquiring language skills. They stated that they had difficulty in understanding the audio files shared by their teachers due to poor internet connection and low sound quality. Many students saw listening skill as the most positively affected skill (35%). According to the researcher, this may be due to the nature of online sessions, where students were mostly just listeners. In addition, with the absence of visual connections, students needed to listen more carefully, and thus their listening skills could be developed unconsciously (Derakhshan, 2021). Karakus et al. (2020), in their study examining the views of Turkish teacher candidates on DE during the COVID-19 pandemic process, it was determined that the participants thought that the DE contributed the most to the listening skill and the least to the writing skill. Öztürk Karataş and Tuncer (2020) who examined the effect of EDE on the development of English as a foreign language (EFL) teacher candidates' language skills, participants thought that the features of the platform were most beneficial for their listening skills. They stated that technical problems [internet connection problem, not having a computer, sound problems, problems arising from the inadequacy of the platform (loading, speed, etc.), poor quality of the recordings] most negatively affect the development of their listening skills. Internet connection issues are the most important technical issue among others. According to the participants, with the use of EDE platforms, they could access the recordings and materials of the sessions whenever and wherever they want. This often provided an advantage in listening skill (22%) but did not provide any advantage in speaking. Yamamoto (2021), on the other hand, interviewed 3 Japanese English teacher candidates in his thesis titled “Analyzing the Self-Reported Experiences of Japanese English as a Foreign Language Pre-service Teachers with Listening Comprehension Skills”, and based on the opinions gathered, he concluded that teacher education focuses on improving the language skills of teacher candidates rather than information on listening education. He (2021) also highlighted the fewness of research that deals with listening pedagogy from teacher candidates' perspectives. Based on the current deficiency in the literature, the aim of this research is to examine the opinions of Turkish teacher candidates about the listening education course they took through EDE during the COVID-19 pandemic period. In line with the stated purpose, answers are sought for the following questions:

1. What do teacher candidates think about synchronized listening education sessions?
2. What do teacher candidates think about recordings of listening education sessions?
3. What are the views of teacher candidates about their listening/watching skill before the course?
4. What are the opinions of the teacher candidates regarding whether they see themselves competent in gaining their students listening/watching skill after the course?
5. What are the opinions of the teacher candidates on the processes of the listening education course sessions?

## METHODS

In this study, phenomenology, one of the qualitative research designs, was preferred. A summary of the research process is presented in Figure 1:



**Figure 1.** Summary of the research process

## Research Design

Phenomenology research is an inductive and descriptive research type that focuses on the human phenomenon and aims to define the meanings of the expression of lived experiences (Saban & Ersoy, 2016). In this design, the researcher carries on studies to reveal the experiences of individuals regarding a concept or phenomenon (Creswell,

2007). It is aimed to determine the opinions of Turkish teacher candidates based on their experiences in the ‘listening education’ course they attend through EDE in this research. Thus, it is thought that the positive situations or problems experienced in the process and the solution proposals for the said problems can be put forward.

### Study Group

The study group of the research was formed by the criterion sampling method, which is one of the purposive sampling methods. Criterion sampling is based on the understanding of studying all situations that meet a set of criteria created by the researcher or previously established (Yıldırım & Şimşek, 2013).

The criterion in determining the participants of the research was defined as Turkish teacher candidates who had attended the ‘listening education’ course through EDE due to the Covid-19 pandemic and volunteered to participate in the research. In the determination of the participants, attention was paid to ensure that the gender distribution of the teacher candidates was as equal as possible in order to ensure the highest level of diversity. Demographic characteristics of the study group are given in Table 1:

**Table 1.** Demographic characteristics of the study group

Code	Gender
G	Female
H <sub>1</sub>	Female
T	Male
Y	Female
M <sub>1</sub>	Male
F	Male
C	Female
M <sub>2</sub>	Male
O	Male
K <sub>1</sub>	Female
A	Male
M <sub>3</sub>	Male
M <sub>4</sub>	Male
H <sub>2</sub>	Female
E	Female
K <sub>2</sub>	Female
S	Female

Looking at Table 1, it is seen that 9 of the teacher candidates participating in the study were female and 8 were male. Therefore, it can be stated that the participants show a close distribution in terms of gender.

In order to increase diversity, efforts were made to ensure that the course success grades of the participants were varied, but this diversity was not at the expected level since participation in the research was based on volunteerism. The course success grades of the participants are as follows (First the code letter of the participants, then the course success score and the letter grade in parentheses are given): G, 95 (AA); H<sub>1</sub>, 83 (BA); T, 92 (AA); Y, 89 (BA); M<sub>1</sub>, 77 (BB); F, 80 (BA); C, 95 (AA); M<sub>2</sub>, 77 (BB); O, 70 (BB); K<sub>1</sub>, 83 (BA); A, 95 (AA); M<sub>3</sub>, 68 (CB); M<sub>4</sub>, 68 (CB); H<sub>2</sub>, 71 (BB); E, 86 (BA); K<sub>2</sub>, 77 (BB); S, 92 (AA). As can be seen, the letter grades of 4 participants are AA, 5 participants’ each are BA and BB, and 2 participants’ are CB.

### Data Collection

As stated by Yıldırım and Şimşek (2013), research data were collected through focus group interviews, which have an important function in collecting qualitative data, when the researcher thought that the data to be collected would be more. This process is described in detail below:

In order to collect the data, semi-structured interview questions were first prepared by the researcher. After scanning the resources related to listening education, EDE and DE, the opinions of two lecturers working in the field of ‘Turkish education’ were taken to ensure that the questions prepared were clear and understandable in terms of language and expression. The opinions of a faculty member working in the field of Computer and Instructional Technologies were taken for the appropriateness of the statements about the EDE and DE processes. In order to test the purpose of the form, a pilot interview was conducted with a Turkish teacher candidate who was not among the participants of the research. After these processes, the interview questions were given their final form as seen below:

1. How often did you attend the synchronous listening education sessions? Why?
2. For what reason/reasons did you attend the synchronous listening education sessions?
3. For what reason/reasons did you not attend the synchronous listening education sessions?
4. What do you think about whether the synchronous listening education sessions contributed to you?
5. How often did you watch the recordings of sessions? Why?
6. For what reason/reasons did you watch the recordings?
7. For what reason/reasons did you not watch the recordings?
8. What do you think about whether the recordings are helpful to you?
9. What do you think about the competence of your own listening/watching skill before the listening education course?
10. Do you consider yourself competent in helping your students acquiring listening/watching skill after the course? Why?
11. If you were the instructor of this course, how would you conduct the sessions through distance education?

Phone calls were made with the students who took the course to determine the participants and they were informed about the study. A WhatsApp group was established by the researcher in order to communicate easily with the participants who decided to participate in the research voluntarily. It was stated to the participants that due to the Covid-19 pandemic, the interview would be held remotely, not face-to-face. With their preference, it was decided to hold the interview via Zoom. After this stage, the researcher took into account that the interviews might take a long time and therefore the motivation of the participants might decrease and divided them into two groups. The first group consists of the first ten participants (5 males, 5 females) in Table 1, and the second group consists of the remaining 7 participants (3 males, 4 females). The researcher planned two separate sessions on Zoom according to the time interval that each group member was available, and sent the participation link to the teacher candidates via the WhatsApp group 5 minutes before the interviews. Each interview held on 28 and 29 January 2021, lasted approximately 110-120 minutes, and this process was recorded with the permission of the participants. The interviews started after each teacher candidate participated, the researcher first prepared them for the interview mentally, and then directed the interview questions to them in the above order.

### Analysis of Data

Content analysis technique was used to analyze the data collected through focus group interviews. According to this technique, similar data are brought together around certain concepts and themes and presented in a way that the reader can understand (Yıldırım & Şimşek, 2013). In this context, the conversations recorded in the interviews were first converted into a written document by the researcher. Later, with the help of this document, the answers of the participants were examined and a code list was created, and general themes and sub-themes were determined by gathering similar codes under the same structure. At this stage, the opinion of an academicians who is an expert in the field of Turkish Education was taken. Again, in order to ensure validity, the opinions of the participants were conveyed in the form of direct quotations in some places. Therefore, seeking expert opinions and quoting directly from the participants (Sutton & Austion, 2015), two of the commonly used methods for establishing validity in qualitative research, were taken into consideration in this study. The analysis of the data was carried out independently by two researchers for the reliability of the research and the views of the coders were calculated using the reliability formula of Miles and Huberman (1994). The reliability coefficient between encoders was determined to be 92.5%, based on 248 consensuses and 20 disagreements. According to the measurement reliability formula, the high percentage of agreement between encoders indicates that the measurement reliability is also high (Yıldırım & Şimşek, 2013). Based on this information, it can be stated that the coding made in the research is reliable according to the percentage of agreement between the coders (Miles & Huberman, 1994).

### FINDINGS

The findings of the research are presented in 5 categories (categories) and 10 related themes based on the research questions. While addressing the findings, direct quotations are included regarding the opinions of the participants whose real names and surnames are not included, instead a separate code name to represent each of them is determined.

#### Opinions on Synchronous Listening Education Sessions

The findings in this category are presented in the context of synchronous listening education sessions. Below are the themes and sub-themes that were revealed in line with the statements of the teacher candidates about the frequency of their attendance to sessions:

**Table 2.** Frequency of Teacher Candidates' Attendance to Synchronous Listening Education Sessions

Theme	Sub-themes	f
Frequency of Attendance to Synchronous Sessions	I usually attended.	1
	I attended sessions in the first weeks.	3
	I attended the first three weeks.	1
	I attended most of them.	2
	I attended several times.	3
	I attended half of it (7 weeks).	1
	I've been to all of them until the last few weeks.	1
	I attended 9-10 weeks.	3
	I attended 3 sessions.	1
	I attended all of them.	1

According to the table, it is seen that the statements of the teacher candidates about the frequency of attendance to synchronous listening education sessions are gathered under 10 sub-themes. Based on the statements, it can be said that the number of teacher candidates attending synchronous sessions for a few weeks or 9-10 weeks is higher. These are followed by the number of attendees in most of the synchronous sessions. As can be seen, most of the teacher candidates attended either a little or most of the synchronous sessions. While there is a teacher candidate who attended all of the synchronous sessions, there is no teacher candidate who did not attend any of them.

In the table below, the themes and sub-themes revealed in line with the statements of the teacher candidates regarding the reasons for their participation in the synchronous listening education sessions are given:

**Table 3.** Opinions of Teacher Candidates on the Reasons for Attending the Synchronous Listening Education Sessions

Theme	Sub-themes	f
Reasons for Attending Synchronous Sessions	Being a representative of students	1
	Considering the course important	5
	Liking the lecturer's expression	2
	Thinking that the course will be productive	2

When Table 3 is examined, it is seen that the opinions of the teacher candidates about the reasons for attending synchronous listening education sessions are gathered under 4 sub-themes. Since the course were considered important in the presented views, it is understood that attending the synchronous sessions was ensured. One of the participants, Y revealed this situation with the following statements:

*One of the biggest reasons I wanted to attend the sessions was that it was a field course and it was related to one of the four basic language skills. Since I care about these points, I tried to attend the sessions as much as I could.*

It is seen that another sub-theme emerging in Table 3 is related to the situation of liking the lecturer's expression. In their views on this sub-theme, the participants stated that they attended the synchronous sessions because they liked the lecturer's expression or found it successful. The view of the participant with the code name M1 on this situation is as follows: 'But in this process, I took care to attend the sessions more. This is because I liked the way the teacher explained the course contents.' In addition, the participant with the code name T said, 'I attended because I thought the sessions would be productive. The teacher's presentations and lectures were very successful. That's why I joined.' expressing his opinion that both the lecturer's expression was successful and he expressed his belief that the course would be productive. The other participant G, who thought that the course would be productive, said: '...I realized that I could learn a lot in this course. That's why I attended many sessions.' One participant stated that he attended synchronous sessions because he was a representative of students, but that this was not the only factor, he tried to attend in all his courses: 'I attended all of the synchronous courses because I was the class representative of the course. I was posting a link to the WhatsApp group. Besides, I was trying to attend all my other courses synchronously.'

In Table 4, the themes and sub-themes revealed in line with the statements of the teacher candidates regarding the reasons why they could not attend the synchronous listening education sessions are given:

**Table 4.** Opinions of Teacher Candidates on the Reasons for Not Attending the Synchronous Listening Education Sessions

Theme	Sub-themes	f
Reasons for Not Attending Synchronous Sessions	Lack of device	2
	Anyway, the recordings of the sessions was loading, the thought	1
	Considering that they were not useful	1
	Death of relatives	1
	Being preparing for the Public Personnel Selection Exam (KPSS)	1
	Lack of internet quota	1
	Problems with internet connection	10
	Family situations	1
	Health problems	2
	Being busy with other things during course hours	3
	Working in a job	3
	Falling asleep	4

Looking at the table, it is understood that 12 sub-themes are formed according to the answers given by teacher candidates. When the data are examined, it is seen that the problems experienced in the Internet connection were mostly mentioned in the opinions about not being able to attend the synchronous sessions. In relation to this situation, it has been expressed that there were infrastructure problems in the place in where they were living (city, village, neighborhood, etc.) or network failures were existed. T, one of the participants, said, ‘There were infrastructure problems here on rainy and stormy days. Because of this, I could not attend some sessions.’

Another view most expressed by the participant teacher candidates is that they could not attend the synchronous sessions because they started in the morning and they could not wake up. The K2 said the following:

*I have two brothers who go to secondary school. One of them is going to high school. Our sessions overlapped. Since I had a chance to watch the sessions later, I was giving my computer to one, the phone to the other. At night, I was watching the recordings. Even when I watched the recordings at night, I couldn't sleep and woke up early in the morning. I was able to attend my sessions when my siblings did not have an important session.*

As can be seen, a teacher candidate who has a large number of siblings but has a shortage of devices to follow the course preferred to watch the recordings during the night instead of attending the synchronous sessions during the day, and stated that she could not wake up for the sessions in the morning even if she wanted to, because she went to bed late at night.

In the other two sub-themes of the views on not being able to attend synchronous sessions, it is understood that the teacher candidates were busy with other endeavors (moving house, traveling, etc.) or working in a job (waiting, working in plantation, etc.) during session hours. These are the most reported reasons for not waking up. The participant with the code name F said the following regarding this: ‘I also attended most of the sessions. I couldn't attend for 4-5 weeks. I was also working in our plantation. That's why I couldn't attend.’

Another reason put forward by the participants is that they could not attend the synchronous sessions due to lack of devices or health problems. A teacher candidate, codenamed H2, said, ‘Because there was only one computer, I had a hard time logging in with my own phone because my phone was a bit old. I did all my assignments last semester with this phone. Then the phone started to fail. That's why we couldn't all attend the sessions at the same time.’, and a participant with the code name S said, ‘We were suffering from some health problems as a family.’ sentences reveal the situation in question. In addition to these, the fact that the recordings of synchronous sessions were uploaded to Mersin University Distance Education Platform, the thought that such sessions were not useful, the loss of motivation caused by the deaths due to the COVID-19 pandemic, the insufficiency of the Internet quota, family situations and being prepared for Public Personnel Selection Exam (KPSS) are among the opinions presented by each participant. The following words of the participant with the code name M1 regarding being prepared for KPSS are remarkable: ‘I was also attending the sessions at the beginning, but I did not attend the later sessions because I was studying for KPSS.’

Considering the opinions about participation in synchronous sessions, it is understood that most of the teacher candidates had attended either a little or most of the simultaneous sessions because they consider them important, and could not attend the sessions mainly because they had problems with Internet connection.

The themes and sub-themes revealed in line with the teacher candidates' statements about whether the synchronous listening education sessions contributed to them are presented in the table below:

**Table 5. Opinions of Teacher Candidates on Whether Synchronous Sessions Contributed to them**

Theme	Sub-themes	f
Whether Synchronous Sessions Contributed to them	Although it was not as efficient as face-to-face education, they contributed to me.	12
	They contributed to me little.	2
	They contributed to me more than face-to-face sessions.	2
	They contributed to me a lot.	1

According to the table, it is seen that the opinions of the teacher candidates about whether the synchronous sessions contributed to them or not are gathered under 4 sub-themes. When the sub-themes are examined, it is understood that all of them are in the direction of the synchronous sessions that contributed to the teacher candidates, but there are differences between their levels. The number of teacher candidates who thought that the sessions done via aforementioned method were not as efficient as face-to-face sessions, but contributed to them, is the highest. They are followed by those who thought that such sessions directly contributed to them. There are those who found the contribution level low, albeit in small numbers. Two teacher candidates thought that synchronous listening education sessions were more productive than those done within the scope of face-to-face education.

A teacher candidate named O, who thought that the synchronous sessions contributed to them even if they were not as efficient as face-to-face sessions, and emphasized that he was working in a job during the session periods, expressed the following:

*If I remember correctly, I was able to attend two synchronous sessions. Considering them, I did not receive as much contribution as face-to-face sessions. If there were face-to-face education, even if we were working in a job, we could document the sessions' hours and attend them without going to work at that time, but in distance education, you cannot tell the sessions' hours to the employer and this time you cannot attend the sessions due to work.*

K1 who thinks that the synchronous sessions were effective, although not as much as face-to-face sessions:

*Among the courses I attended, the one I learned the most was listening education. Although not face-to-face, simultaneous sessions also contributed to me. The lecturer didn't just give lectures depending on the slides, this was a positive situation for me.*

Expressed her satisfaction with the fact that the lecturer did not depend on the slides while lecturing.

A teacher candidate named M2, on the other hand, expressed the opposite opinion from the above and stated that the sessions done through EDE rather than face-to-face are more productive for him, since they solve his sleep problem:

*If there had been face-to-face sessions, maybe I could have slept, I might not have gone to school, but thanks to distance education, I attended the sessions even though it was morning. From this point of view, distance education has been more productive for me than face-to-face education. If I was at school, I would either not come to class or I could sleep.*

Expressing his opinion in this direction, M1 also used the following expressions:

*I embrace distance education more because I finished high school openly. I prepared for YKS. (The Higher Education Institutions Examination) remotely by watching video sessions. I feel more comfortable at home. I feel more comfortable than when I was at school.*

T, one of the participants who thought that synchronous sessions contributed little, made a comparison with the DE platform of another university and argued that the platform of his own university was insufficient:

*The current platform is not yet at the level to make our learning qualified. There are many things that need to be fixed. I attended the certificate program of another university through distance education and got a certificate. I can say that the distance education model I saw there is very good in this regard. Compared to it, our platform was insufficient. For this reason, I think that all the sessions I attended synchronously contributed little to me. I got an idea, but clearly "I'm good at this, I've improved myself." I can't say.*

The participant codenamed Y, on the other hand, expressed the opinion that synchronous sessions were not as productive as face-to-face ones because her eyes were tired in front of the screen by saying 'Since it is not face-

to-face, I cannot say that the listening education course was as efficient as the other courses, because my eyes hurt a lot because I was in front of the screen and I could not focus on the sessions.’.

A teacher candidate, codenamed M4, stated that, without comparing with face-to-face education, the synchronous sessions contributed a lot to him:

*Of course it was too much. We have processed some of the content related to listening education in another course before. With this course, we have strengthened it even more. How healthy listening is realized, its biological dimension... It has contributed a lot in these points. For me it was an improving and good course. I've reaped a lot of benefits of it.*

If the suggested views are summed up, it is seen that all of the teacher candidates thought that the synchronous and distance listening education sessions contributed more or less to them. Among these, the majority of those who thought that the synchronous sessions contributed to them, although not as much as the face-to-face sessions. Some of the instructors' teaching by sticking to the slides, difficulty of obtaining permission to attend the sessions, which can be obtained in the face-to-face education process, in the EDE process and for this reason, not running efficiently the synchronous sessions attended even if it is difficult at work, inability to get as much efficiency as face-to-face education in practical sessions were among the limitations emphasized by the teacher candidates in this group. It was also encountered with teacher candidates who claimed that synchronous sessions contributed little to them, on the grounds that the insufficiency of the platform or the fact that watching the sessions in front of the screen caused pain in their eyes. One of the participants expressed the opinion that synchronous sessions conducted remotely are more efficient than face-to-face sessions, with the thought that it eliminates the loss of motivation due to coming to school after waking up early in the morning and making preparations. Another participant expressed the similar opinion because he felt more comfortable at home, based on the habit of watching video sessions remotely from the high school preparatory period. A teacher candidate expressed the opinion that synchronous sessions contributed a lot to him, without comparing it with face-to-face sessions. However, when the investigation was made, it was determined that this participant mainly evaluated the theoretical course contents and expressed his opinion and stated that he attended the synchronous sessions only a few times. Therefore, it is seen that teacher candidates who had participated more in synchronous sessions made a comparison with face-to-face ones and expressed their opinions, while a participant who did not make this comparison attended synchronous sessions several times.

### Opinions on Listening Education Course Recordings

The findings in the category are presented in the context of the recordings of the synchronous listening education sessions. The themes and sub-themes revealed by the teacher candidates' statements about how often they watched the recordings are given below:

**Table 6.** Frequency of Watching the Recordings of the Teacher Candidates

Theme	Sub-themes	f
Frequency of Watching the Recordings	I watched all the recordings.	2
	I didn't watch any of the recordings.	2
	I watched it once.	1
	I watched the recordings of a few sessions in the first weeks.	1
	I rarely watched.	5
	I watched the recordings of 3-4 sessions.	2
	I watched the recordings of 5-6 sessions.	1
	I watched half of the total course recordings (7 weeks).	1
	I watched most of the recordings.	2

According to the table, it is seen that the opinions of the teacher candidates about the frequency of watching the recordings are gathered under 9 sub-themes. Based on the opinions presented, it can be stated that the number of teacher candidates who rarely watched the recordings is higher. This is followed by those who watched all, most or 3-4 of the total course recordings and those who did not watch any of them. The number of teacher candidates who followed 5-6 or 7 sessions' recordings is one. As can be seen, the number of participants who did not watch any of the recordings is very few, and it can be said that most of the participants watched at least one recording. Themes and sub-themes revealed in line with the statements of the teacher candidates regarding the reasons for watching the listening education course recordings are given below:

**Table 7.** Teacher Candidates' Opinions on the Reasons for Watching the Recordings

Theme	Sub-themes	f
Reasons for Watching the Recordings	To make up for the sessions that could not be attended synchronously	13
	To make up for missed points in synchronous sessions	4
	To make up for points not understood in synchronous sessions	2
	To evaluate my presentation	1

When Table 7 is examined, it is seen that the opinions of the teacher candidates about the reasons for watching the recordings are gathered under 4 sub-themes. In the presented opinions, it is understood that the recordings are followed mainly to make up for the sessions that cannot be attended synchronously. One of the participants, C, revealed this situation with the following statements: 'I watched all the recordings because I could not attend the synchronous sessions.'

It is seen that another sub-theme emerging in Table 7 is related to making up for the parts missed in synchronous sessions. The participant, codenamed S, stated with the following sentences that she watched the recordings in order to make up for the synchronous sessions she could not attend and the points she missed in the synchronous sessions. She also underlined that the ability to watch, pause or fast forward the recording at any time is a convenience that is not available in synchronous sessions. In this direction, K2 said, "The sessions in the form of recordings were more beneficial for me. I could stop and continue whenever I wanted, I could take a break." she said.

Expressing that she watched the recordings in order to understand the points that she could not understand in the synchronous sessions, G said the following sentences: 'I watched the recordings again to strengthen understanding on subjects that were difficult to understand.' On this subject, another participant, codenamed M1, said: 'I also did not fully understand the midterm exam, I watched the recording of the relevant week in order to understand it better.'

It has been determined that a teacher candidate (M1) watched a recording in order to evaluate his lecture in a session: '... Apart from that, there was a session where I spoke and made a presentation. I watched the replay of it. To see my speech disorders, to look critically at myself.'

According to the opinions expressed, it is understood that the listening education course recordings are mainly followed to make up for synchronous sessions that cannot be attended. It is seen that the number of teacher candidates who watched the recordings in order to make up for the missed or incomprehensible session parts despite being attended synchronously is much less. It is also emphasized that they had the flexibility to watch, pause or rewind course recordings at any time.

In Table 8, the themes and sub-themes revealed in line with the statements of the teacher candidates regarding the reasons for not watching the listening education course recordings are given:

**Table 8.** Opinions of Teacher Candidates on the Reasons for Not Watching the Recordings

Theme	Sub-themes	f
Reasons for Not Watching the Course Recordings	Seeing participation in the synchronous sessions as sufficient	9
	Internet connection problem	3
	Feeling tired after returning from work	2
	Insufficient internet quota	1

Looking at the table, it is seen that there are 4 sub-themes according to the answers given by the teacher candidates. When the data is examined, it is understood that the opinions about not following the recordings are mainly mentioned about the fact that it was sufficient to attend the synchronous sessions. One of the participants, H1 expressed this situation with the following sentences:

*This is not just a case of listening education course. I don't want to watch it again in other courses. It makes me feel better to listen to the lecture in session and take the necessary notes. To be honest, watching the recording of that session afterward makes me very bored.*

The view of the teacher candidate named E is in this direction: 'I did not watch the recordings of the synchronous sessions I attended because I was taking notes while I was following those sessions. That's why the contents of the

session were a little more permanent.'

Another view most frequently expressed by the participants is that they refer to the difficulties they experienced with the Internet connection. Regarding this, participant codenamed K1 said, '...at first, I was listening when I missed a session, but unfortunately I could not watch the recordings at all because I was in the village and there was no internet connection.' and S said, '... I had trouble due to power cuts. I was waiting for the power to come. When the electricity came on, I continued to watch the recording from where I left off.'

It is also understood that there are participants who could not watch the recordings because they were working in a job and returned from work tired. The participant codenamed M2 said: 'My own laziness actually. I could watch the recordings when I came home from work, but because I felt tired, I came home and went to bed early, I couldn't watch them.'

Finally, there was a participant (M4) who could not watch the recordings due to insufficient internet quota:

*I started watching the recordings when I got the Internet at home. Because my mobile phone's Internet quota was low. Considering the videos of other courses, my quota was insufficient. That's why I tried to follow it superficially at that time. So I can say that I have a problem in terms of quota. After the home internet connection was taken, I overcame these problems and started to watch the recordings more regularly.*

According to the statements of the teacher candidates about the reasons for not watching the recordings, the opinion that it was sufficient to have already attended the synchronous sessions is predominant. Problems experienced in internet connection, feeling tired when coming home due to working at a job, and insufficiency of internet quota are among the opinions that have been identified, albeit at a low level, among the reasons for not being able to watch the recordings.

The themes and sub-themes revealed in line with the teacher candidates' statements about whether the listening education course recordings have contributed to them are presented in the table below:

**Table 9.** Opinions of Teacher Candidates on Whether the Recordings Contributed to Them

Theme	Sub-themes	f
Whether the Recordings Contributed to them	They contributed.	14
	They should be installed on the platform even though I haven't watched any of them.	2
	They didn't contribute.	1

According to the data in Table 9, the opinions of the teacher candidates about whether the recordings contributed to them or not are grouped under 3 sub-themes. The teacher candidates who thought that the recordings contributed to them are in the majority. A participant named G had the following to say about it: 'I think they contributed because while listening to the lecture, there were points that we missed, did not understand, or could not attend the session, we closed the gap through these recordings.' A participant, codenamed H1, who said that she was working at a job, mentioned the importance of recordings for her, over the problems about recordings she experienced in another course:

*In terms of repetition, I also think it is positive. For example, the instructor of another course did not upload any recordings at first, and when we could not attend the session, we had no way of knowing what was going on. We couldn't rewatch. This was affecting me negatively as I was working in a daytime job. I sent a message to the instructor, and then he started uploading the recordings to the platform. It is a great advantage for me that the recordings were uploaded to the platform because of these experiences.*

The teacher candidate named F, on the other hand, emphasized the contribution of the recordings of the practical sessions: 'It contributed in general. It was especially useful to watch the recordings of the courses in which we made practices.'

Although two teacher candidates did not watch any recordings, they stated that recordings should be uploaded to the Mersin University Distance Education Platform. In this context, a participant named A stated the following:

*Since I attended all of the synchronous sessions and did not watch any of the recordings, I cannot comment on this. But even though I haven't watched it, I think the recordings should be uploaded to*

*the platform. If there is something I don't understand, it helps me to understand by watching the recordings again. Sometimes I may not be available at home. There can be noise, I can get distracted, I can miss the subject, I want to watch it again... In such cases, the recordings are good.*

A teacher candidate named M3 who said that he watched a few recordings stated that these recordings did not contribute to him: "I watched a few recordings. I don't remember them either. It did not contribute anything." According to the opinions about whether the course recordings contributed or not -whether they watched the recordings or not- most of the teacher candidates thought that they contributed to them in terms of repeating (especially in the practical sessions), making up for missed sessions or sessions' parts, and understanding the points that were not understood.

### Opinions of Teacher Candidates on Their Listening/Watching Competence Before the Course

Themes and sub-themes revealed in line with the teacher candidates' statements regarding their listening/watching competence before the listening education course are presented in the table below:

**Table 10.** Opinions of Teacher Candidates on Their Listening/Watching Competence Before the Course

Theme	Sub-theme	f
Listening/Watching Competence Before the Course	I consider it sufficient because I think I have the talent.	5
	I consider it sufficient because I received training on this skill before.	3
	I do not consider it sufficient because I have not received any education on this skill before.	7
	I do not consider it sufficient because I have a problem of distraction/inability to focus.	2

According to the table, it is seen that the opinions of the teacher candidates on their listening/watching competence before the course are gathered under 4 sub-themes. The number of teacher candidates who found their pre-course listening/watching competence insufficient because they did not receive any education is the highest. A participant, whose code name is G, used the following statements regarding this:

*It wasn't enough, so after this course, I realized that listening is actually the basis of other skills, and I think a lot of work should be done on this. Because when I look at my own education life, for example, I can say this for primary and secondary school, I don't remember a study explaining its importance. So everything was going very normal. The subjects were passing normally, but no serious listening practice was done. That's why I wasn't so clearly aware of the importance of listening. After taking this course, I really started to think differently and realized that I can and should do many things for my own students.*

A teacher candidate with the code name H1 said, "I also saw that I was incompetent in terms of listening/watching because until now, no proper activity was done in schools to improve my listening/watching skill." she said. F expressed his opinion as follows: 'I also felt incompetent before the course and underestimated listening skill. Except for our teachers who took English classes in the past, our other teachers have never given us such a training.' When attention is paid, it is understood that the participants who expressed their opinions in this direction took the process before the 'listening education' course to primary school.

This group is followed by those who considered themselves competent before the course as they have talents. A teacher candidate named T said 'Except for a few points in terms of both listening and watching, I think I'm a good listener/viewer as long as I'm not in an environment that will distract me. I am a person who pays a lot of attention to details, especially when watching content such as movies and videos.' on this subject.

Another sub-theme related to finding one's own listening/watching skill sufficient before the course is that having received education on this subject stands out. Regarding this situation, Y expressed her opinion as follows:

*In particular, I prepared an activity on listening education in the 'basic concepts of language education' course. That's why I knew. In the 'Turkish language' course I took in the first grade, the teacher of the course had us do a song listening activity. It was an activity that required us to catch the lyrics. As a result, I had knowledge, through this course I once again refreshed them.*

A participant with the code name S also said: 'I also think that I am a good listener. Sometimes I get distracted in a session, but I can collect the attention of me right away. In the same way as watching, I took the 'media literacy' course, as my friends said, and that course also contributed to me.'

When the opinions on this subject are examined, it is observed that the teacher candidates pointed to some courses they took in the lower grades during their undergraduate education before the listening education course. Also, according to Table 10, it is seen that the view of finding his/her own listening/watching skill insufficient before the course due to distraction or inability to focus constitutes another sub-theme. Regarding this sub-theme, a participant codenamed A said, ‘I was at a low level before I took the listening education course. I’ve been like this since I was little. I am someone who gets distracted very quickly. That’s how I am when I read a book.’ was of the opinion.

When the above statements are taken into account, it is understood that most of the teacher candidates find themselves incompetent because they have not received any education (from primary school) on developing listening/watching skill. In addition to these, there are teacher candidates who considered their listening/watching skills to be incompetent before and after the course because they have problems with distraction/not being able to focus. Even though they were in the same course, there are also participants who argued that their listening/watching skill had already become competent thanks to some of the courses (media literacy, basic concepts of Turkish education, Turkish language) they had taken at the undergraduate level before the listening education course.

### Opinions of Teacher Candidates on Whether They Competent in Gaining Listening/Watching Skills to Their Students after the Course

The themes and sub-themes revealed in line with the statements of the teacher candidates about whether they see themselves as competent in giving their students listening/watching skills after the course are presented in the table below:

**Table 11.** Opinions of Teacher Candidates on Whether They Competent in Gaining Listening/Watching Skills to Their Students After the Course

Theme	Sub-themes	f
Competence in Gaining Listening/Watching Skills to Their Students After the Course	I think that I am not enough to conduct an activity.	16
	I think that I am enough to design an activity.	13
	Theoretical information about listening/watching skill was useful.	12
	I have the necessary theoretical knowledge about conducting an activity.	8
	I can conduct an activity with the knowledge I have.	1
	I am not competent in theoretical knowledge about listening/watching skill.	1

From the Table 11, it is understood that 8 sub-themes are formed according to the answers given by the teacher candidates about whether they see themselves as competent in giving their students listening/watching skill after the listening education course. When the data are examined, it is seen that the opinions mainly refer to the state of not seeing oneself as competent to conduct activities to be used both in-class and in the assessment-evaluation process. The reason for this situation are overcrowded classrooms, the lack of participation in the synchronous sessions where the activity was conducted or the failure to watch the recordings, inability to experience face-to-face activities in the classroom environment, lack of practice hours in Turkish Teaching Undergraduate Curriculum. K2, one of the teacher candidates, revealed this situation with the following statements:

*Actually, I also watched the activity practices in the listening education course, but I couldn't get much efficiency because it was remote. I wish we could do an activity practice in this course after designing it, but the duration of the course, the lack of practice hours, the distance and the large number of students prevented this.*

The teacher candidate with the code name H1 points out the lack of practice in the classroom environment with the following sentences:

*I know how I can conduct any activity that I had designed thanks to the practices in the courses, but I think that I am lacking in doing this in a real classroom environment because we could not do these practices in the real classroom environment due to distance education. I have problems with breathing and excitement control. If we had practiced in a real classroom environment, maybe I would have been able to overcome these difficulties.*

In this direction, a participant with the code name M3 said, “I find it sufficient at a very low level. Because I think that by just taking a course – if this is a distance course – we will not be enough at all.” he said.

One of the views expressed within the scope of the theme in question is that the theoretical aspect of the course predominates because the practice time for the listening education course is not included in the Turkish Teaching

Undergraduate Curriculum, which started to be implemented in 2018. One of the participants, F expressed this situation with ‘I wish this course had practice hours as in the previous Undergraduate Curriculum. It is not correct that it consists entirely of theoretical sessions.’ sentences. T, on the other hand, said, ‘The instructor had these practices made even though there was no practice hour in the Undergraduate Curriculum, I hope that the deficiency in the Curriculum will be eliminated as soon as possible and more practices will be made in the next courses.’ Only one of the teacher candidates (participant with the code name G) considered herself sufficient in conducting the activity:

*Compared to before the course, I see improvement in myself. For example, I think that I have information about what to do before, during and after listening and I can guide my students. The practices in the course also guided me in this regard. In the future, I can design new activities and conduct them.*

While most of the teacher candidates considered themselves incompetent in conducting activities, 8 of them thought that they had the necessary theoretical knowledge on this subject, in other words, they were equipped with the necessary information to conduct an activity. On this subject, it would be appropriate to take a look again at the words of the teacher candidate with the code name H1 above. In addition, M1 said, ‘I may not be able to conduct the activities in a course exactly like the teacher of the listening education course, but I understood the philosophy of this. I understood how listening could be improved with what types of activities.’

Another point where the opinions put forward gain weight is related to the process of designing an activity. Most of the participants thought that they were sufficient in designing activities after the listening education course conducted through EDE. In this context, M4 said ‘I can design an activity, but I think I am lacking in practice’, H2 said ‘I think I have improved myself in terms of activity. However, I don't know about conducting it because I couldn't do any practice.’, E said, “There may be no problem in designing, but I think that I will have problems in practice right now.”, A said ‘I saw that the activities conducted in the course were based on creativity. In fact, I have already started to design some activities in my head. It has been helpful in that respect.’

The opinions that the theoretical information about listening/watching skills in the listening education course were useful is another issue reported by most of the teacher candidates. In relation to this, G said ‘... I learned a lot about physiological, psychological and cognitive disorders that I may encounter in my students. I think they will be very useful in my professional life.’, M2 said ‘I understood the theoretical information at first. I think these will come in handy in my professional life.’, M3 said ‘There are stages of listening, elements of listening and such... When you know these, you can have a better experience as a teacher. So it contributed to me.’, M4 said ‘It is important to have information about what listening is and how it happens. Of course, the contribution of this course in this sense is enormous.’ and K2 said ‘The midterm assignment, where I had the opportunity to examine both the theoretical information and the Turkish Curriculum in more detail, was useful.’ H2 expressed her view that the theoretical knowledge about the physiology of listening and aphasia was useful, with the following sentences:

*The instructor also said that it is important for us to know how listening takes place in the brain. Because when our students have such problems in the future, we, as teachers, need to realize this. It has been effective for me in that way.*

Regarding this subject, a teacher candidate named A also said, ‘I can say that I started to pay more attention to people thanks to the sessions given about the brain.’

In the context of the benefit of the theoretical knowledge in the course, 2 teacher candidates emphasized the change in their views before and after the course. M1 expressed this situation with these sentences: ‘Before the course, I did not think that a person's listening skill could be improved. With the course, this idea gradually evolved, and now I think the opposite.’ and K1 with these ‘The course contributed a lot to my professional life because although I consider myself good at listening/watching, I didn't think it was that important for children before. I learned a lot thanks to the course.’

One of the participants (code name is T) stated that he was not competent in theoretical knowledge about listening/watching skill:

*I do not think that I am fully competent in theory. I think I have an idea about the process. How to prepare an activity for children, how to conduct it; I pretty much made up my mind on how to evaluate their success. But I don't see enough of them. Of course, I think that I can improve myself by reading more, encountering examples of activities, and then I can provide a quality education.*

When the opinions are examined, it is understood that most of the teacher candidates do not consider themselves competent to have the activities that they will use both in the classroom and in the assessment-evaluation process,

but they think that they have the necessary theoretical knowledge about designing activities. In addition, it is seen that the theoretical contents presented in the sessions are useful.

### Opinions on the Processes of the Listening Education Course Sessions

Asked to the teacher candidates, ‘If you were the instructor of this course, how would you conduct the sessions through distance education?’ The themes and sub-themes revealed according to their answers based on this question are given in the table below:

**Table 12.** Opinions on the Processes of the Listening Education Course Sessions

Theme	Sub-themes	f
Opinions on the Processes of the Listening Education Course Sessions	I would reduce the theoretical parts.	7
	I would practice more in sessions.	5
	I would make teacher candidates practice.	5
	I consider that the practices made in the sessions are sufficient.	7
	I think the theoretical parts sufficient.	7
	I would assign an activity design assignment in midterm and/or final.	3
	I would put more emphasis on watching skill.	1

When Table 12 is examined, it is seen that 7 sub-themes are formed depending on the answers given by the teacher candidates to the question asked about the teaching processes. The opinions presented focus on finding the theoretical parts of the course sufficient or more and finding the practices sufficient. 7 of the teacher candidates thought that the theoretical parts of the course should be reduced. In relation to this, H1 stated that:

*In general, I find the practices of the instructor of the course good. I think he went into detail only in the theoretical parts. Yes, he said that he did so in terms of KPSS, but I said: Is this much about the physical dimension of listening necessary? I wouldn't give these subjects too much; I would go into that subject less if I were him.*

In this regard, F said ‘I would try to minimize the theoretical dimension. Even if there was no practice hour in the Undergraduate Curriculum, I would try to devote a certain part of the course to practice, and the instructor tried to do so.’, M2 said ‘If I were the instructor, I would try to finish the theoretical parts in a short time.’, K1 said ‘The theoretical parts were a bit too much as the instructor conducted the course according to the curriculum.’

Contrary to the opinions above, 7 of the teacher candidates considered the theoretical parts sufficient. A participant named T said the followings:

*Theoretical information is also really helpful, first of all, it helps people understand themselves, and understands how listening takes place. With the meaning she/he deduced from this, decides what kind of activity method she/he will follow. In this respect, I think the theoretical parts are important.*

The following words of one of the teacher candidates, Y, reveal both this issue and the opinion that the practices in the sessions were sufficient:

*I couldn't do anything more than the instructor of the course because the conditions of distance education... The practice hours of the listening education course in the Undergraduate Curriculum have already been abolished. There would be no more. I would watch a video or how to do an event, I would do this. Would I have covered the physical aspects of listening in such detail as the instructor did? Yes, I would. These are interrelated. It should not be missing. The chain must be completed. What is an ear? What is the eardrum? These are necessary.*

The majority of opinions expressed that the practices conducted within the scope of this course are sufficient. Above, in addition to the statements of the participant named Y, the following words of K1 are related to this:

*I was very satisfied with the lectures and practices of the instructor. The theoretical parts were a bit too much as the course was based on the curriculum. But it was very good that he conducted the practices with his own initiatives. If I were him, I would do the same.*

When the table is examined, it is seen that another theme that emerges is related to conducting more practice in the course. Within the scope of this theme, which was revealed based on the opinions of 5 teacher candidates, C said: ‘Maybe I would conduct more practice on how to prepare and execute an activity.’ The following words of M2 are related to the theme of getting teacher candidates to practice, as well as conducting more practice in the sessions:

*If I were the instructor, I would try to finish the theoretical parts in a short time. Later, I would tell*

*my students how to make a session plan. I would conduct a sample activity, then I would make the volunteer students conduct activities. For them to see the execution of a session.*

In another sub-theme that emerged about the dimension of the teaching process of the listening education course, it is seen that emphasis was placed on making teacher candidates practice. In parallel with M2's comments above, K2 stated the following:

*I wouldn't talk too much theoretical. The instructor of the course managed the process really well, but if I were him, I would have loaded the theoretical parts on the student. I think practice is better for them. Council of Higher Education's Undergraduate Curriculum is very theoretical. Theoretical parts are very useful for KPSS. Knowing that theoretical knowledge, overcoming KPSS and not being able to do an activity for the student... I think this is a much worse problem. So the activity could have been more.*

The following statements of a participant named G are also related to this theme:

*If I were the instructor, I would give the basic information first, the things that need to be known about the course. Apart from that, maybe I would make the students do something in terms of practices. So if I made an activity, maybe I would want something from them. How much that would be enough, I don't know. If there was something that could be done under the circumstances, maybe I could ask the students for such an activity.*

Among the opinions regarding the teaching process in the same sub-theme, there are also suggestions to assign teacher candidates the task of preparing activities within the scope of midterm and/or final assignment. M4, one of the 3 teacher candidates who made this suggestion, said the following:

*I would explain the subjects until the midterm, but I would ask students to create activities related to listening education as assignment during the midterm, by giving ample, detailed instructions. I wish they had seriously prepared for this. I would like that for the final as well.*

In relation to this theme, the teacher candidate with the code name A said, 'Otherwise, as my other friends said, I could have given an activity assignment. The final assignment would at least be an activity design assignment.' It is a suggestion that more emphasis should be placed on watching education besides listening to the following sentences of the same participant: 'I could have put a little more emphasis on watching. Because we focused a little more on listening.'

According to the opinions and suggestions presented, it is seen that the teacher candidates mostly made statements about the theoretical and practical parts of the course. While 7 teacher candidates emphasized that the theoretical parts of the course should be reduced, especially emphasizing the lack of practice hours in the Undergraduate Curriculum, a few of them stated that they found the theoretical parts sufficient. In addition, 7 of the teacher candidates found the practices in the course sufficient, and 5 of them stated that they did not find it sufficient. It was also proposed to give teacher candidates to practice in the sessions, to prepare an activity for midterm and/or final assignments. Finally, one of the teacher candidates suggested that watching skill was neglected and that it should be emphasized a little more. This is thought to be due to the fact that the course name in the Turkish Language Teaching Undergraduate Curriculum (Council of Higher Education, 2018) is 'listening education', this dimension has been neglected by mentioning the word 'watch' once in the course content, and therefore, the instructor of the course carried out the educational activities within this framework.

## CONCLUSIONS

In the light of the relevant research data, the results of this research, which was carried out to determine the views of Turkish teacher candidates on the listening education course conducted through EDE during the Covid-19 pandemic, are discussed in this section.

Considering the opinions about attendance to synchronous sessions, it is seen that most of the teacher candidates attended either a few or most of the synchronous sessions of the course; there were no teacher candidates who did not attend any of the sessions; since the listening education course was considered important, it was determined that they mostly attended synchronous sessions. In addition, it was determined that they could not attend to the sessions due to problems with the internet connection. Opinions about internet connection problem are the results of many studies in the field (Arslan and Şahin, 2013; Asmara, 2020; Bakioğlu and Çevik, 2020; Başaran et al., 2020; Bayburtlu, 2020; Bennet et al., 2020; Birişçi, 2013; Can, 2020; Dias et al., 2020; Faridah, et al., 2020; İskender, 2021; Kan and Fidan, 2016; Karakuş et al., 2020; Karakuş et al., 2021; Metin vd., 2021; Mohan et al., 2020; Kavuk and Demirtaş, 2021; Wang et al., 2020; Yılmaz, 2020). Internet connection problems might be solved by providing devices, financial supports (like University of York) or GB assistance by mobile operators with the

Council of Higher Education's initiative as Öztürk Karatas and Tuncer (2020) stated.

All of the teacher candidates are of the opinion that the synchronous and remote listening education sessions contributed more or less to them. Among these, the majority of those who thought that the synchronous sessions contributed to them, although not as much as the face-to-face sessions. One of the participants expressed the opinion that synchronous sessions contributed a lot to him, without comparing it with face-to-face sessions. However, when the examination was made, it was determined that this participant mainly evaluated the theoretical course contents and expressed his opinion and stated that he attended the synchronous sessions several times. Therefore, it is seen that teacher candidates who participated more in synchronous sessions made a comparison with face-to-face education and expressed their opinions, while a teacher candidate who did not make this comparison attended synchronous sessions several times. The tendency to compare the courses conducted through EDE with face-to-face courses and to find face-to-face courses more efficient has been found in studies in the literature (Başaran et al., 2020; Bozkurt, 2020; Düzakın and Yalçınkaya, 2008; Elcil and Şahiner, 2014; Görgülü-Arı and Hayır-Kanat 2020; İskender, 2021; Karacaoğlu et al., 2021; Karal et al., 2011; Kavuk and Demirtaş 2021; Keskin and Özer Kaya, 2020; Kürtüncü and Kurt, 2020; Pınar et al., 2020; Uyar, 2020; Yalman, 2013) is also a frequently encountered situation.

Among the other limitations emphasized by the teacher candidates in this group are the situation where it is difficult to get the permission to attend the sessions, which can be taken during the face-to-face education process, during the EDE process, and therefore, the synchronous sessions attended at the workplace -even if it is difficult- were not efficient, inability to get as much efficiency as face-to-face education in practical courses. Ways should be developed for students working in a job to easily obtain the official permissions they will need in the DE or EDE process as well as in the face-to-face education process.

It was also encountered with teacher candidates who claimed that synchronous sessions contributed little to them, on the grounds that the inadequacy of the platform or the fact that following the lesson in front of the screen caused pain in eyes. Opinions about looking at the screen for a long time and distraction are also presented among the problems experienced by teachers from different branches (working in primary and secondary schools) experienced with students in the study of Kavuk and Demirtaş (2021). It has been reported in various sources that long-term exposure to screen light causes physiological and psychological problems such as distraction, fatigue, long-term retinal damage, inability to sleep, blurred vision, pain and dryness in the eyes, and this negatively affects the DE process (Eyesafe, 2020; Figueiro et al., 2011; Shochat, 2012; Tüsgil, 2020). In this study, the fact that only one teacher candidate experienced the said negative situation (pain in the eyes) suggests that individuals in the position of students may have taken the necessary precautions. In any case, before the DE or EDE process, individuals in the position of students should be informed about what kind of precautions they can take against the negativities that may arise from looking at the screen for a long time. Besides, even if it was switched urgently, it would be appropriate to take the opinions of students in the development of DE or EDE platforms that were designed and put into operation. In particular, it is essential to establish opportunities for interaction which is constantly emphasized in the literature (Anderson, 2003; Attri, 2012; Doğan and Tatık, 2015; Faridah et al., 2020; Gacs, et al., 2020; Gewin, 2020; Karakuş et al., 2020; Karal et al., 2011; Marsh, et al., 2010; Rovai, 2002; Uçarı 2016; Ustati and Hasan, 2013). In designing and using processes of platforms, the highest level of teacher-student, student-student and student-content interaction must be taken into account.

A teacher candidate said that she was satisfied with the instructor's teaching by not sticking to the slides. Although it has been stated in Chtourou and Zouari (2020), Gordon et al. (2010), Yıldız and Selim's (2015) researches that slides are among the most used materials in courses conducted through DE, it is thought that it is appropriate for the instructor of the course not to lecture only by looking at this type of material. Because presentations should not be the primary teaching environment in the DE process (Jones, 2003). Instructors should be warned that only slide-based lectures should not be taught in sessions conducted through DE or EDE, and that this type of material should be used as a supporting element of lecture.

One of the participants thought that coming to school after waking up early in the morning and making preparations eliminates the drowsiness in the sessions and the loss of motivation based on these; another one expressed the opinion that synchronous sessions conducted remotely are more productive than face-to-face sessions because he feels more comfortable at home, based on the habit of watching remote sessions from the high school preparatory period. As Kandemir (2014) determined, these views seem to be related to the affordability of DE, the alternatives it offers in learning, and the spatial independence it provides to learners. In addition, in a study conducted by İskender (2021), it was determined that DE, which offers a different option to students with suitable conditions, is seen as a plus value for both instructors and learners with its accessibility feature at any time. In the study of Görgülü-Arı and Hayır-Kanat (2020), the participants (science and social science teacher candidates) presented

the views of saving time regarding DE, in Paydar and Doğan's (2019) study, they (primary school teacher candidates) experienced the comfort of space, and in Pinar and Dönel Akgül's (2020) study, they (secondary school students) were better motivated to take lessons in the home environment.

When the views about watching the course recordings were examined, it was determined that the number of participants who did not watch any of the recordings was very few, and most of the participants watched the recording of at least one session. However, in general, the frequency of watching the course recordings is low. In a study published by Can (2020), the rate of watching video recordings of the courses conducted through DE was low among university students. The researcher's conclusion that the recordings may have had a low viewing rate due to the need for more internet use was among the opinions presented by teacher candidates in this paper, albeit at a low level. The most dominant reason for not watching the recordings is the fact that it was considered sufficient to have already attended the synchronous sessions. Problems experienced in internet connection and feeling tired when coming home because of working at a job are among the reasons for not being able to watch the course recordings, albeit at a low level.

Course recordings were mainly followed to make up for the sessions that could not be attended synchronously. It has been observed that the number of teacher candidates who watched the recordings to make up for missed or incomprehensible session parts even though they attended synchronously is much less. It was also emphasized that they had the flexibility to watch, pause or rewind course recordings at any time. The fact that it offers the flexibility to watch and repeat at any time is a point identified about the advantages of DE or EDE in many studies (Başaran et al., 2021; Görgülü Arı and Hayır Kanat, 2020; Kan and Fidan, 2016; Karal et al., 2011; Marsh, 2010; Öztürk Karataş and Tuncer, 2020; Pinar and Dönel Akgül, 2020) based on collecting opinions from primary, secondary or university students. In order to overcome the problems that can be experienced in the internet connection and to take advantage of the advantages of DE, educational activities can be carried out with a design that blends face-to-face and DE.

According to the opinions about whether the course recordings contributed or not -whether they watched the recordings or not- most of the teacher candidates thought that the course recordings contributed to them in terms of repeating (especially in the practical sessions), making up for missed sessions or session sections, and understanding the points that were not understood.

Nine of the teacher candidates who participated in the research found their listening/watching skills to be incompetent before the course, and 8 of them were competent. 4 of those who saw it as insufficient mentioned that their listening/watching skills did not reach a sufficient level even after the course. Most of the participants found themselves inadequate as they have not received any training (from primary school) on developing their listening/watching skill. In addition to these, there are participants who considered their listening/watching skills to be incompetent before and after the course because they have problems with distraction/not being able to focus. Even though they were in the same class, teacher candidates who argued that their listening/watching skill have already become sufficient thanks to some courses they took at the undergraduate level before taking the listening education course. Among these courses, 'media literacy' is an elective course, 'Turkish language' and 'basic concepts of language education' are among the compulsory courses (Council of Higher Education, 2018). In addition, the 'Turkish language' course is given by different instructors and students can choose the instructor they want at the beginning of the semester. Therefore, it is seen that the teacher candidates who prepared activities related to listening/watching education in the 'basic concepts of language education' course and those who took courses from the lecturer/staff who conducted listening/watching activities in the 'Turkish language' course or preferred 'media literacy' among the elective courses find their listening/watching skill competent before the listening education course. It would be appropriate to state that the number of teacher candidates who considered themselves competent in this subject before the listening education course is high because they think that they have the ability to listen/watch. Considering the small number of teacher candidates who stated that their listening/watching skills are still insufficient for various reasons after the listening education course, the high number of teacher candidates who consider themselves sufficient, it is seen that a situation has emerged in parallel with the research findings of Karakuş et al. (2020) and Özer and Çekici (2020). As a matter of fact, according to the Turkish teacher candidates who participated in a study conducted by Karakuş et al. (2020), DE courses contributed the most to their listening skill compared to other language skills. In the research of Özer and Çekici (2020), the participating instructors expressed the opinion that the Turkish language course taken with the DE system can have a partially positive effect on the development of their students' listening skills. It may be appropriate to provide additional listening/watching sessions during the period when face-to-face training is available for teacher candidates who find their listening/watching skill incompetent even after the course.

When the opinions of the teacher candidates regarding whether they saw themselves competent in gaining

listening/watching skill to their students after the course are examined, it is understood that a large part of the teacher candidates did not consider themselves competent in conducting activities that they would use both in the classroom and in the assessment-evaluation process, but they thought that they had the necessary theoretical knowledge about designing activities. These views show that the listening education course taught through DE is insufficient in terms of making activity practices and they differ from the participants' views in İskender's (2021) research. In the aforementioned research, the instructors expressed the opinion that listening skill education would be effective in teaching Turkish to foreigners through DE. The separation of the opinions of the teacher candidates at the focus of this article is due to the excessive class size, not participating in the synchronous sessions or not following the recordings of these sessions, lack of experience of doing face-to-face activities in the classroom environment and lack of practice hours in Turkish Teaching Undergraduate Curriculum according to their own statements. By overcoming these problems, the negative views presented may become parallel to the views obtained by İskender. Considering the possibility that today's teacher candidates will be able to teach via DE or EDE in the future, it should be ensured that they conduct activity practices in synchronous listening education sessions, even from a distance and there is no practice time in the Curriculum.

Participants mostly expressed their opinions about the theoretical parts of the course and the practices within the scope of processes of the sessions. While 7 teacher candidates emphasized that the theoretical parts of the course should be reduced, especially emphasizing the lack of practice hours in the Undergraduate Curriculum, the same number of teacher candidates stated that they found the theoretical parts sufficient. Also 7 teacher candidates found the practices within the course sufficient, and 5 of them stated that they were not sufficient. In addition to these, it was also suggested that teacher candidates should be given practice in the sessions, and assignments to prepare activities in midterms and/or finals. Finally, one of the participants suggested that the watching skill was neglected and that it should be emphasized a little more. In this, it is thought that the fact that the name of the course is "listening education" in the Turkish Language Teaching Undergraduate Program (Council of Higher Education, 2018) and that the word "watch" is mentioned once in the course contents, this dimension is neglected, and therefore the instructor of the course carries out the educational activities in this direction. It is thought that the reason for this are that the course name in the Turkish Language Teaching Undergraduate Curriculum (Council of Higher Education, 2018) is "listening education", neglecting this dimension by mentioning the word 'watching' once in the course contents offered in the Curriculum, and therefore, the instructor of the course may have processed the sessions within this framework. It would be appropriate to eliminate the mentioned deficiency in the Undergraduate Curriculum in order to increase the effectiveness of listening education course in terms of practice.

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## Examining the Primary-School Teachers' Motivation Levels during the Covid-19 Pandemic

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### ABSTRACT

The purpose of this research is to investigate the primary-school teachers' motivation levels towards the profession during the COVID-19 pandemic. In accordance with this purpose, the professional motivations of primary school teachers have been examined according to the variables of gender, years of professional seniority, grade level taught and the number of students attending the course in the distance education. The study group of the research consists of 258 primary-school teachers working in Erdemli district of Mersin province. The study was carried out by using the survey method one of which is a quantitative research method and the data have been collected through the Personal Information Form developed by the researchers and the "Primary School Teacher Motivation Scale" developed by Ozturk&Uzunkol (2013). The results of the research demonstrated the professional motivation level of the primary-school teachers to be moderate during the Covid-19 Pandemic. The gender showed a significant difference on primary-school teachers' professional motivation levels and female teachers' general average of professional motivation levels were found to be higher than the male teachers' professional motivational levels during Covid-19 Pandemic. Another significant difference in professional motivation levels was observed in the seniority levels in which it was determined to be between 21+ and 5-10, 11-15, 16-20 and between 16-20 and 11-15, 16-20 years of professional seniority groups. The professional motivation levels of the primary-school teachers did not show a significant difference according to the class level and the number of students participating in distance education. The data obtained from the scale have been interpreted, using the same scale, by comparing them with the studies carried out with teachers before the pandemic. Compared to pre-pandemic period, the professional motivation levels of the primary-school teachers are found to decrease.

**Keywords:** Primary-school teachers, Covid-19, Motivation

### INTRODUCTION

Individuals, by nature, need an internal or external driving force to achieve their goals (Akbaba, 2006). Luthans (1995) defined this driving force as motive. And motivation, in its most basic sense, is defined as showing action to achieve a goal (Ibicioğlu et al., 2014). Directing and dealing with a situation with an internal desire is defined as intrinsic motivation, while extrinsic motivation is defined as being motivated by a situation to obtain tangible and relatively beneficial feedback from outside (Ryan & Deci, 2000). The difference here is the source of motivation. While intrinsic motivation consists of the individual himself, extrinsic motivation requires environmental effects. (Yazıcı, 2009).

Motivation is effective in the behavior of individuals (Özdaşlı & Akman, 2012). Therefore, motivation is of great importance in educational activities (Akbaba, 2006), as motivation is an important concept for both teachers and students in order to achieve the desired goals in the education-teaching processes. (Uyulgan & Akkuzu, 2014). A qualified education becomes possible when the teachers are motivated (Ada et al., 2014). Teachers' motivation also affects the students' motivation, fulfilling the targeted reforms of education, and obtaining the intended output from the education (De Jesus & Conbay, 2001). For these reasons, one can say that teachers' having high motivation and job satisfaction is a situation that concerns the entire education system (Selvitopu & Taş, 2020). Individuals' productivity, success and motivation depend on many different factors (Ayık & Ataş, 2014). Consequently, teachers' motivation levels may vary (Kılıç & Yılmaz, 2019).

The COVID-19 epidemic, which emerged on December 1st, 2019 in Wuhan, a city in of Hubei state in China, has become a global crisis in a short time (Can, 2020). On March 11th, 2020, when the epidemic was declared to be a

pandemic by WHO (2020), the first case was recorded in Turkey. The pandemic has been declared as a state of emergency in many countries. Countries have made rapid and new decisions regarding this situation (Zhang et al., 2020). As well as the economy and the health, COVID-19 has also greatly affected the education. In a very short time, face-to-face education turned into the form of distance education. Education systems were unprepared for this condition (Quezada et al., 2020). Distance education system was put into practice in Turkey in 23rd March, 2020. After nearly six months, On September 21st, 2020, face-to-face teaching started again. According to the course of the epidemic in Turkey, schools switched to distance education again on November 20th, 2020. Yet again, on March 3rd, 2021, considering the pandemic conditions in the cities, face-to-face education started again at particular levels and the distance education was still carried on 15.04.2021 (www.meb.gov.tr).

One of the occupational groups most affected by these new and changing conditions is teachers. Teachers, whose responsibilities have changed, started to have to take care of the social conditions of the students they are responsible for, and to be in regular communication with students and parents (König et al., 2020). In addition, one can say that it became comparatively difficult for teachers to attract students' attention to the lesson, motivate them to learn, and stay in touch with them during the distance education (Sangeeta & Tandon, 2020). Teachers' proficiency in using technology, their cooperation with students and parents etc may also vary depending on different factors. Furthermore, e-learning drawbacks such as not being able to test students' learning, low technological skills of students, internet and infrastructure problems can also affect the teaching. Such situations, on the one hand, cause a group of teachers to experience stress and be in a negative mood throughout this process, although there are teachers who are warmly attracted to distance education (Klapproth et al., 2020; Almanthari et al., 2020).

Behaviors and moods of teachers affect their motivation levels for the teaching profession (Karabağ Köse et al., 2018), and it is thought that educational practices carried out during the COVID-19 pandemic may have an impact on teachers' motivation. In addition, no study has been found in the literature on the motivation levels of teachers after the pandemic period. It is thought that examining the changes created by the educational practices in the COVID-19 pandemic on the motivation of teachers will contribute to the literature. Therefore, the main problem sentence of the research has been determined as; "What is the professional motivation level of the primary-school teachers in the Covid-19 pandemic?". In this context, answers are sought for the following sub-problems.

- 1-) Is there a significant difference by gender in the professional motivation level scores of primary-school teachers during the COVID-19 pandemic?
- 2-) Is there a significant difference in the professional motivation level scores of the primary-school teachers during the COVID-19 pandemic considering the years of seniority?
- 3-) Is there a significant difference in the professional motivation level scores of the primary-school teachers during the COVID-19 pandemic according to the grade level?
- 4-) Is there a significant difference in the professional motivation level scores of primary-school teachers during the COVID-19 pandemic compared to the number of students attending the course in distance education?

## METHOD

### Model of the Research

This research was carried out according to the survey model, which is one of the quantitative research methods. Karasar (2006) defines general survey models as scanning studies on the entire population or on selected samples from the population in order to reach a general conclusion about a population. Using scanning model, this study aims to determine the motivation status of primary-school teachers during the COVID-19 pandemic.

### Study Group of the Research

The study group of the research consists of 258 primary-school teachers selected by purposive sampling method among 580 primary-school teachers working in Erdemli district of Mersin province in the 2020-2021 academic year. Participation in the research is on a voluntary basis. Information about the study group of the research is presented in Table 1.

**Table 1.** Personal Information of the Primary School Teachers Constituting the Study Group

Variable	Gruplar	Frekans	Yüzde	Toplam
<b>Gender</b>	Kadın	130	50,4	258
	Erkek	128	49,6	
<b>Placement Year</b>	0-5 Yıl	18	7,0	258
	5-10 Yıl	28	10,9	
	11-15 Yıl	65	25,2	
	16-20 Yıl	41	15,9	
	21 ve üstü	106	41,1	

<b>Grade Level</b>	1. Sınıf	55	21,3	258
	2. Sınıf	71	27,5	
	3. Sınıf	69	26,7	
	4. Sınıf	63	24,4	
<b>Number of Students</b>	0-10 Kişi	93	36,0	258
<b>Attending Classes in Distance Education</b>	11-20 Kişi	123	47,7	
	21-30 Kişi	23	8,9	
	31 ve üstü Kişi	19	7,4	

Of the 258 teachers who participated in the study, 50.4% were female and 49.6% were male teachers. As their career year; 7.0% of 258 primary-school teachers work in the range of 0-5 years, 10.9% of them 5-10 years, 25.2% of them 11-15 years, 15.9% of them 16-20 years and 41.1% of them 21 years and over. According to the grade level, 21.3% of the 258 teachers teach at the 1st grade, 27.5% at the 2nd grade, 26.7% at the 3rd grade and 24.4% at the 4th grade. In terms of the number of students attending the course in distance education, 36.0% of 258 primary-school teachers are 0-10 people, 47.7% are 11-20 people, 8.9% are 21-30 people, 7.4% are 31 and above.

### Data Collection Tools

**Personal Information Form:** In the personal information form developed by the researchers, there are questions to determine the gender, professional seniority year, class level of the primary-school teachers and the number of students participating in the distance education. The identity information of the teachers was not requested in the personal information form.

**Primary School Teacher Motivation Scale:** Developed by Öztürk & Uzunkol (2013), the "Primary School Teacher Motivation Scale" has four sub-dimensions: positive attitude towards the profession, appreciation and professional happiness, avoidance of the profession and assimilating the profession. "Primary School Teacher Motivation Scale" consists of 30 items. There are five options for each item. These options are expressed as Strongly Disagree (1), Disagree (2), Partially Agree (3), Agree (4) and Totally Agree (5). The four sub-dimensions of the scale whose validity and reliability are tested explain 50% of the total variance. The total internal consistency number was found to be .87. In the exploratory factor analysis, the KMO value was found to be .843.

For the analysis of the data, the first step was to check whether the data showed a normal distribution. Tabachnick & Fidell (2013) state that the distribution shows a normal distribution when the skewness and kurtosis values are between  $\pm 1.50$ . Since the kurtosis and skewness coefficients of the data obtained in the study were between these values, it was observed that the data showed a normal distribution. For this reason, parametric tests were used in the analyses. While calculating the General Average, the sub-dimension of avoidance was reverse scored. Independent Samples T-Test was used to examine primary-school teachers' professional motivations during the COVID-19 pandemic by gender.

### Analysis of Data

A One-Way Analysis of Variance was conducted to examine the professional motivations of primary-school teachers during the COVID-19 pandemic by years of seniority, grade level and the number of students attending the course during the distance education process. The significance value of the data was determined over  $p < .05$ . Data have been evaluated over the reference ranges as;  $X \leq 1.79$  Not Sufficient,  $1.80 \leq X \leq 2.59$  Low,  $2.60 \leq X \leq 3.39$  Intermediate,  $3.40 \leq X \leq 4.19$  High, and  $X \geq 4.20$  Extremely High.

### FINDINGS

This part of the study includes the findings obtained from the analysis of the main problem and sub-problems, For this purpose, in Table 2, the descriptive statistics of the professional motivation of the primary-school teachers during the Covid-19 pandemic are presented according to the sub-dimensions and the general average.

**Table 2.** Descriptive Statistics Results of Primary-School Teachers' Attitude Scores Towards Profession During the COVID-19 Pandemic.

Dimensions	N	$\bar{X}$	S
<b>Positive Attitude towards the Profession and Professional Success</b>	258	3,29	1,20
<b>Recognition and Professional Happiness</b>	258	2,61	,96
<b>Job Avoidance</b>	258	3,00	,86
<b>Assimilation of Profession</b>	258	4,17	,79
<b>General Average</b>	258	3,36	,57

As can be seen in Table 2, the descriptive statistics of primary-school teachers' motivation towards the profession were found to have a medium level of motivation in the positive attitude towards the profession and professional success sub-dimension ( $\bar{X}= 3.29$ ).

In the sub-dimension of appreciation and professional happiness, it was determined that the motivation average of the primary-school teachers was at a medium level ( $\bar{X}= 2.61$ ). It is seen that the general average of the professional motivation of the primary-school teachers is at a moderate level ( $\bar{X}= 3.36$ )

The Independent Samples T-Test was applied to examine the primary-school teachers' attitude scores towards the profession during the COVID-19 pandemic by gender.

**Table 3.** Independent Samples T-Test Results of Primary-School Teachers' Attitudes Towards Profession During the COVID-19 Pandemic by Gender

Dimensions	Cins	N	$\bar{X}$	S	Sd	t	P
<b>Positive Attitude towards the Profession and Professional Success</b>	Kadın	130	3,42	1,19	256	1,69	,09
	Erkek	128	3,16	1,20			,09
<b>Recognition and Professional Happiness</b>	Kadın	130	2,66	,98	256	,73	,46
	Erkek	128	2,57	,94			,46
<b>Job Avoidance</b>	Kadın	130	2,96	,79	256	-,66	,50
	Erkek	128	3,03	,94			,50
<b>Assimilation of Profession</b>	Kadın	130	4,25	,75	256	1,52	,12
	Erkek	128	4,10	,82			,12
<b>General Average</b>	Kadın	130	3,44	,56	256	2,31	,02
	Erkek	128	3,28	,57			,02

According to the results of the analysis in Table 3, the motivation levels of the primary-school teachers do not show a significant difference in the sub-dimensions of positive attitudes towards the profession and professional success  $t(256)=1.69$ ,  $p> .05$ , appreciation and professional happiness  $t(256)=.73$ ,  $p> .05$ , avoidance of occupation  $t(256)= -.66$ ,  $p> .05$  and assimilation of occupation  $t(256)=1.52$ ,  $p> .05$  according to gender. On the other hand, the general average of the primary school teachers' motivation levels towards the profession shows a significant difference according to gender  $t(256)=2.31$ ,  $p< .05$

One-Way Analysis of Variance was applied to examine the Primary-School Teachers' attitude scores towards the profession during the COVID-19 pandemic according to the years of seniority. While expressing the differences, 0-5 years were coded as A, 5-10 years B, 11-15 years C, 16-20 years D, and 21 years and above as E.

**Table 4.** One-Way Variance Analysis Results of Primary-School Teachers' Attitude Towards Profession During the COVID-19 Pandemic by Placement Year

Dimensions		Sum of Squares	Sd	Mean Square	F	P	Fark
<b>Positive Attitude towards the Profession and Professional Success</b>	Between Groups	13,52	4	3,38	2,38	,052	-
	Within Groups	359,24	253	1,42			
	Total	372,77	257				
<b>Appreciation and Professional Happiness</b>	Between Groups	27,91	4	6,98	8,33	,000	A-D, B-D, C-D, C-E, D-E
	Within Groups	211,98	253	,83			
	Total	239,90	257				
<b>Job Avoidance</b>	Between Groups	7,33	4	1,83	2,49	,043	B-E, D-E
	Within Groups	185,84	253	,73			
	Total	193,18	257				
<b>Assimilation of Profession</b>	Between Groups	13,73	4	3,43	5,91	,000	A-D, C-D, D-E
	Within Groups	146,95	253	,58			
	Total	160,69	257				
<b>General Average</b>	Between Groups	6,32	4	1,582	5,11	,001	B-E, C-E, D-E, B-C, B-D
	Within Groups	78,30	253	,310			
	Total	84,63	257				

As can be seen in Table 4, the results of the analysis indicate that there is no significant difference in the positive attitude towards the profession and the professional success sub-dimension of the primary-school teachers according to their placement years  $F(4, 253) = 2,38, p > ,05$ . However, in the sub-dimension of appreciation and professional happiness, there is a significant difference according to the placement year  $F(4, 253) = 8,330 p < ,05$ . Scheffe Test was conducted to determine between which occupational year groups the difference was. According to the Scheffe Test results, it was determined that the difference was between 16-20 and 0-5; 5-10, 11-15, 21+ and between 11-15 and 21+ placement year groups. A significant difference is observed in the sub-dimension of Job Avoidance regarding the placement year.  $F(4, 253) = 2,49, p < ,01$ . The Scheffe Test results indicate that the obtained difference is between 16-20 and 5-10, 21+ placement years. A significant difference was observed in the sub-dimension of assimilation of the profession according to placement year

$F(4, 253) = 5,91, p < ,05$ . According to the results of the Scheffe Test, it was determined that the difference was between 16-20 and 0-5, 11-15, 21+ placement year groups. On the general average of the motivation of the primary-school teachers towards the profession, there is again a significant difference according to the placement year  $F(4, 253) = 5,11, p < ,05$ . According to the results of the Scheffe Test, the difference is between 21+ and 5-10, 11-15, 16-20 and between 5-10 and 11-15, 16-20 placement year groups.

One-Way Analysis of Variance has been applied to examine the Primary- School Teachers' attitude towards the profession during the COVID-19 pandemic according to the grade level.

**Table 5.** One-Way Analysis of Variance Results of Primary School Teachers' Attitudes Towards Profession During the COVID-19 Pandemic by Grade Level

Dimensions		Sum of Squares	Sd	Mean Square	F	p
<b>Positive Attitude towards the Profession and Professional Success</b>	Between Groups	8,35	3	2,78	1,94	,12
	Within Groups	364,41	254	1,43		
	Total	372,77	257			
<b>Appreciation and Professional Happiness</b>	Between Groups	1,33	3	,44	,47	,70
	Within Groups	238,56	254	,93		
	Total	239,90	257			
<b>Job Avoidance</b>	Between Groups	5,79	3	1,93	2,61	,05
	Within Groups	187,39	254	,73		
	Total	193,18	257			
<b>Assimilation of Profession</b>	Between Groups	1,75	3	,58	,93	,42
	Within Groups	158,94	254	,62		
	Total	160,69	257			
<b>General Average</b>	Between Groups	1,90	3	,63	1,95	,12
	Within Groups	82,72	254	,32		
	Total	84,63	257			

According to Table 5, the analysis results indicates no significant difference in the sub-dimensions of positive attitude towards the profession and professional success  $F(3, 254) = 1,94, p > ,05$ , Appreciation and professional happiness  $F(3, 254) = ,47, p > ,05$ , Job avoidance  $F(3, 254) = 2,61, p > ,05$  and assimilation of the profession  $F(3, 253) = ,93, p > ,05$ , according to the grade level.

There is also no significant difference in the general average of the motivation levels of the primary school teachers according to the grade level  $F(3, 254) = 1,95, p > ,05$ .

One-Way Analysis of Variance was applied to examine the Primary-School Teachers attitude towards the profession during the COVID-19 pandemic regarding the number of students attending the course in the distance education process.

**Table 6.** One-Way Analysis of Variance Results of Primary-school Teachers' Attitudes Towards Profession During the Covid-19 Pandemic According to the Number of Students Attending the Class in the Distance Education Process

Dimensions		Sum of Squares	Sd	Mean Square	F	P
<b>Positive Attitude towards the Profession and Professional Success</b>	Between Groups	8,463	3	2,82	1,96	,11
	Within Groups	364,311	254	1,43		
	Total	372,773	257			
<b>Appreciation</b>	Between Groups	4,73	3	1,57	1,70	,16

<b>and Professional Happiness</b>	Within Groups	235,17	254	,92		
	Total	239,90	257			
<b>Job Avoidance</b>	Between Groups	2,03	3	,67	,90	,44
	Within Groups	191,14	254	,75		
	Total	193,18	257			
<b>Assimilation of Profession</b>	Between Groups	3,48	3	1,16	1,87	,13
	Within Groups	157,20	254	,61		
	Total	160,69	257			
<b>General Average</b>	Between Groups	1,79	3	,59	1,83	,14
	Within Groups	82,84	254	,32		
	Total	84,63	257			

As in Table 6, in the results of the analysis, positive attitude towards the profession and professional success according to the number of students attending the course in distance education  $F(3, 254) = 1,96, p > .05$ , appreciation and professional happiness  $F(3, 254) = 1,70, p > .05$ , avoidance of occupation  $F(3, 254) = .90, p > .05$ , and assimilation of occupation  $F(3, 253) = 1.87, p > .05$ . There was no significant difference on the general average of the motivation levels of the primary school teachers according to the grade level.  $F(3, 254) = 1.830, p > .05$ .

As is seen in Table 6, there is no significant difference in the sub dimensions of positive attitude towards the profession and professional success  $F(3, 254) = 1,96, p > .05$ , appreciation and professional happiness  $F(3, 254) = 1.70, p > .05$ , Job avoidance  $F(3, 254) = .90, p > .05$  and assimilation of profession  $F(3, 253) = 1.87, p > .05$  according to the number of students attending the course in distance education. There is also no significant difference in the general average of the motivation levels of the primary school teachers according to the class level.  $F(3, 254) = 1.830, p > .05$ .

## DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In this study primary-school teachers' motivation levels towards the profession during the COVID-19 pandemic have been examined according to the variables of gender, placement year, grade level and the number of students attending the course during the distance education process in terms of the sub-dimensions of positive attitude towards the profession and professional success, appreciation and professional happiness, job avoidance, professional assimilation. The analyzes were compared with the results of previous research on the motivation levels of primary-school teachers.

The results of the analysis indicated that the general average of the professional motivation levels of the primary-school teachers during the COVID-19 pandemic was moderate. ( $\bar{X} = 3.36$ ) According to the study conducted by Bayraktar & Akin (2019) on primary-school teachers before the pandemic, the professional motivation of primary-school teachers is determined to be at a high level ( $\bar{X} = 3.61$ ). The general motivation levels of primary school teachers for the profession can be said to have decreased compared to the pre-pandemic period.

The results of the sub-dimensions regarding the motivation levels of the primary-school teachers during the COVID-19 pandemic have been found to be as  $\bar{X} = 3.29$  in Positive attitude towards the profession and professional success; as  $\bar{X} = 2.61$  in Appreciation and occupational happiness, as  $\bar{X} = 3.00$  in Job avoidance, and as 4.17 in Profession assimilation. According to the Bayraktar and Akin's study (2019), the sub-dimensions of positive attitude towards the profession and professional success have been found to be as  $\bar{X} = 4.29$ , appreciation and professional happiness as  $\bar{X} = 3.78$ , avoidance from the profession as  $\bar{X} = 2.62$ , and professional assimilation as  $\bar{X} = 3.77$ .

Similar results are also seen when compared with Demir et al.'s (2017) study, which was conducted with the same scale. When compared with the results before the pandemic, it is seen that the results of the primary-school teachers' positive attitude towards the profession and the sub-dimensions of professional success, appreciation and professional happiness have lower scores. In their study on the factors on teachers' motivation, Ada et al. (2014) concluded that teachers' being appreciated and feeling professionally successful are effective on developing positive attitudes towards the profession. Büyükses (2010) also concluded in his study that the fact that teachers are not appreciated by their administrators negatively affects their motivation.

Considering these results, the problems experienced by teachers about being appreciated for the profession and feeling successful while doing their profession can be said to affect their positive attitudes towards the profession during the COVID-19 pandemic. On the besides, the avoidance scores of primary-school teachers have increased compared to before the pandemic. It can be said that the educational disruptions experienced during the pandemic

period, the increase in the workload of teachers and the uncertainties that occur in the process cause an increase in the scores of teachers to avoid their profession. On the other hand, there is an increase in the scores of the primary-school teachers' professional assimilation sub-dimension compared to the pre-pandemic period.

For the first sub-problem of the research, the motivation levels of the primary-school teachers towards the profession have been examined according to the gender variable. The results have shown that there is a significant gender difference on the general average of the motivation levels of the primary-school teachers, and the professional motivation of female teachers during the pandemic is determined to be higher than that of males. No other significant differences are detected in terms of gender in any of the sub-dimensions of the scale. However, while the averages of female teachers in the sub-dimensions of positive attitude towards the profession and professional success, appreciation and professional happiness, assimilation of the profession were higher, the averages of male teachers in the sub-dimension of avoiding the profession were found to be higher. This situation is similar to the results of Demir et al.'s (2017) study on the motivation of primary-school teachers before the pandemic. According to these results, it can be said that female teachers' motivation level averages towards the profession are higher than male teachers before and after the pandemic. In his study on teachers' motivation, Ertürk (2016) determined that female teachers' intrinsic motivation levels are higher than male teachers, and this is due to the fact that female teachers are less affected by external factors and adapt more to their profession if they achieve the feeling of satisfaction and success towards the profession compared to male teachers.

For the second sub-problem of the study, the motivation levels of primary-school teachers in the pandemic have been examined according to their professional seniority years. According to the results, there is a significant difference in the general average of primary-school teachers' attitudes towards the profession according to professional seniority, and this difference is observed as between 21+ with 5-10, 11-15, 16-20 and 5-10 with 11-15, 16-20. While there was no significant difference according to professional seniority in the sub-dimension of positive attitude towards the profession and professional success, it was determined that the views of teachers differed according to professional seniority among other sub-dimensions. In Demirkol's (2019) study conducted before the pandemic, it is seen that there was a significant difference only in the dimension of assimilation of the profession according to professional seniority. In this case, it can be said that the motivation levels of teachers according to professional seniority have been affected by the pandemic.

For the third sub-problem of the research, the motivation levels of the primary-school teachers during the pandemic have been examined according to the grade level. According to the results, there is no significant difference on the motivation levels of the primary-school teachers according to the grade level. However, while the group with the highest motivation in the general average is the 2nd grade teachers, it is followed by the 1st grade, 4th grade and 3rd grade teachers, respectively. In the studies conducted by Bayraktar and Akın (2019) before the pandemic, it was seen that the motivation levels of the primary-school teachers did not show a significant difference compared to the class level in the grand total and other sub-dimensions.

For the fourth sub-problem of the study, the motivation levels of primary-school teachers during the pandemic have been examined according to the number of students attending the course in distance education. According to the results, it was seen that the number of students attending the course in the distance education process did not make a significant difference on the motivation of the primary-school teachers towards the profession. In the study conducted by Canöz et al (2019) and Demirkol (2019) before the pandemic, it is seen that the motivation level of primary-school teachers does not differ according to the number of students in the classroom.

In order to increase the professional motivation of primary-school teachers, which have been found to decrease in the pandemic, it may be suggested during the COVID-19 pandemic process that detailed research should be carried out by the ministry in order to determine the reasons for this decrease in teachers' motivation. In addition to this, due to the decrease in the appreciation and professional happiness sub-dimension scores of primary-school teachers during the pandemic, it can be suggested that teachers be given certificates of achievement in proportion to their professional dedication.

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## How Can the Unconscious Mind of the New Psychological Definition be Analyzed and Can the Formation of Thought be Closed to Perception and Manipulation at the Beginning by Using Algül Digital-Manual/Analog Psycho-Semiotic Language Parsers?

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### Abstract

The aim of this article is to examine and research the unconscious reactions of the new psychological definition and also can the formation of thought be closed to perception and manipulation at the beginning by using Algül Digital-Manual/Analog Psycho-Semiotic Language Use Parser? It is to show how it can be done by using Algül Digital-Manual- Analog Psycho-Semiotic Language Use Parsers to motivate and be awareness large masses through the psychological unconscious area, that is, the experiences formed as a result of their life period.

To create awareness and realization for the humankind about their attitudes and behaviors which are coming from their psychological unconscious area that they gained them their life period unconsciously so they can control their behaviors by easily.

**Keywords:** Psychological Unconscious Area, Algül Digital-Manual-Analog Psycho-Semiotic Language Use Parsers, Perception, Thought Formation, “Humankind in the Circle”, awareness.

### Introduction

“Everything that’s happened to us is subliminal. A few roles in our daily lives it may seem like it’s playing. But these are our conscious thoughts are invisible roots (Mlodinow, 2013:11).” Carl Jung

“Over the past two decades of neurological research, it has become increasingly clear that the way we experience the world--our perception, behavior, memory, and social judgment--is largely driven by the mind's subliminal processes and not by the conscious ones, as we have long believed. In *Subliminal*, Leonard Mlodinow employs his signature concise, accessible explanations of the most obscure scientific subjects to unravel the complexities of the subliminal mind. In the process he shows the many ways it influences how we misperceive our relationships with family, friends, and business associates; how we misunderstand the reasons for our investment decisions; and how we misremember important events--along the way, changing our view of ourselves and the world around us(2021, <https://www.kobo.com/ww/en/ebook/subliminal-4>).” Leoanard Mlodinow named his book as: *Subliminal: How Your Unconscious Mind Rules Your Behavior*.

### Great Brain!

"Let me love my mind." His sentence is one of the examples used anonymously in Turkish culture. It is impossible not to really like the 'mind' 'brain' and not admire the working principles, not work to make further analyses. Of course, in this mind, whether you are aware of it or not; The contribution of science at the time is inevitable. The love of loving minds is science beneath the minds. A view that manages to remain neutral can do science good. In fact, it's not easy for a human being to be impartial. When we consider our acquires in this article, science makes us realize the difficulty of being isolated and able to look at the universe, which is now its meaning, which is besieged from the moment it is born.

According to a textbook on human psychology, the human perception system sends eleven million pieces of information to the brain every second. However, anyone who has had to deal with a few children, all of whom are trying to speak at once, will testify that the amount of information that your conscious mind can process cannot even get close to this limit. The amount of information we can process in one second has been found to be between sixteen and fifty pieces. If your conscious mind had to process this information, your brain would be held like an overloaded computer. Also, even if we are not aware of this, we can make a large number of decisions every second. Should I spit out the bite in my mouth because I smell something bad? What's the meaning of that word that guy sitting across from me at the table said? And what's that guy like?

Evolution has given us an unconscious mind because it is what allows us to survive in a world that requires the entry and processing of subconscious amounts of information. Our sensory perception, our memories, our daily

decisions and activities seem to be happening without effort in its entirety, but the only reason for this is that the effort required by them is spent outside of our brain's awareness (Mlodinow, 2013:51)."

### **What is the New Definition of Unconscious?**

In the first quarter of 2000, scientists redefined the subconscious and the unconscious. They redraw their boundaries. In a nutshell Carl Jung writes: "What we didn't consciously realize was that we didn't realize it. There are certain events. They fall below the threshold of consciousness, so to speak. These have happened, but they have been perceived as subliminal. The word 'subliminal' is Latin and means 'below the threshold'. Psychologists use the term 'below the threshold of consciousness'. Subliminal effects that expand our perception, our unconscious mind processes and how these processes affect people.... In order to fully comprehend human life, we need to understand both of our conscious and unconscious selves and how they interact with each other.

The subliminal parts of our brain are invisible to us. Nevertheless, how we consciously experience life, how we see ourselves and others, the meanings that we place on what happens every day in our lives, our ability to reach quick opinions and decisions that can sometimes be a matter of life and death, and what we do as a result of all these insightful experiences affect very fundamentally (Mlodinow, 2013:13).

Is he/she responsible for human behavior? On the basis of the attitudes and attitudes that we unwittingly exhibit, our experiences in our life process or the customs, traditions, etc. that are passed down from generation to generation, which have been repeated over and over and even centuries, thousands of years. But it comes from teachings we weren't aware of. If we can scientifically open up and clarify this field and open up the space for people to examine their own thoughts, and therefore their attitudes and attitudes, humanity can expect a better world.

First, Subliminal: Complex new technologies have revolutionized our understanding of the parts of our brain that work under our conscious mind (the subliminal world). These technologies, for the first time in human history, made it possible to study the unconscious by truly scientific methods. Here is the concept of modern unconsciousness based on studies and measurements based on new science (Mlodinow, 2013:14) that examines the unconscious, often called 'The New Unconscious' in order to distinguish it from the subconscious definition made famous by Sigmund Freud, a neurologist who preferred clinicianship. These technologies, for the first time in human history, made it possible to study the unconscious by truly scientific methods. Here is the concept of modern unconsciousness based on studies and measurements based on new science (Mlodinow, 2013: 14) examining the unconscious, often called 'The New Unconscious' in order to distinguish it from the subconscious definition made famous by Sigmund Freud, a neurologist who preferred clinicianship. Unconscious is order to distinguish it from the subconscious definition made famous by Sigmund Freud, a neurologist who preferred clinicianship. Human behavior is the product of an infinite flow of perception, emotion and thought, both consciously and unconsciously, and the idea that we are not aware of the causes of most of our behaviors is a difficult thing to accept. Freud and his followers have long distanced themselves from the idea that beliefs, research psychologists (p.27) and the idea that knowledge is important in our behaviors, and this approach has been characterized as pop-psychology (Mlodinow, 2013:28).

### **How Can You Analyze Your Unconscious Mind That Rules Your Behavior with Using Algül Digital-Manuel (Analog) Psycho- Semiotic Language Use Parsers?**

"The seeing eye is not just a physical organ, At the same time, the person to whom He/She belongs, Conditioned by the tradition in which he/she grew up It is a means of perception (Mlodinow, 2013:47)." Ruth Benedict

When we look at the history of semiotic, we see that it is multidisciplinary. This branch of science, which is clearly full of science related to the formation of thought from the beginning, continued its work relentlessly during both world wars and began to create a widespread culture in this field in the 1800s with the environments in which activities celebrated for weeks were held in Europe and America. The historical journey of Derrida's "Destructible Criticism" Conception and the scientists who contributed to this journey; P. de Man, M. Bakhtin, R. Barthes, U. Eco, Kristeva... (Rifat, 2009:45-69). This branch of science, which is related to many scientists, can create the idea that it is related to all other branches of science and covers them like a large roof.

If semiotics can be designed as a branch of science to study the life of indicators (linguistics and visual) in society, and this science forms part of social spirituality and therefore general spiritual science (Rifat, 2009:33). Although the importance of linguistic indicators is undeniable, the idea that 21st century people are designed visually more than ever may not be far away because the harsh capitalist environment can be determined to be far from deep

readings, so it is determined that people who do not think, who act with impulsivity like a child and tend to consume very and very quickly, are moved towards the majority. In fact, large audiences that can be easily manipulated, manipulated and driven through images...

With the Algül Digital Manual/Analog Psycho-Semiotic Language Usage parsers, in the individual dimension, dismantling and dismantling, in other words, parsing the linguistic and visual indicators of the universe of meanings surrounding the individual, can begin to find out how it understands the unconscious area of the universe of meanings surrounding it, and how this understanding is reflected in its attitude and behavior. Now you may have the management knowledge of how you're being guided. In other words, the key. It can also prevent legal or illegal data obtained from the digitalized universe of meanings of the individual from digitizing it from being digitized because it will now be aware of which private information is surrounded by linguistic and visual encirclement. Before

“ what does Semiotic / Semiology / Semiotics mean?

First, the definition of the indicator should be made. An indicator, "In general, is defined as all kinds of forms, objects, phenomena, etc., which may represent anything except itself and which therefore have the characteristics of being able to replace what it represents. Semiotics is the branch of science that examines indicators (Rıfat, 2009: 11)."

Göstergebilim is used as the Turkish equivalent of the words semiotic/semiologic.

Semiotic is used as the base for the choice of the word semiotics. The word Semiotic (Rıfat, 2009: 27) comes from French, and when the etymology of the word is examined, it is seen that it fulfills both visual and linguistic meaning. When it comes to the use of psycho-semiotic language use, only the visual elements come to the mind of the general majority and this is the case even for the well-educated people. The problem arises from this point because languages are actually visual elements based on the indicative (letters)/indicated (meaning), so each of them is indicators. They construct a semantic through indicatives. For this reason, the word "semiotic" has been preferred while creating the noun phrase Psycho-Semiotic Language Use. Although the word semiotic contains both visual and linguistic meaning, it cannot put an end to the usage confusion. An introduction of word or noun phrase that will eliminate the usage confusion here and create the perception in the majority of the public that words can also be designed with fictional "narrative strategies", but that can come out only with a book, will not be included in this article (Algül, 2020:797)."

### **How can we use thoughts that exist in the unconscious field to solve the connection between thought and attitude relationship?**

Charles Sanders Peirce, who is one of the two pioneers of contemporary Legend. The other is Ferdinand de Saussure. (Rıfat, 2009:30). He compared saussure's ability to accurately decipher a theft in his cabin, even though he had never seen it in his cabin, "and just like birds sing and fly, this ability is the greatest of our instinctive powers." In other words, the function of the unconscious is a very important part of our evolutionary survival mechanism." More than a hundred years later, research and clinical psychologists have realized the fact that we all now have a rich and effective unconscious life that continues in parallel with our conscious thoughts and feelings and has powerful effects on the ways through which we can only begin to measure them with a certain degree of accuracy (Mlodinow, 2013:13)

### **“Raising Awareness and Proposed Solutions**

1. Linguistics courses can be scheduled in Communication Faculties. Thus, the formation of the perception that each language is based on one formula becomes easier. Those who know the quite mathematical formula quite will get it. In this way, the perception that the natural languages are indicators will become accustomed and this will naturally affect the form of thinking. Gaining a general view of all languages to the individual can create the thought that they can also be used as a design tool. This view will create a new perception, which can influence the way of thinking.
2. If Communication Faculties are transformed into the Faculty of Communication Design, this can contribute to change the point of view and to form a new perception on behalf of the vast majority and to the formation of a new thought. Communication is closely related to design in the reality of our age. (Algül , 2020: 800)."
3. Activities can be carried out by the relevant faculties to create a culture of semiotics in the society so that the public can begin to consciously understand the fact that it is surrounded by linguistic and visual

indicators. Consciously looking at the universe of meanings surrounding itself is a prerequisite for analyzing attitudes and behaviors.

### **How the Formation of Thought be Closed to Perception and Manipulation at the Beginning by Using Algül Digital-Manual/Analog Psycho-Semiotic Language Use Parsers?**

Here, the meaning loaded into the word psycho refers to linguistic visual indicators that affect the attitude, attitude and behavior of the individual. These linguistic and visual indicators can be from social and/or individual memory, as well as towards the inner world of the individual; it can be done through data obtained from the legal-looking field, which is illegally protected by the KVKK (Personal Data Protection Law) or from the digitalized universe of meanings of the individual. By carrying a handbook containing the information written in this field, the individual can benefit from this hand/pocket book, which provides a collection of weeds that remind us where the root thought that gives rise to behavior and behavior can originate. That's what manual means. What the analogue version can be requires expertise and collaboration with different disciplines; should be discussed for development.

Digital Parser, on the other hand, is a digital device that the individual will carry out from a very early age, by performing all these operations with artificial intelligence, on the screen, at the end of the day and/or during the day and night, within the time period that the individual desires to learn, how much psycho-lingual and visual indicators are exposed and which root thoughts these psycho-visual and linguistic indicators are aimed at, It can provide a kind of transcript of the history of root thoughts formed in this unconscious space. This parser can be a special and important device in itself; lower volume and/or full-range samples can be added to mobile phones.

“What is the psycho-Semiotic Usage Parser?

1. A Psycho-Semiotic Language Parser that tracks, records and separates the digital traces that the individual left behind in digital environments. In this way, one will be able to differentiate and even measure the language uses, which can paralyze him with the evil Psycho-Semiotic Language Use about what he has written.
2. Psycho-Semiotic Language Parser with immediate penal sanctions approved by digi-law. If its measurement and assessment say that there is evil use, this determination will be processed and finalized instantly by digital law.
3. Advanced versions can also be designed: A complete Psycho-Semiotic Language Usage decoder.
4. Maybe, this century is the right time for legally deciphering the genetic-cultural habit that paralyzes this goal that evil interest-group entities have made for hundred of years and now transferred into digital environments and legalizing this process, what do you think?
5. In fact, looking at the profile should be included in this psycho-Semiotic Language Use and since its content should be capable of digi-tracking, moods such as ‘what did he/she write,’ ‘who looked end when did he/she/foundation look,’ ‘how did this look feel in terms of Psycho-Semiotic Language Use’ should also be presented in the reporting section.
6. In fact, looking at the profile should be included in this Psycho-Semiotic Language Use and since its content should be capable of digi-tracking, moods such as "what did he write", "who looked and when did he look", "how did this look feel in terms of Psycho-Semiotic Language Use" should also be presented in the reporting section.
7. A Psycho-Semiotic Language Parser that, tracks, records and separates the digital traces that the individual left behind in digital environments. In this this way, one will be able to differentiate even the measure the language uses which can paralyze him with the evil Pyscho-Semiotic Usage Language Use about what he has written.
8. Digital Trace Equipments/software (Transcripts) must work together with Pyscho-Semiotic Language Usage Parser
9. If there are people who attack the posts made by the individual on digital media in terms of Psycho-Semiotics, a Psycho-Semiotic Language Use Parser that can measure and evaluthe digital traces, that the individual left behind in digital environments ate this use Immediately (Algül,2020:801).”

### **Conclusion**

“Man decides to paint the world. Over the years, there has been a gap in the cities, kingdoms, mountains, bays, ships, islands, fish, rooms, appliances, stars, horses and people pictures. Shortly before he died. The image of the persevering lines of the labyrinth on its own face discovers that it follows (Mlodinow,2013:75).” Jorge Luis Borges

Imagine that the general public performs this 'discovery' and 'awareness' within their own life processes; What and where does human development evolve? From the moment we are born, it is done through the experiences they have gained throughout their own life processes to reach and make sense of the universe of meanings that human

children are surrounded by. In the field they unconsciously delusionally, the teachings conveyed throughout their life processes, their own lives, life experiences; it consists of the degrees of influence. Innate genetic traits; Intelligence, ability, ability, as well as the nature of the education he receives: Critical, questioning or not, of course, plays a role. Finding and giving answers to the question of what the human being does and why with the mind provided by the current science, increasing awareness through scientific data when evaluating the universe of meanings, can make it clearer to reach the material in this field. If individuals start following their own thought formations, we can create a field of analysis indexed to science, removing the universe of meanings from being individual.

As a result, it is added to the education of the general people of the world; Even the use of Algül Manual Psycho-Language Use parsers can create awareness in this field, spread the light of science to a wide audience, and a culture of monitoring the return of personal thought formations, attitude and attitude, and behaviors, such as second and third parties, can be given and this culture can be passed on to generations if it is maintained. In other words, large masses of people may begin to become conscious about the formation of thoughts. If they gain the ability to follow personal thought formations in this way, they can observe others from the same perspective and be problem-solving oriented. One feature of the language is that it can be passed down from generation to generation. Once this culture is introduced, it may also be possible to process it into the genetic code.

In summary: Algül Digital-Manual/Analog) Psycho-Semiotic Language Use Parsers can be a device in itself, but they can also be an application that can be added to mobile phones with little scope or fully equipped. Thus, people will be able to see how psycho-language use affects their attitudes and attitudes, gain access to their unconscious acquire and control their attitudes and attitudes. Thus, individuals will be able to start to follow and monitor their attitudes and attitudes that are not aware of the psycho-semiotic (linguistic and visual indicators) they are exposed to during the day and night, but which are actually formed as a result of a cause-and-effect, effect-reaction, causality relationship.

In other words, the human being is more responsible than ever. Don't be responsible for yourself, don't know yourself. Just like Leonardo di ser Piero da Vinci's "Man in Circle"... Man and woman in the circle. If we can observe, follow and measure the unconscious space on an individual basis, in other words, the area where the root thoughts that we acquire as a result of our lives but are not aware of turn into attitudes and attitudes, then we have started to control the area.

To summarize further: The unconscious field can be individually scaled, observed, observed tracked, controlled, briefly measured, which can lead to many improvements. For example: the "getting fired up" thing can end, like less fighting, more truth, less buying, more happiness, etc.

To analyze unconscious mind by using Algül Digital-Manual/Analog Psycho-Semiotic Language Use Parsers in numbers:

1. By adding to all digital devices used to measure the use of digital psycho-semiotic language from digital/civilian environments.
2. In order to measure the use of Manual-Analog psycho-semiotic language in civilian-everyday life, in order to raise awareness, the classic hand/pocket book as we know it, through classical knowledge acquisition.
3. A digital device (mobile phone, computer) with intelligent, digital glasses or lens articulated differentials will be included in everything it sees in everyday life, as it is possible to measure the universe of meanings surrounding the individual.
4. Is it possible to control 100% unconscious space only by voluntarily chipping individuals? It seems obvious that we will be able to measure the success rate on the application site, but can we foresee this? A digital glasses or lens that can voluntarily plug in chips and/or detect all semiotic uses and transfer all of them synchronously to the digital devices they use, in order to measure 100 percent all psycho-semiotic uses that the individual will be exposed to. Individual rights and freedoms are sacred. Even these small-scale, sustainable awareness studies will be very useful. Chip will be able to create advanced and dangerous situations. As a result, each digital apparatus can be remotely seized and used to serve against its intended purpose.
5. One last repetition; With The Algül Digital Manual/Analog Psycho- Semiotic Language Use Parsers, "unconscious mind that rules our behaviors" (Mlodinow, 2013:BookTitle) are observed, observed

tracked, monitored, controlled on an individual scale; can be briefly measurable, which can lead to many improvements.

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## Investigation of Primary-School Teachers' Attitudes towards Educational Game According to Different Variables

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### ABSTRACT

Educational games are included in student-centered practices in the contemporary education system, which are suitable for the purpose of raising students who know themselves and love to research and learn. Educational games enable children to develop their cognitive, social and psycho-motor skills by being inspired by activities that are different from traditional learning environments and that they love to do in their daily lives. As well as being instructive, it is important that the learning activities to be developed are interesting and entertaining. Teachers who design and implement the activities also play an important role at this point. The aim of this study is to examine the attitudes of classroom teachers towards educational game according to the variables of gender, place of work, professional year, and the grade they teach. For this purpose, the research was carried out according to the descriptive survey model, which is one of the quantitative research methods. The study group consists of 307 primary-school teachers working in Erdemli district of Mersin province in the spring term of the 2020-2021 academic year. The Personal Information Form developed by the researchers and the "Attitude Scale of Basic Education Teachers towards Educational Games" designed by Altuner-Çoban, Bozkurt and Kan (2019) were used in order to determine the attitudes of the participants towards educational games. Statistical analysis package program was used in the analysis of the data and data analysis was carried out by using the appropriate techniques for the data set. As a result of the research, it was determined that primary-school teachers generally have a positive attitude towards educational games. While there was no difference in the variables of gender, professional year and working region, there was a difference in the grade level variable. It has been concluded that teachers who teach lower class groups have a more positive attitude towards educational games.

**Keywords:** Educational Game, Attitude, Primary-school Teacher

### INTRODUCTION

The modern education system aims to raise children with advanced thinking skills, problem solving, strong, tolerant, consistent, high self-confidence and sensitive to universal values. In this context, raising children who are self-aware, have their own truths and are beneficial to society is among the aims of today's education programs. (Gültekin, Atalay and Ay, 2014). In order to achieve these goals, it is necessary to implement new approaches, namely student-centered education (Kukul, 2013). Educational games are also included in student-centered practices.

Games allow children to move away from traditional learning environments and to realize and use their individual talents. The fact that the games have rules and the obligation to follow these rules increases the attention of children and ensures that learning is permanent. In addition to all these, teaching with games also increases the success of students (Hanbaba & Bektaş, 2011). In this context, it is seen that the contribution of educational games is great. The difference of the educational game from the ordinary games is that the educational game is designed for a purpose, in order to bring a knowledge or skill to the player. In addition, attention should be paid to the fact that educational games are of a quality that will provide target-behavior, are appropriate for the age and developmental level of children, and meet their developmental needs. Also, educational games should be of a quality that will attract children's attention and have a good time while playing. By means of educational games, children both have fun and learn. With this way, the acquired knowledge and skills become permanent (Erçetin, 2007). Thanks to educational games, monotony educational environments become interesting and student participation reaches a high level (Chen et al., 2001).

Educational game applications have a positive effect on the physical development of the children. The game also supports the children's memory retention, naming, matching and classification abilities (Aral, Gürsay, & Köksal, 2000). Children exhibit a positive attitude towards learning through educational games. As a result, they participate more actively in the learning process. Thus, the child's sense of curiosity and motivation increases even more. As

a result, the child becomes ready to learn (Kıldan,2001)

It is known that educational games that allow students' active participation have a positive effect on students' academic success (Bayat, Kılıçaslan, & Şentürk, 2014; Boyraz & Serin, 2016). Educational games develop skills such as problem solving and creativity by attracting the attention of the student and making learning enjoyable. They provide permanent learning by increasing motivation. (Torun & Duran, 2014; Altınbulak, Emir & Avcı, 2006). However, teachers think that the program and the game are separate, they do not use the game as an effective teaching method, think that the game will take a lot of time, do not know the importance of the game in the development of the child, and generally see the game as an activity used to evaluate the free time in the program (Cooney, 2004; Tuğrul, Aslan, Ertürk and Altınkaynak, 2014). However, educational game is a teaching technique that entertains while reinforcing the learned information, repeat it in a comfortable environment and provide memorability in mind. Educational game is a technique that develops individual abilities, that teaches winning and losing, obeying the rules, not only on children, but also on all individuals, including adults.

Educational games improve learners' perception levels, decision-making skills and practical thinking skills (Yiğit, 2007). The more the child plays in in-school and out-of-school learning environments, the more stimuli he encounters and develops. These developments can only improve with the positive attitude of classroom teachers towards educational games. This study aims to examine the attitudes of primary-school teachers towards educational game according to different variables, and seek answers for the sub-problems identified for this purpose. Identified sub-problems are as;

- What is the distribution of the primary school teachers' scores according to the scale of attitude towards educational game?
- Do primary-school teachers' attitude scores towards educational games differ according to gender?
- Do primary-school teachers' attitude scores towards educational games differ according to their placement years?
- Do primary-school teachers' attitude scores towards educational games differ according to the grade level they teach?
- Do primary-school teachers' attitude scores towards educational game differ according to the region?

## METHOD

This research was carried out through the descriptive survey model, which is one of the quantitative research methods. Karasar (2006) defines general survey models as scanning studies on the entire population or on selected samples from the population in order to reach a general conclusion about a population. The research aims to determine the attitudes of classroom teachers towards educational game according to different variables. For this reason, the descriptive survey model is thought to be appropriate to use in the research.

## Study Group

Participants to be included in this study are selected by purposive sampling method The study group of the research consists of 307 primary-school teachers working in Erdemli district of Mersin province in the spring term of the 2020-2021 academic year.

**Table 1.** Distribution of Primary-school Teachers by Variables

	Variable	N	%
Gender	Female	145	47,2
	Male	162	52,8
Placement Year	0-5 Years	0	0
	6-10 Years	23	7,5
	11-15 Years	91	29,6
	16-20 Years	76	24,8
	20+ Years	117	38,1
Grade Level	1. Grade	85	27,7
	2. Grade	62	20,2
	3. Grade	74	24,1
	4. Grade	86	28,0
Region	Urban	175	57,0
	Rural	132	43,0

## Data collection tool

In the study, the data have been collected through the Personal Information Form developed by the researchers and the "Basic education teachers' attitude scale towards educational games" developed by Altuner-Çoban,

Bozkurt and Kan (2019). The scale consists of a total of 20 items and two sub-dimensions, with the first dimension "Positive Attitude" 16 items and the second dimension "Negative Attitude" 4 items. The Cronbach's Alpha reliability coefficients for the entire scale and its first and second sub-factors were calculated as .92, .95 and .82, respectively.

## FINDINGS

In the first place, the relevant data was checked whether it showed a normal distribution. Tabachnick and Fidell (2013) state that the distribution shows a normal distribution when the skewness and kurtosis values are between  $\pm 1.50$ . Since the kurtosis and skewness coefficients of the data obtained in the study were between these values, it was supposed that the data showed a normal distribution. For this reason, parametric tests were used in the analyses.

**Table 2.** Descriptive Statistics of Primary-school Teachers' Attitude Scores Towards Educational Game

	N	$\bar{X}$	SS
Positive Attitude	307	4,84	0,356
Negative Attitude	307	2,07	1,281
General Attitude*	307	4,39	0,673

\*The items in the negative attitude sub-dimension were reverse coded in the calculation of the general attitude average.

In Table 2, "Positive Attitude" ( $\bar{X}=4.84$ ), which is the sub-dimension of the "Attitude Scale towards Educational Play" regarding the attitudes of primary-school teachers towards educational game, is observed to be at high level and "Negative Attitude" ( $\bar{X}=2.07$ ) is at a low level. and the general attitude average ( $\bar{X}=4.39$ ) is at a high level.

**Table 3.** T-Test Results of Primary-school Teachers' Attitude Scores Towards Educational Game by Gender Variable

	Gender	N	$\bar{X}$	SS	sd	t	p
Positive Attitude	Female	145	4,84	0,435	305	0,031	0,976
	Male	162	4,84	0,267			
Negative Attitude	Female	145	2,17	1,450	305	1,339	0,181
	Male	162	1,97	1,103			
General Attitude	Female	145	4,34	0,752	305	-1,265	0,207
	Male	162	4,43	0,593			

In Table 3, The "Positive Attitude" ( $t(305)=0.031$ ,  $p>0.05$ ), "Negative Attitude" ( $t(305)=1.339$ ,  $p>0.05$ ) and general attitude averages ( $t(305)=-1.265$ ,  $p>0.05$ ) have shown no statistically significant difference in the attitudes of primary-school teachers towards educational games according to the gender variable.

**Table 4.** ANOVA Result of Primary-school Teachers' Attitude Scores Towards Educational Game by Placement Year Variable

	Source	Sum of Squares	sd	Mean Square	F	p	Diff.
Positive Attitude	Between Groups	,409	3	0,136	1,076	0,359	-
	Within Groups	38,378	303	0,127			
	Total	38,787	306				
Negative Attitude	Between Groups	5,028	3	1,676	1,022	0,383	-
	Within Groups	496,908	303	1,640			
	Total	501,937	306				
General Attitude	Between Groups	1,441	3	0,480	1,060	0,366	-
	Within Groups	137,311	303	0,453			
	Total	138,752	306				

In Table 4, It has been observed that there is no statistically significant difference among "Positive Attitude" ( $F(3,303)=1.076$ ,  $p>0.05$ ), "Negative Attitude" ( $F(3,303)=1.022$ ,  $p>0.05$ ) and general attitude averages ( $F(3,303)=1.060$ ,  $p>0.0$ ) according to the placement year variables.

**Table 5.** ANOVA Result of Primary-school Teachers' Attitudes Towards Educational Game According to Grade Level Variable

	Source	Sum of Squares	sd	Mean Square	F	p	Diff.
Positive Attitude	Between Groups	4,904	3	1,635	14,617	0,000	1-4, 2-4, 3-4
	Within Groups	33,883	303	0,112			
	Total	38,787	306				

Negative Attitude	Between Groups	15,487	3	5,162	3,215	0,023	1-2
	Within Groups	486,450	303	1,605			
	Total	501,937	306				
General Attitude	Between Groups	3,192	3	1,064	2,378	0,070	-
	Within Groups	135,561	303	0,447			
	Total	138,752	306				

As in Table 5, there is a statistically significant difference between the "Positive Attitude" ( $F(3,303)=14,617$ ,  $p<0,05$ ) and "Negative Attitude" score ( $F(3,303)=3,215$ ,  $p>0,05$ ) according to the grade level variable of the primary-school teachers' attitudes towards educational game. Tukey test was applied to determine in which groups these differences exist. According to the result of the Tukey test, it is determined that this difference is between 1st grade and 4th grade, 2nd grade and 4th grade, 3rd grade and 4th grade in the "Positive Attitude" sub-dimension. Again, according to the test results, it can be said that the levels of the 1st grade, 2nd grade and 3rd grade teachers are higher than the positive attitude sub-dimension levels of the 4th grade teachers.

The significant difference in the "Negative Attitude" sub-dimension of the Tukey test is between the 1st grade and 2nd grade teacher scores. The negative attitude levels of the 1st grade teachers are observed to be higher than the negative attitude levels of the 2nd grade teachers.

When the general attitude scores in the table are examined, it is seen that there is no statistically significant difference between the general attitude scores ( $F(3,303)=2,378$ ,  $p>0,05$ ) according to the grade level variable of the primary-school teachers' attitudes towards educational games.

**Table 6.** T-Test Results of Primary-school Teachers' Attitude Scores Towards Educational Game by Region

		Variable					
	Gender	N	$\bar{X}$	SS	sd	t	p
Positive Attitude	Urban	175	4,83	0,251	305	-0,665	0,506
	Rural	132	4,86	0,461			
Negative Attitude	Urban	175	2,02	1,209	305	-0,811	0,418
	Rural	132	2,14	1,372			
General Attitude	Urban	175	4,41	0,610	305	0,595	0,552
	Rural	132	4,36	0,751			

As is seen in Table 6, there is no statistically significant difference between the averages of "Positive Attitude" ( $t(305)=-0,665$ ,  $p>0,05$ ), "Negative Attitude" ( $t(305)=-0,811$ ,  $p>0,05$ ) and general attitude ( $t(305)=0,595$ ,  $p>0,05$ ) of the primary-school teachers towards educational games according to the variable of the region they teach.

## CONCLUSIONS AND DISCUSSION

In this study, which aims to examine the attitudes of primary-school teachers towards educational game according to different variables, the Attitude Scale towards Educational Game have been used and the results have been revealed in line with the scores of 307 primary-school teachers working in Erdemli district of Mersin province. According to the results for the first sub-problem, the scores obtained from the "Attitude Scale towards Educational Play" regarding the attitudes of primary-school teachers towards educational game, it is observed that the results of the scale's positive attitude sub-dimension are high, while the negative attitude sub-dimensions are low. In addition, when the scores obtained from the overall scale are examined, it can be said that the general attitude is high. The primary-school teachers participating in the study can be said to have a positive attitude towards educational games. In the study conducted by Tortop and Ocak (2010), it was concluded that primary-school teachers consider themselves sufficient in educational games.

Özyürek and Çavuş (2016) stated that teachers consider themselves sufficient in using educational games in the learning process. On the contrary, in the study conducted by Hazar and Altun (2018) in which teachers' opinions and competencies regarding educational games are examined, it is stated that Physical Education and Turkish teachers are observed to consider themselves sufficient, while participants from other teaching fields have seen themselves as inadequate. They stated the reason for this to be the teachers not receiving training on educational games.

When the results for the second sub-problem are examined, the Attitude Scores of Primary-school Teachers towards Educational Game do not differ according to gender. There is no statistically significant difference in terms of gender variable both in general attitude scores and in sub-dimensions of the scale. Tortop and Ocak (2010), in their study examining self-efficacy perceptions towards educational play, concluded that male primary-school teachers consider themselves more competent than female primary-school teachers.

Considering the results for the third sub-problem; It has been observed that there is no significant difference both in the general attitude average score and in the positive and negative attitude sub-dimensions according to the placement year variable of Primary-school Teachers' Attitudes Towards Educational Game. Çangır (2008), on the other hand, found in his study with primary school religious culture and moral knowledge teachers that teachers with less seniority years use educational games more than those with more seniority years.

Considering the results for the fourth sub-problem; It is seen that the Attitude Scores of Primary-school Teachers towards Educational Game differ according to the grade level variable. While this difference is not reflected in the general attitude average scores, it can be observed in the sub-dimensions of the scale. According to the results of the "Positive Attitude" sub-dimension, the 1st grade, 2nd grade and 3rd grade teachers have higher positive attitude sub-dimension levels than the 4th grade teachers. When the "Negative Attitude" sub-dimension is examined; The negative attitude levels of the 1st grade teachers are found to be higher than the 2nd grade teachers. Similar to these results, Çangır (2008) found in his study that teachers reduced the use of educational games as the grade level increased. He pointed out that the reason for this situation is the difficulty of classroom control and the decrease in the ambition of the students to play as they get older. In the study conducted by Tortop and Ocak (2010), teachers stated that they take class and age levels into consideration when planning the activities they will do, and they adjust the duration of the educational games according to the signs of fatigue. Also, Kırbaş and Breaking Girgin (2018); Topçu, Küçük, and Göktaş (2014) also emphasized the importance of educational games to be suitable for age level in their studies. In the light of this information, one can conclude that the reason teachers design educational game-based learning activities at lower grade levels have a high attitude is that they design shorter-term activities and implement them correctly.

Looking at the results for the fifth sub-problem; It is observed that the Attitude Scores of Primary-school Teachers towards Educational Game does not differ according to the region of study. These results are seen both in the general attitude average scores and in the positive and negative attitude sub-dimensions.

When the results of the study are considered in general, it is seen that the primary-school teachers have a positive attitude towards the educational game. In addition, it is observed that there is no statistically significant difference in the variables of gender, placement year and working region. On the other hand, when the variable of grade level is examined, the attitudes of teachers who teach lower grade levels are observed to be higher towards educational games. This indicates that more attention is paid to educational games at younger ages and that teachers are not indifferent to it. In line with the results of the research, it is recommended to encourage teachers to use educational games suitable for age and grade level more in the learning process, and to conduct research on issues such as the effectiveness of educational games and attitudes towards educational games in different fields.

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## Powerful Hecuba: A Heroine in Action

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### ABSTRACT

Hecuba, who despite being old, a woman and a war prize, actively participates in the dramatic action alongside the chorus of Trojan women in the face of the Greek overlord Agamemnon's inability to implement the just atonement for the impiety they have received. Euripides, in his tragedy *Hecuba*, not only gives voice to the women, but also gives them the possibility, as true protagonists, to be endowed with the ability to actively carry out the just punishment for the treachery they have received from the Thracian king, Polymestor.

### INTRODUCTION

One may not speak of contemporary gender studies without going to the origins of the treatment of women in literature, more specifically in its presence in the preserved texts of Ancient Classical Greece. And it is in the theater, and mainly in tragedy, where we will find clear examples of female characterization. If the heroines represented in the plays of the three most important tragedians (Aeschylus, Sophocles and Euripides) are analyzed, a clear dividing line can be seen between female victims (as submissive wives, captives, sacrificed young girls) and empowered women. In this second group of women, among whom are such well-known figures as Medea and Clytemnestra, one finds the main heroine of Euripides' homonymous work, Hecuba. It is the treatment of this woman that even today surprises all who study Greek tragedy and who, without a doubt, is considered a clear example of the power that Euripides puts in female hands. Furthermore, Euripides not only gives voice to the former queen of Troy, but puts her on the scene as a main character who acts, and she acts like any male character would, being capable of causing even the death of her enemies.

### THE STUDY AND FINDINGS

Euripides premiered the *Hecuba* tragedy in 424 B.C.E. It is a work tinged with great criticism of permanent warlike conflict (Romero Mariscal, 2005, pp. 505-513), and the decline of political values that violate basic norms of coexistence (Bañuls y Crespo, 2007, pp. 105-163). The purpose of the drama is to restore a broken order, mainly expressing the total renunciation of improper practices, the breaking of established norms, the personal interest of the "political class" and the consequent distrust of the δῆμος, with an undercurrent of lament for the consequences of defeat for the most defenseless (women, elderly and children). The beginning of the play is enlightening in this sense, as the ghost of Polydorus, son of Priam and Hecuba, reveals the play's fundamental theme, the violation of ξενία (Baslez, 2008).

The ghost of Polydorus tells how Polymestor, the one who was supposed to protect him (ξένος πατρός, line 26), upon learning of the fall of Troy and the death of Priam, decides to kill the child in order to steal the gold treasure that he had brought. This moral relationship of hospitality between Polymestor and Priam is the reason why Hecuba, when she recognizes the corpse of her son, screams and expresses the incredulity manifested shortly after in lines 714-716. Moreover, it is a straightforward question (line 715): ποῦ δίκᾳ ξένων; // *What about the laws between the guest and the host?* This question is the key to interpreting the mother's attitude from this moment on. It is the search for a just punishment for the traitor, who has broken one of the basic rules of coexistence sanctioned by the gods, which moves this mother to action. Hecuba, henceforth, does not act alone. She has the collaboration of the chorus of Trojan women.

The *Hecuba* tragedy is usually interpreted as the representation of the loneliness and despair of the main heroine. She symbolizes the suffering mother who has previously lost her loved ones and now loses her two youngest children. Her daughter, Polyxena, is sacrificed as the posthumous booty of Achilles, and her son, Polydorus, is murdered at the hands of his Thracian host Polymestor. Under this premise, many scholars have seen Hecuba's vengeful reaction as a consequence of despair over the pain of a new death, an impious death, a reaction considered by some as a sign of her heroism (Kovacs, 1987, pp. 78-114), and by others, proof of her degradation (Abrahamson, 1952, pp. 120-129; Luschig, 1976, p. 233; Reckford, 1985, pp. 112-128; Nussbaum, 1986, pp. 397-421). Despite

these two views within literary criticism, there is a certain unanimity in studies affirming the cruelty of the revenge carried out by the old woman. Falkner (1989, p. 124), Collard (1975, pp. 65-66) and Gellie (1980, p. 40) have remarked the excessiveness of the revenge and the comparison with those of Medea and of Alcmene; while Michelini (1987, p. 141) reminds us that the standards of the Greeks of the time about how revenge should be committed is different from ours and states that Hecuba should not have failed to produce compassion in the public in the second part of the tragedy.

The present paper intends to demonstrate that her actions are not out of cruelty, but of reparation, of justice. They are undertaken by Hecuba and the Trojan women since Agamemnon, a powerful Greek leader, was not in a political position to carry it out.

Indeed, the queen's revenge is a journey in which the heroine, at the same time as the chorus, both progressively recognizes a necessity for, as well as executes a logical retribution against those guilty of impiety. Throughout the play, the fate of Troy remains as an unbearable disgrace for the Trojan captives. From one *stasimon* to another they go from a feeling of incomprehension, as a result of the absurdity of the war, to the realization to some extent of the logical punishment in the destruction of their city for the kidnapping of Helen by Paris, the Trojan prince. For her part, Hecuba has to endure the deaths of two of her children. These deaths are two independent events, since they are not realized for the same reasons, but nonetheless are connected to the heroine's revenge.

The sacrifice of Polyxena and the revenge of Hecuba arise from the same moral principle: the need to honor the obligations towards the φίλοι after someone's death. The Greeks, on the one hand, following Achilles' request for his corresponding war spoils, need to honor the hero with the young woman's blood, while the old woman needs to punish Polymestor, the murderer of her child, for not having respected the principle of ξενία. Likewise, there are causal effects in the dramatic action between sacrifice and revenge: without the death of her daughter, Hecuba would not have discovered her son's body. Moreover, if this death had not been admirable, as the herald related in his speech, she could not have benefited from Agamemnon's benevolence, which was necessary to bring her plot to fruition.

It is important to point out that Polydorus is not a direct victim of the Trojan War, but an indirect one, since his death is caused by the impious and unjust act of a φίλος who was obligated to provide protection. Thus, it is not surprising that the death of Polyxena, though leaving Hecuba absorbed in pain, does not provoke any other reaction in her than that of resignation in the face of misfortune (Sorkin, 1993, pp. 114-116). Before Hecuba starts the funeral rites for her daughter, the Greeks bring the body of her youngest son, whom she believed to be safe in the home of the most beloved of her guests. Yet the son was murdered by him out of greed, violating the divine law of hospitality. This last death, for such a vile motive, and through the betrayal of sacred laws, transforms Hecuba's pain into rage (χόλος, line 1118), and from a state of desolation she takes action in search of reparation.

In order to compensate for (correct) the betrayal, Hecuba needs the help of Agamemnon. Knowingly, she limits herself to asking for those things which he can grant her: to be his confidant, and to prevent the aid of the Achaeans in case they want to help the traitor during the revenge process (lines 870-874). The hero, surprised, asks her how she, a simple old woman, is going to finish off Polymestor and if she is going to have any help (lines 876-880). In response, Hecuba mentions the Trojans and the deception she is about to effect (lines 881-885):

**Ἑκάβη.-** στέγαι κεκεύθασ' αἶδε Τρωάδων ὄχλον. / **Ἀγαμέμνων.-** τὰς αἰχμαλώτους εἶπας, Ἑλλήνων ἄγρην; / **Ἑκάβη.-** σὺν ταῖσδε τὸν ἐμὸν φονέα τιμωρήσομαι. / **Ἀγαμέμνων.-** καὶ πῶς γυναιξὶν ἀρσένων ἔσται κράτος; / **Ἑκάβη.-** δεινὸν τὸ πλῆθος σὺν δόλῳ τε δύσμαχον. / **Ἀγαμέμνων.-** δεινόν· τὸ μέντοι θῆλυ μέφομαι γένος.

**Hecuba.-** These tents hide a multitude of Trojans. / **Agamemnon.-** Do you mean the captives, the spoils of the Hellenes? / **Hecuba.-** With them, I will punish my murderer. / **Agamemnon.-** And how are women going to have power over men? / **Hecuba.-** Terrible is the mob and through deception, invincible. / **Agamemnon.-** Terrible. But, nevertheless, I censure the female sex.

Agamemnon assumes that Hecuba's intention is to kill Polymestor, although she has not said so. Perhaps this is an indirect reference to Athenian law, since already in Draco's code premeditated murder (ἐκ προνοίας), tried in the Areopagus court, was punishable by capital punishment (Cantarella, 2000, pp. 62-63).

The episode ends with the heroine ordering a slave to summon Polymestor, along with his children, and with

Agamemnon's request to delay Polyxena's funeral. The Atreid agrees to be her confidant and wishes her success in her plan, since the punishment for the breach of the rights relating to the πόλις (lines 902-904) is justice: γένοιτο δ' εὖ πως · πᾶσι γὰρ κοινὸν τόδε, / ἰδίᾳ θ' ἐκάστῳ καὶ πόλει, τὸν μὲν κακὸν / κακὸν τι πάσχειν, τὸν δὲ χρηστὸν εὐτυχεῖν // *Hopefully, all ends well, since this is the common interest, as individuals and as a city, that the evil suffer and the good be pleased.* Agamemnon appropriates Hecuba's demands for justice and unites the private and public spheres with regard to compliance with the basic rules of coexistence.

As soon as the Thracian king arrives on the scene, and even before Hecuba addresses him, he expresses his regret for the misfortunes that have befallen her (lines 954-955): δακρύω σ' εἰσορῶν πόλιν τε σὴν / τήν τ' ἀρτίως θανοῦσαν ἔκγονον σέθεν // *I cry when I contemplate you, your city and your daughter who has just died; and he justifies himself by not having gone to see her before (lines 962-967).* Far from showing himself as the impious man that Hecuba had portrayed, here Polymestor appears conciliatory and saddened by the former queen's current situation, to the point of asking her how he can help (lines 976-977), since he, as does the army of the Achaeans, considers it φίλη (lines 982-983).

Hecuba immediately begins a dialogue loaded with irony in order to successfully implement her plan. First, she asks if her son is alive, to which Polymestor does not hesitate to answer that he is (line 989). She next asks if the gold that was handed over with the boy is safe, to which he again answers affirmatively (lines 994-997). It is then that Hecuba begins to reveal a story of a hidden treasure in the temple of Athena Ilias and the existence of a quantity of money (χρήμαθ', line 1012) that she has managed to get out of Troy and has hidden in her tent (line 1014). She encourages him, along with his children, to enter the Trojan tents, where she assures there are no men (line 1018) and, therefore, there is no danger so he can take the money safely. And without a doubt, he and his sons do so in order to obtain such succulent loot. At this point, the chorus intervenes in song and anticipates the misfortune that is about to befall Polymestor (lines 1025-1033):

ἀλίμενόν τις ὥς εἰς ἄντλον πεσὼν / ἴλἐχριος ἐκπεσῇ φίλας καρδίας, / ἀμέρσας βίον. τὸ γὰρ ὑπέγγυον / δίκαια καὶ θεοῖσιν οὐ συμπίπτει· ὀλέθριον ὀλέθριον κακόν.† / ψεύσει σ' ὁδοῦ τῆσδ' ἐλπίς ἢ σ' ἐπήγαγεν / θανάσιμον πρὸς Ἄϊδαν, ἰὼ τάλας· ἀπολέμω δὲ χειρὶ λείψει βίον.

*Like one who has fallen sideways into a bottomless sea, you will lose your precious heart, you will be deprived of life. For what is due to justice and to the gods is not toppled. Dismal, dismal disgrace! Hope will deceive you on this path, the one that has led you mortal toward Hades. Oh wretch! You will abandon life by a hand that did not make war.*

However, the Trojans, or at least a part of them that are outside the tents do not know exactly what is happening inside them and believe that his punishment is death, a sentence which he himself is guilty of by his own fault, a human and divine fault (δίκαια καὶ θεοῖσιν, v. 1029).

Immediately afterwards, the groans of Polymestor are heard, lamenting his having been blinded and the cruel murder of his children (Orban, 1970, pp. 323 ff.; Tarkow, 1984, pp. 123-136) and who, full of fury and impotence, threatens the Trojans (lines 1039-1040): ἀλλ' οὔτι μὴ φύγητε λαιψηρῶ ποδί· / βάλλων γὰρ οἴκων τῶνδ' ἀναρρήξω μυχούς // *No, you don't need to flee on nimble feet! Well, by throwing things I will poke holes in every nook and cranny of these hovels.* At this precise moment, the chorus asks the following question (lines 1042-1043): βούλεσθ' ἐπεσπείσωμεν; ὥς ἀκμὴ καλεῖ / Ἐκάβη παρεῖναι Τρῳάσιν τε συμμάχους // *Do you want us to enter? For the occasion exhorts us to assist as allies in favor of Hecuba and the Trojans.*

The chorus is deeply involved in the Thracian king's punishment by the heroine. When Polymestor describes the attack against him, he speaks graphically of the violence of Hecuba's servants (lines 1132-1182), but there is no explicit indication of the previous entry of any chorus into the tent. One can consider the chorus to be divided into two semi-choruses: one that participates actively in the action, while the other wonders whether to come to the aid of the heroine and the other Trojans. As in *Andromache* (lines 817-824), the main character is off stage in a situation that entails danger, and the chorus wonders if it can do something to help. But before taking any action, the character in question enters the stage, dispelling their doubts and concerns. And indeed, Hecuba leaves the tents euphoric, rebuking the traitor and announcing that she has blinded him and has killed his two children with the help of the best Trojan women (σὺν ταῖς ἀρίσταῖς Τρῳάσιν, line 1052). The old woman is finally satisfied, for her impious host has repaid his moral debt (δίκην δέ μοι / δέδωκε, lines 1052-1053).

The reference to the 'best Trojan women' could exclude the participation of the members of the chorus, however, upon his exit from the tent, Polymestor's words and attacks seem to be directed at all the Trojan women (lines 1059-1064): ποίαν / ἢ ταύταν ἢ τάνδ' ἐξαλλάξω, τὰς / ἀνδροφόνους μάρψαι χρήζων Ἰλιάδας, / αἶ με διώλεσαν; /

τάλαινα κόραι τάλαινα Φρυγῶν // *Which way will I charge, this way or that, to reach the Trojan assassins who have destroyed me? Unfortunate, unfortunate daughters of the Phrygians!* The large number of rhetorical questions in this passage reflects the anguish and helplessness of not being able to contemplate and decide where to direct his step. The tension in the monody of the king is in *crescendo*, and the dance, as a "hunt", had to be composed of rapid movements, each time to a different place (Prato, 1984-1985, p. 140). The footsteps that the Thracian hears seem to be certainly those of the chorus, which either moves away from or surrounds him as he performs his desperate dance. It is possible that here the choreographers replace, both on stage, as well as in Polymestor's blind assessment, the Trojan women who perpetuate the punishment. In his monody, he makes no reference as to whether or not he is carrying the corpses of his children. It seems, however, that he is faced with the difficult decision of leaving them behind and continuing with the "hunt" for the Trojan women (Ley, 2007, p. 109; Collard, 1991, p. 190). Polymestor wishes to eat his full of meat and bones with a feast of wild beasts (ἀγρίων θηρῶν, line 1073) an animalization of the Trojan women who make up the desired banquet. This cannibalistic wish by the Thracian king is undoubtedly reminiscent of Hecuba's wish in *Iliad* 24. lines 212-214 of eating Achilles' liver, murderer of her son Hector.

The hero continues to sing, but this time calling to his fellow Thracians and their Achaean allies for help (lines 1089-1094). This attracts Agamemnon who, pretending to know nothing, listens to the Thracian king's accusations and threats against Hecuba. Then, the Atreid asks him to speak civilly (lines 1129-1130): ἐκβαλὼν δὲ καρδίας τὸ βάρβαρον, / λέγ' // *as soon as you have expelled barbarism from your heart, speak*. Agamemnon says he is willing to listen to Polymestor's version, and to Hecuba's, and to judge righteously (κρίνω δίκαιος, line 1131).

Polymestor begins by confessing that he has killed Polydorus (line 1036), but at no time does he refer to having a ξενία relationship with the Trojan family. Nor does he mention Priam's money, the true motive for the murder. Instead, Polymestor tries to justify his actions out of the fear that if the young Trojan had lived, he might have tried to revive the power of Troy, and the Achaeans for their part, might start a new warlike conflict with devastating consequences for all (lines 1138-1144). Next, the Thracian describes in detail the attack by Hecuba and her friends. He explains how the women deprive him of his weapons and take his sons away (line 1155-1159), how later the women draw knives and end the life of the children (lines 1160-1164), and how they blind him with their brooch pins (lines 1169-1171). He furthermore insists on having done Agamemnon a favor by killing an enemy (lines 1175-1176). The Thracian ends his speech with a criticism of the entire female gender, the cause of his current misfortune, which makes the chorus judgmentally criticize his insolent attitude (lines 1183-1186).

The king is presented as a beast that chases μαιφόνους κύνας, bitches stained with crime, and as a hunter who searches the wall: the Greek term is κυνηγέτης, literally "dog driver." As Rodríguez Cidre (2010, p. 238) rightly points out about this comparison: "this implies a deep irony in the text as a blind Polymestor, feeling the walls, can hardly lead to the 'bitches' who deprived him of his children." This reference to dogs, as well as the one found in line 1078, is not at all innocent in a tragedy where the main heroine will be virtually transformed into a bitch. Indeed, we see in *Hecuba* two versions of the slaughtering in two very different situations: the first that of Polyxena, outside, in the ritual of a sacrifice with an officiant and with the entire army, on the one hand, as witness; the second is that of the children, two victims inside the tents who are denied the rite, with a multitude of murderers and a single witness, on the other hand, beholding the last thing he will ever see. This external / internal confrontation reaffirms the feminine character of the murderers, but on an atrocious note, as a fearful scene of carnage.

After the allegations of the Thracian King, it is Hecuba's turn. She reveals to Agamemnon the true motive for Polydorus' murder, the desire on the part of Polymestor to seize Priam's treasure (lines 1206-1207). She eloquently argues that he has not ended her son's life out of friendship with the Greeks, but rather killed him when there was no longer any reason to do so, for nothing but the Trojan money (lines 1214-1216). This is a crime that deserves punishment, and so the heroine ends her intervention with a warning to Agamemnon in which she reminds him of the charges of impiety and disloyalty for which Polymestor is being tried (lines 1232-1235).

As promised, Agamemnon establishes himself as the judge of ἀγών and explicitly says that he does so because a failure to do so causes him shame (αἰσχύνην φέρει, line 1241). The Atreid very quickly refutes the excuses that Polymestor has given, concluding that the Thracian's motivations were greed, and insisting that this greed led to ἀποκτείνει ξένον (line 1244), something he reiterates three lines later, ξενοκτονεῖν (line 1247). With this, Agamemnon collects the words of Hecuba from line 1216: ξένον κατέκτας σὴν μολόντ' ἐφ' ἐστίαν // *you killed the guest who came into your home*. A few words that reflect the same opinion from figures of opposing sides, Greeks and non-Greeks, about this type of crime: a crime against the basic norms of civic behavior must be punished. The gods in this tragedy also share this vision and the crime is punished by them. The winds, now that the punishment has been enforced, are once again favorable to the Greek ships.

Polymestor is forced to accept his sentence. But while Hecuba rejoices at having succeeded in bringing his ruse to light and justice, the Thracian taunts with three predictions that will take place in the future: the metamorphosis of Hecuba into a bitch with fiery eyes (v. 1265) and the deaths of Cassandra and of Agamemnon at the hands of Agamemnon's wife Clytemnestra (lines 1275, 1277 and 1279). This end to the character constitutes a Euripides innovation. The metamorphosis is linked to a lithification, since it says that the old woman, on the high seas, will become a stone bitch. Her body, turned into a canine statue, will serve as a signal to sailors. This lithification enables an identification of the character of Hecuba with that of Niobe. But in addition to the stone element, Hecuba appears like Niobe as the mother of the best children and, at the same time, as the orphan of all of them (Segal, 1993b, p. 71; Iriarte, 2002, pp. 135-136), for a relationship between Hecuba and Niobe.

Although one should keep in mind the different negative connotations linked to the dog in the Greek world since it can refer to shamelessness, cowardice or selfishness, it is also important to remember that the bitch is considered by the Greeks to be a symbol of motherhood. This can be seen in the Yambo of the women of Semonides of Amorgos (folio 7W, line 12). Hecuba's dog animalization has received numerous readings. As previously stated, the bitch is related to a maternal valence (Gregory, 1999, p. 34; Loraux, 1990, p. 146). Nevertheless, in her role as avenger, she could be related to the Erinyes (Mossman, 1995, p. 196; Zeitlin, 1996, p. 185). Still other studies see an allusion to the goddess Hecate since the dog is one of the symbols of this divinity generally linked to childbirth and death (Bukert, 1985, p. 65; Padel, 1992, p. 102). Additionally, Sorkin (1993, p. 122) assimilates metamorphosis with the Sphinx monster. Finally, some analyses propose, in general terms, the characterization of Hecuba turned bitch as a sea monster given the geographical location (Segal, 1993a, pp. 158-159, 180 and 185). A singular interpretation of the metamorphosis is that proposed by Rodríguez Cidre (2010, pp. 242 ff.), who proposes that Hecuba's transformation into a bitch can be read as the synecdoche of Scylla.

## CONCLUSIONS

Much has been written about the evolution of the character of Hecuba, from her maternal attitude, to the sacrifice of Polyxena, and to the cruelty with which she executes her plan of revenge to blind Polymestor and kill his two sons. More than frequently what interpreters have wanted to see in this tragedy is the representation of the fragility of human fortune and the disintegration of a noble character that, attacked by misfortune, eventually acts as a dehumanized savage. The metamorphosis of Hecuba into a dog, as predicted by Polymestor, is the final phase of this dehumanization. Nevertheless, it is not the first case in Greek tragedy where the death of innocent children occurs, e.g., *Medea*, nor should it surprise that in fifth century B.C. Athenian society, the punishment for a crime also fell on the relatives of the culprit.

Women seem to have dominated the tragic scene, both qualitatively and quantitatively, being characterized as mothers ("good" / "bad") / daughters / wives (faithful / unfaithful) / sisters / even nurses or other servants. This characterization is quite obvious and a concern of first order. This is because of the fundamental role women play, not only in myth but - of course - in history, in the real world. Most women do not have relevance by themselves but in function of the family and the man, in relation to which they are first "daughters of ..." (and also "sisters of ..."), then - usually - "wives of" and, finally, "mothers of ..." If we examine the female characters of mythology - mortal women, heroines - we see that they are largely victims of man's brutality, or simply of his selfishness, betrayal or coldness. Still, and despite this, other women no longer remain merely passive, tearful victims who limit themselves to lamentation or suicide.

Other women are dauntless. They are rebellious, vindictive women who protest the injustices to which they are subjected and the inequality with which they are treated because of their sex. They do not allow themselves to be trod upon, and they themselves take justice into their own hands. They are architects of death. They are the ones who rise up murderous against those who have caused them deep grievance or injustice, and it is almost always against men. This is the case of Hecuba, whose participation in the dramatic action, as shown above, is active, essential and powerful. Indeed, it is the power that Hecuba wields, despite being an old, captive woman, that continues to surprise any and all who wish to engage this Euripidean tragedy.

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## Primary School Teacher Candidates Perspectives of Alternative Education Practices

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### ABSTRACT

In this study, it was aimed that the primary school teacher candidates develop their alternative education models within the scope of the “Alternative Education Practices in Primary School” course. The research study group which was designed with the qualitative research method, consisted of 77 primary school teacher candidates studying at Kastamonu University, Faculty of Education, Department of Primary School Education. “Alternative Education Model Form” was used as a data collection tool in the research. The data were analyzed by the descriptive analysis method. According to the results, it was seen that primary school teacher candidates prefer to give a special name and a suitable name for alternative education applications. In their alternative methods primary school teacher candidates aimed to discover themselves and contribute to their development. They preferred constructivism theory for their alternative education practices. Also primary school teacher candidates mainly focused on the learner-centered, flexible and experience-based approaches to the curricula of alternative education practices. In the alternative education practices they developed, primary school teacher candidates generally talked about strategies, methods and techniques to improve students’ higher-order thinking skills. Finally, it has been seen that the evaluations in alternative education models of primary school teacher candidates mainly consist of performance-oriented evaluations and portfolios.

**Keywords:** Primary school teacher candidates, alternative education, alternative education practices.

### INTRODUCTION

In the broadest sense, education, which is defined as the process of changing the behavior of individuals (Tyler, 1949), is also seen as the transfer of beliefs, moral standards, knowledge and skills from generation to generation (Curzon, 2004). Curzon (2004) states that education includes curricula, methods, techniques, tools and materials related to the teaching-learning process. Based on this definition, alternative education can be defined as the changes in the elements in the education process.

Deal and Nolan (1978) state that alternative education is a variation of the traditional school. In O’Brien, Thesing and Herbert (2001) alternative education has a more focused curriculum, a shared sense of purpose, a learner-centered philosophy, a non-competitive environment, greater autonomy, and a more personalized relationship between students and staff a smaller unit. Defined as a structure containing alternative education practices that focus on creating non-traditional options to help meet the needs of all students (De La Rosa, 1998). Morley (1991), emphasizes that alternative education is a way to ensure that every student is successful, make available a wide range of options, and enable students to recognize their strengths. Similarly Kartal (2014) defines that alternative education practices include;

- small size,
- supportive environment,
- individual programming,
- versatility,
- autonomy and democratic structure,
- participation of family and society in management,
- well-defined standards and rules,
- targeted services,
- expresses that it has accountability and continuous evaluation features.

Waldorf, Montessori, Reggio Emilia, Summerhill and Home Schooling are the most well-known among these models globally, while the most common alternative education applications in our country are; multigrade classes, mobile teaching and regional boarding schools. In Turkey, primary school teachers’ first places are generally rural areas and they often start working there in village schools with multigrade classes, mobile teaching and regional boarding schools. This situation requires primary school teacher candidates’ to know these alternative education practices. In this context the “Alternative Education Practices in Primary School” course is included in the classroom education undergraduate program. In this course;

*“Geographical, social and economic factors affecting education in Turkey, ways of meeting the educational needs of children in rural and scattered settlements; mobile teaching, advantages and disadvantages of mobile teaching; regional primary boarding schools, advantages and disadvantages of boarding primary schools; teaching in multigrade classrooms, the causes of multigrade classrooms, the basic foundations of teaching in multigrade classrooms and the way of teaching, planning of teaching in multigrade classrooms, classroom management and assessment activities, and teacher’s duties and responsibilities in multigrade classrooms, teaching practices in multigrade classrooms around the world.”(YOK, 2021).*

So it can be expected that primary school teacher candidates taking this course will learn about alternative practices in our country and have knowledge about alternative education practices that are being applied in the world.

### Aim of the Study

It is expected that primary school teacher candidates who are taking Alternative Education Practices in Primary School course, will learn about alternative practices in our country and know alternative education practices that are being applied in the world. Within this context, in this study, it was aimed that the primary school teacher candidates would develop their alternative education practices within the scope of the “Alternative Education Practices in Primary School” course.

### THE STUDY

In this study, a qualitative research design was used to determine the alternative education practices of primary school teacher candidates.

### Study Group

The research study group, which was designed with the qualitative research method, consisted of 77 primary school teacher candidates studying at Kastamonu University, Faculty of Education, Department of Primary School Education. The students were the third grade students attending the “Alternative Education Practices in Primary School” course. Within the scope of the course, throughout the semester, students were informed about alternative education practices which were being used in Turkey and the world, and discussions were held on these practices. At the end of the term, they were asked to propose an alternative education implementation.

### Data Gathering Tool

“Alternative Education Model Form” was used as a data collection tool in the research. The form consists of six items:

1. Name of Alternative Education Model
2. Purpose of Alternative Education Model
3. Educational Theories/Models Which Implemented in Alternative Education Model
4. Features of the Alternative Education Model Curriculum
5. Strategies, Methods and Techniques Which Will be Used in Alternative Education Model
6. Assessment-Evaluation Approaches Which Will be Used in Alternative Education Model

### Data Analysis

The data of the research were analyzed by the descriptive analysis method. In order to ensure the reliability of the research, the data were analyzed by an expert other than the researcher, and the percentage of agreement between them was calculated by Miles and Huberman (1994) formula. The value calculated according to the percent agreement suggested was determined as .87. Findings were supported by direct quotations when they were relevant to the findings.

### FINDINGS

#### Findings of the Naming of Alternative Education Model

The first finding discussed in the study is the naming of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 1.

**Table 1:** Descriptive statistics about the name of alternative education model

Name of Alternative Education Model	f
Proper Name (Anka, Gardenia, Thoth, etc.)	32
Purpose of Model (Developmental Model, Transformative model, etc.)	20
Catch-phrases as a name(I’m discovering myself, my school my future, etc.)	14
Surname	5
Name-Surname	4

Name	2
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When Table 1 is examined, it is seen that primary school teacher candidates mostly use proper names like Anka, Gardenia, etc. in naming alternative education practices. This is followed by the purpose of the model naming (Developmental model, transformative model, etc.). Then catch-phrases as a name come like “*My school my future!*”. Primary school teacher candidates also used their surnames, names or both in naming.

### Findings of the Purpose of Alternative Education Model

Another finding discussed in the study is the purpose of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 2.

**Table 2:** Descriptive statistics about the purpose of alternative education model

Purpose of Alternative Education Model	f
Enabling students to discover himself/herself	38
Contributing to the development of the student	27
Enabling students to acquire the nature of knowledge	20
Contributing students to become more independent	20
Contributing to social development and change	17
Preparing the student for life/future	14
Enabling students to love nature and animals	10

When Table 2 is examined, it is seen that primary school teacher candidates mainly prefer enabling the student to discover himself/herself for alternative education applications. Then it comes contributing to the development of the students. Enabling students to acquire the nature of knowledge is also among the aims of alternative education practices of primary school teacher candidates. Primary school teachers also stated that they aim at contributing students to become more independent in their models. Contributing to social development and change, preparing the student for life/future and enabling students to love nature and animals are the other statements of primary school teacher candidates models’ purposes. The opinions of the primary school teacher candidates on this subject are presented below:

*“It is an alternative education model in which students can express their thoughts freely, discover their talents and develop themselves in every way.”* (Enabling students to discover himself/herself-C11)

*“Purpose of the model is to encourage children to discover their interests and is to contribute them to become more independent and self-confident.”* (Contributing to the development of the student-C5)

*“Purpose of the model is to ensure that students will not only memorize the information but also will learn it with its full meaning.”* (Enabling students to acquire the nature of knowledge-C38)

### Findings of the Educational Theories/Models Which Implemented in Alternative Education Model

The other finding discussed in the study is the theories/models of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 3.

**Table 3:** Descriptive statistics about educational theories/models

Educational Theories/Models	f
Constructivism	59
Multiple Intelligence Theory	31
Cooperative Learning	19
Social Learning Theory	16
Cognitive Learning Theory	13
Active Learning	7
Behavioral Learning Theory	5
Mastery Learning/Learning at School	4
Other (brain based learning, etc.)	3

According to Table 3, primary school teacher candidates mostly prefer Constructivism in selecting models/theories related to the alternative education practices they developed. The theory of multiple intelligences follow this. Then

comes cooperative learning, social learning and cognitive learning theory. A small number of primary school teacher candidates prefer active learning, behavioral learning theory, mastery learning/learning at school and brain based learning.

#### Findings of the Features of the Alternative Education Model Curriculum Which Will be Implemented

The fourth finding discussed in the study is the curriculum of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 4.

**Table 4:** Descriptive statistics about alternative education model' curriculum

Alternative Education Model' Curriculum	f
Learner Oriented	27
Flexible/Frame	18
Experience Oriented	15
Spiral Approach	14
Various Courses	12
Inquiry-Based	8
Other (Thematic, Modular, Core, etc.)	8

When Table 4 is examined, it is seen that the primary school teacher candidates mainly state that the curriculum should be learner-oriented in their suggestions for alternative education practices. They also focused on a flexible and experience-oriented program. It is also among the suggestions that the curriculum should be suitable for the spiral approach, include various courses and be inquiry-based.

#### Findings of the Strategies, Methods and Techniques Which Will be Used in Alternative Education Model

Another finding discussed in the study is the strategies, methods and techniques of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 5.

**Table 5:** Descriptive statistics about alternative education model' strategies, methods and techniques

<i>Strategies, Methods and Techniques</i>	<i>f</i>	<i>Strategies, Methods and Techniques</i>	<i>f</i>
Discovery learning	35	Six hats	16
Inquiry	34	Field trip	16
Creative drama	32	Demonstration	16
Problem solving	29	Station	15
Q&A	23	Group studies	12
Brainstorming	22	Educational games	11
Observation	21	Expository instruction	10
Discussion	20	Project	10
Case study	18	Other (interview, explicating, etc.)	10

According to Table 5, primary school teacher candidates prefer mainly discovery learning and inquiry in alternative education applications. This is followed by creative drama, problem solving, questioning&answering, brainstorming, observation and discussion. They also prefer case study, six hats, field trip, demonstration and station. Educational games, expository instruction and project also prefer by primary school teachers' alternative education practices.

#### Findings of the Assessment Approaches Which Will be Used in Alternative Education Model

The final finding discussed in the study is the assessment approaches of the primary school teacher candidates for the alternative education practices they developed. Findings related to this are given in Table 6.

**Table 6:** Descriptive statistics about alternative education model' assessment approaches

Assessment-Evaluation Approaches	f
Performance oriented	27
Portfolio	24
Self-evaluation/peer evaluation/group evaluation	19
Observation	11
Structured grid	9
Exams	9
Rubrics	9
Other (asking questions, questionnaire, interview, etc.)	9

When Table 6 is examined, it is seen that primary school teacher candidates mainly use performance oriented assessment in their alternative education practices. Similarly, portfolios took second place. And then self-evaluation/peer evaluation/group evaluation was located. Observation has also taken its place among the evaluation methods. Primary school teacher candidates also prefer a structured grid, exams and rubrics as assessment approaches.

## CONCLUSIONS

This research was carried out to develop classroom teacher candidates' practices related to alternative education. When research results were examined, it was seen that primary school teacher candidates prefer to give a special name and a suitable name for alternative education applications. It was seen that all students put positive names. In their alternative methods primary school teacher candidates aimed that their students to discover themselves and contribute to their development. It was seen that the primary school teacher candidates focused on models that would make students feel free and safe, that acquiring of the nature of knowledge was necessary, and that they focused on models that are prepared for the future and what they should be suitable for daily life. As a theory, constructivism was preferred the most. Considering all this information, it can be stated that they plan to create alternative education practices in line with a contemporary approach. According to Reimer and Cash (2003) quoted in the study conducted in North Carolina (2001), it is emphasized that alternative education practices should focus on individual development, it is essential for students to feel themselves in a family atmosphere, and learning should be based on experiences. In the light of this information, it can be said that the primary school teacher candidates set appropriate goals for alternative education principles.

The primary school teacher candidates mainly focused on the learner-centered, flexible and experience-based approaches to the curricula of alternative education models. This situation is consistent with the other research findings and shows that teacher candidates have adopted a curriculum approach that puts students at the center. When the literature is examined, it is seen that developing curricula in alternative education practices are essential and that the curricula developed should be in a way that puts the student in the center and can connect with their daily lives (Duke and Griesdorn, 1999; Moss, Strawhun and Peterson, 2014; Reimer and Cash, 2003). Accordingly, it can be thought that the primary school teacher candidates adopt a curriculum approach towards alternative education practices.

In the alternative education models that primary school teacher candidates' developed, primary school teacher candidates generally talked about strategies, methods and techniques to improve students' higher-order thinking skills. In line with these findings, it can be said that teacher candidates focused on practices that will contribute to their students' higher-order thinking skills. It is seen in the literature that alternative education practices should include different methods and techniques and that students should develop their high-level thinking skills (O'Hair, Williams, Wilson, and Applegate, 2010; Reimer and Cash, 2003).

Finally, it has been seen that the evaluations in alternative education models of primary school teacher candidates mainly consist of performance-oriented evaluations and portfolios. It has been determined that the exams are preferred at a deficient level. The reason may be that the primary school teacher candidates go through an exam-oriented education system and want to implement more efficient evaluations for their students as an alternative. Obleton, Reames and Kochan (2012) also state that the evaluation phase is very critical regarding alternative education practices. Reimer and Cash (2003) similarly emphasize that using different assessment and evaluation methods is critical to demonstrate the effectiveness of alternative education.

This research aimed to determine the alternative education practices of primary school teacher candidates studying at a university. The scope of the research can be expanded with the participation of primary school teacher candidates studying at different universities. Opinions of primary school teacher candidates on alternative education practices can be obtained through qualitative or quantitative ways.

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## Reviewing Professional Ethical Principles and Self-Efficacy Levels of Coaches

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### ABSTRACT

Ethics, as in scientific studies, is a behavior seen in all areas of life. This situation, which should be followed by athletes, is also valid for coaches who are role models. The aim of this study is; To determine the professional ethics and self-efficacy levels of the trainers working in the Youth Sports Provincial and District Directorate, Izmit HEM, Municipality, University and private clubs in the Kocaeli region and to investigate the relationship between them.

The sample of the study consisted of 50 trainers, 20 women and 30 men working in different branches. The data were collected online via Google-form, and the personal information form prepared by the researcher, the Coach Professional Ethical Principles Scale (AMECO) and the Coach Self-Efficacy Scale were used as data collection tools. The data obtained from the scales were analyzed with the SPSS 25 package program. The level of significance in the analyzes was accepted as  $p < 0.05$ .

As a result of the research; It was determined that the trainers who participated in the study had high levels of professional ethical principles and self-efficacy. A statistically significant difference was found in favor of women in the dimension of responsibility in terms of gender. When self-efficacy levels were compared in terms of gender, in teaching and management sub-dimension; When self-efficacy levels were compared in terms of age, in total self-efficacy and teaching sub-dimension; When compared in terms of education, a significant difference was found in the dimensions of teaching and personality. No difference was detected in other dimensions. In addition, there is a positive and significant relationship between compliance with professional ethical principles and self-efficacy.

**Keywords:** Coach, Ethics, Self-efficacy

### INTRODUCTION

Ethics which is defined as habit and tradition (MEB, 2011) was lexicalized from the word ‘ethos’ meaning personality in Greek (Şimşek & Altınkurt, 2009). It is a set of values, principles, standards, and principles that specify criteria about what is wrong and what is correct; help to be aware of how things are done; guide behaviors of a person or a group (Cevizci, 2002). In other words, it also is all the moralities underlying the behaviors of a person. Ethics, at the same time, is a process. In this process, it is acted by adhering to certain values while making and implementing decisions (Şen, 2010 p.11).

Ethics research the background of all the behavior and actions of the human. Ethics concept, today, is accepted as a discipline scrutinizing and organizing behavior patterns mostly in business life (MEB, 2011); it also is one of the values that must be followed in the conduct of professions (Şen, 2010 p.11). Concepts such as ethical code, ethical principle, unethical behavior, business ethics, professional ethics about professional ethics have frequently been used during recent years. As in many professions, the ethical principles of the coaches have been determined and they are expected to comply with these ethical principles (Certel et al., 2018).

In the literature, there is information that sports improve value judgments and moral behaviors in a positive way. What is important here is that the coaches who are mediators in gaining these behaviors should behave by adopting ethical principles within the scope of professional ethics (Dolaşır and Büyüköztürk, 2009). Coaches are sports training specialists who set an example to the athletes with their knowledge and personality traits as well as their behaviors are constantly observed by the teams. Therefore, there can be created a significant impact on athletes if the coaches can apply ethical principles (Dolaşır Tuncel, 2014 p.480). Coaches who are well-trained and have high self-efficacy are exemplary role models for athletes.

Self-efficacy can be defined as a person's ability to do his/her job correctly and within moral rules, as well as the belief in one's own abilities and capacity to plan and perform the forms of action needed to manage forward-looking situations (Bandura, 1977). It is the way of taking action based on the situation by using his/her own knowledge and equipment according to the performance expected from the person (Bıkmaz, 2004). Self-efficacy is the set of many factors such as one's past experiences, indirect experiences, psychological factors, and verbal persuasion (Köroğlu, 2018). The stronger the self-efficacy, the higher the goal people set for themselves and the stronger their commitment to them (Bandura, 1994).

In literature, self-efficacy perception is discussed under different names such as writing self-efficacy, academic self-efficacy, general self-efficacy. One of them is the coach's self-efficacy. Coaching self-efficacy is defined as coaches' belief that they can influence the learning and performance of their athletes (Feltz et al., 1999).

The self-efficacy belief of a coach may affect the quality of sports training while the methods affect the athlete's ability to understand and apply what is taught and also the athlete's participation in learning. This situation can determine the sportive competencies and success of the athletes. For this reason, coaches are expected to have a high level of professional self-efficacy in order to provide a high level of benefit in the sports education process (Koçak, 2019).

In this regard, the purpose of this study was to determine the level of competence and reveal the relationship between compliance with professional ethical principles and self-efficacy levels of coaches who work in the Kocaeli region.

## **METHOD**

### **Research Model**

This research was conducted based on the general survey that is one of the quantitative research models. The general survey models are survey arrangements on the entire population or a group or sample of the relevant population to pass judgment on the population consisting of lots of items (Karasar, 2017 p.111).

### **Research Group**

The sample was selected by the convenience sampling method. The sample, in this technique, consists of participants who are easily accessible by the researcher. Sample number is specified by  $N \geq 50 + 8m$  formula (Şimşek, 2018 p.12).

The population consisted of coaches in Kocaeli while the sample consisted of 50 coaches whose 20 were females and 30 were males (20 of them work in Provincial Directorate of Youth and Sports; 9 of them work in İzmit Public Education Center; 4 of them work in municipalities; 1 of them work in university and finally, there are 16 coaches work in different branches in private clubs).

Our sample included 50 persons because the surveys could not be conducted face to face and also there were no sufficient returns to the surveys.

### **Data Collection**

The data were obtained by applying online in Google form between 24 November - 5 December 2020.

The personal information form; Coach Professional Ethics Principles Scale (CPEPS) that was developed by Dolaşır Tuncel and Büyüköztürk (2009); and, Coach Self-efficacy Scale that was developed by Koçak (2020) were used as data collection tools.

The personal information form that was prepared by researchers include questions about gender, age, educational background, branch, institution, and years of experience in the profession.

### **Coach Professional Ethics Principles Scale (CPEPS):**

Coach Professional Ethics Principles Scale (CPEPS) that was developed by Dolaşır Tuncel and Büyüköztürk (2009) is a 5 point Likert scale and has 34 items. The first 21 items of the scale are the Responsibility sub-dimension and the other 13 items mean the Respect sub-dimension. Cronbach's Alpha coefficient is (.97). As the

points in scale increase, levels of acting under professional ethical principles increase at the same time. The lowest point of the scale is 34 while the highest point is 170. Cronbach Alpha coefficient was determined as 0,76 for this study.

#### Coach Self-Efficacy Scale:

Coach Self-Efficacy Scale that was developed by Koçak (2020) is a 5 point Likert scale and has 21 items. There are 5 sub-dimensions as Performance Efficacy, Psychological Efficacy, Teaching Efficacy, Personalizing Efficacy, and Ruling Efficacy. Cronbach's Alpha Coefficient is (.86). The lowest point is 21 while the highest point is 105.

Cronbach Alpha coefficient was determined as 0,69 for this study.

#### Analysis of data

Data of scales were analyzed by SPSS 25 packaged software. Frequency and descriptive statistics were performed. Since the data did not display a normal distribution, a two-sample T-test based on mean/ratios of two independent groups was used in comparisons between two groups while the Kruskal-Wallis test was utilized for multiple comparisons and finally, the Spearman Correlation test determined the relationship between the variables. The significance level in analyses was accepted as  $p < 0,05$ .

### FINDINGS

**Table 1:** Distribution of Participants by Gender

Gender	Groups	f	%
	Female	20	40,0
	Male	30	60,0
	<b>Total</b>	<b>50</b>	<b>100,0</b>

According to Table 1, regarding the distribution of participants by gender, 20 (40%) of them are females while 30 (60%) of them are males.

**Table 2:** Distribution of Participants by Age

Age	Groups	f	%
	18-24	7	14,0
	25-34	20	40,0
	35-44	16	32,0
	45-54	7	14,0
	<b>Total</b>	<b>50</b>	<b>100,0</b>

According to Table 2, regarding the distribution of coaches by age, 7 (14%) of them are in the 18-24 age range; 20 (40%) of them are in the 25-34 age range; 16 of them are in the 35-44 (32%) age range and finally, 7 (14%) of them are in 45-54 age range.

**Table 3:** Distribution of Participants by Educational Background

Educational Background	Groups	f	%
	High School	7	14,0
	Bachelor	36	72,0
	Master Degree	7	14,0
	<b>Total</b>	<b>50</b>	<b>100,0</b>

According to Table 3, regarding the distribution of participants by educational background, 7 (14%) of them graduated from high school; 36 (72%) of them have bachelor's degree and finally, 7 (14%) of them have a master degree.

**Table 4:** Distribution of Participants by Branch

Branch	Groups	f	%
	Badminton	3	6,0
	Wrestle	4	8,0
	Archery	1	2,0
	Skate	1	2,0
	Taekwondo	3	6,0
	Football	16	32,0
	Basketball	4	8,0
	Volleyball	4	8,0
	Athleticism	10	20,0
	Fencing	1	2,0
	Handball	1	2,0
	Tennis	1	2,0
	Swimming	1	2,0
	<b>Total</b>	50	100,0

According to Table 4, regarding the distribution of coaches by branch, 3 (6%) of them work in the badminton branch; 4 (8%) and 1 (2%) of them are interested in wrestle and archery respectively; 1 (2%) and 3 (6%) of them work in ice skate and taekwondo branch respectively; 16 (32%) of them interested in football while 4 (8%), 4 (8%), and 10 (20%) of them work in basketball, volleyball and athleticism branches respectively; 1 (2%) of them interested in fencing while 1 (2%), 1 (2%) and 1 (2%) work in handball, tennis and swimming branches respectively.

**Table 5:** Distribution of Participants by Institution and Years of Experience in Profession

Institution	Groups	f	%
	Provincial Directorate of Youth and Sports	13	26,0
	Youth and Sports District Directorate	7	14,0
	Izmit PEC	9	18,0
	Private Clup	16	32,0
	Municipalities	4	8,0
	University	1	2,0
	<b>Total</b>	50	100,0
Experience	1-5 years	22	44,0
	5-10 years	13	26,0
	10-15 years	7	14,0
	15 years and more	8	16,0
	<b>Total</b>	50	100,0

According to Table 5, regarding the distribution of participants by institution and years of experience in the profession, 13 (26%) of them coach in the Provincial Directorate of Youth and Sports; 7 (14%) of them coach in the District Directorate of Youth and Sports; 9 (18%) of them coach in Izmit Public Education Center; 16 (32%), 4 (8%), and 1 (2%) of them coach in private clubs, municipalities and university respectively. 22 (44%) of them have 1-5 years of experience; 13 (26%) of them have 5-10 years of experience; 7 (14%) of them have 10-15 years of experience while 8 (16%) of them have 15 years and more experience in the profession.

**Table 6:** Descriptive Statistics Data and P-Values belong to CPEPS and Self-Efficacy Variables by Gender

	Gender	N	Min	Max	$\bar{x}$	SS	Z	P
CPEPS Responsibility Sub-Dimension	Female	20	92,00	105,00	101,45	3,67	-2,119	0,03
	Male	30	93,00	105,00	99,46	3,50		

<b>CPEPS Respect Sub-Dimension</b>	<b>Female</b>	20	50,00	65,00	62,25	4,36	-,939	0,34
	<b>Male</b>	30	50,00	65,00	61,76	3,63		
<b>CPEPS TOPLAM</b>	<b>Female</b>	20	144,00	170,00	<b>163,70</b>	6,62	-1,658	0,09
	<b>Male</b>	30	144,00	170,00	<b>161,23</b>	6,43		
<b>Self-Efficacy Performance</b>	<b>Female</b>	20	16,00	20,00	19,15	1,38	-,404	0,68
	<b>Male</b>	30	14,00	20,00	19,03	1,49		
<b>Self-Efficacy Psychological</b>	<b>Female</b>	20	18,00	20,00	19,55	,75	,327	0,74
	<b>Male</b>	30	18,00	20,00	19,63	,66		
<b>Self-Efficacy Teaching</b>	<b>Female</b>	20	21,00	25,00	<b>24,45</b>	<b>1,19</b>	-2,769	<b>0,00</b>
	<b>Male</b>	30	20,00	25,00	<b>23,46</b>	<b>1,56</b>		
<b>Self-Efficacy Personalizing</b>	<b>Female</b>	20	17,00	20,00	19,65	,81	,919	0,35
	<b>Male</b>	30	17,00	20,00	19,76	,77		
<b>Self-Efficacy Management</b>	<b>Female</b>	20	19,00	20,00	<b>19,80</b>	<b>,41</b>	-2,060	<b>0,03</b>
	<b>Male</b>	30	15,00	20,00	<b>19,30</b>	<b>1,05</b>		
<b>Self-Efficacy TOTAL</b>	<b>Female</b>	20	95,00	105,00	<b>102,60</b>	3,08	-1,580	0,11
	<b>Male</b>	30	91,00	105,00	<b>101,20</b>	3,34		

According to Table 6, regarding descriptive statistic data and P-values belong to (CPEPS) and Self-efficacy values by gender, there is a significant difference among the point averages of the CPEPS responsibility sub-dimensions in favor of females ( $p=0,03$ ). Responsibility point averages of females ( $101,45\pm3,67$ ) are higher than the point averages of males ( $99,46\pm3,50$ ). There is no significant difference in CPEPS total and Respect sub-dimension by gender ( $p>0,05$ ).

There is a statistically significant difference between self-efficacy teaching (0,006) and ruling (0,03) sub-dimensions point averages in favor of females ( $p<0,05$ ) while there is no significant difference in other dimensions and total point averages ( $p>0,05$ ). Average scores of females in teaching ( $24,45\pm1,19$ ;  $23,46\pm1,56$ ) and ruling ( $19,80\pm0,41$ ;  $19,30\pm1,05$ ) sub-dimensions are higher compared to the scores of males.

**Table 7:** Descriptive statistics, P-values, and groups from which the difference originates based on the total score and sub-dimensions of coaching self-efficacy and ethical principles of coaches by age

		N	$\bar{x}$	Ss	$X^2$	P	The groups from which the difference originates
<b>Self-Efficacy_Teaching</b>	<b>18-24</b>	7	25,00	,000	8,724	<b>,033</b>	35-44<18-24 ( $p=0,027$ )
	<b>25-34</b>	20	23,95	1,47			
	<b>35-44</b>	16	23,31	1,70			
	<b>45-54</b>	7	23,71	1,38			
	<b>Total</b>	50	23,86	1,50			
<b>Self-Efficacy_Total</b>	<b>18-24</b>	7	105,00	,00	11,471	<b>,009</b>	45-54<18-24 $p=0,021$ 35-44<18-24 $P=0,014$ 25-34<18-24 $P=0,028$
	<b>25-34</b>	20	101,60	2,93			
	<b>35-44</b>	16	101,06	3,71			
	<b>45-54</b>	7	100,57	3,36			
	<b>Total</b>	50	101,7600	3,29			

According to Table 7, regarding descriptive statistic data and P-values belong to self-efficacy variables by age, there is a significant difference between self-efficacy total ( $p=0,009$ ) and self-efficacy teaching ( $p=0,033$ ) sub-dimension point averages in favor of older age groups. Point averages of participants in the 18-24 age range in self-efficacy total ( $105,00\pm0,00$ ) are higher compared to other older age groups ( $p>0,05$ ). There is no significant relation between CPEPS and other sub-dimensions of self-efficacy.

**Table 8:** Descriptive statistics, P-values, and groups from which the difference originates based on coaching self-efficacy and ethical principles of coaches by educational background

		N	$\bar{x}$	SS	$X^2$	P	The groups from which the difference originates
Self-Efficacy-Teaching	High School	7	22,14	1,22	11,11	,004	High School<Master Degree p=0,035
	Bachelor	36	24,14	1,35			High School<Bachelor p=0,003
	Master Degree	7	24,14	1,46			
	Total	50	23,86	1,49			
Self-Efficacy-Personality	High school	7	20,00	,00	6,48	,039	Bachelor>Master Degree p=0,023
	Bachelor	36	19,81	,62			High School>Master Degree p=0,019
	Master Degree	7	19,00	1,41			
	Total	50	19,72	,78			

According to Table 8, regarding descriptive statistic data and P-values belong to self-efficacy variables by educational background, there is a statistically significant difference among self-efficacy teaching ( $p=0,004$ ) sub-dimension point averages in favor of undergraduate education and postgraduate education. Point averages of participants who graduated from high school are lower compared to other participants who have bachelor's degree and master degree ( $p>0,05$ ). However, this significant relationship is in favor of participants who graduated from high school in the self-efficacy personality sub-dimension. Again, in self-efficacy personality, point averages of participants whose educational degree is high school ( $20,00\pm0,00$ ) are higher compared to others who have bachelor's ( $19,81\pm0,62$ ) and master degree ( $19,00\pm1,41$ ) ( $p>0,05$ ). There is no statistically significant relation between CPEPS and other sub-dimensions of self-efficacy.

**Table 9:** Relationships of participants between CPEPS and Self-Efficacy

		CPEPS _Respec t	CPEPS Total	Self- Efficacy- Performan ce	Self- Efficacy- Psycholo gical	Self- Efficacy- _Teachin g	Self- Efficacy- _Personali ty	Self- Efficacy- _Manage ment	Self- Efficacy- _Total
CPEPS _ Responsibil ity	r	,499"	,857"	,177	,320'	,229	,161	,260	,359'
	p	,000	,000	,218	,024	,109	,265	,068	,010
	N	50	50	50	50	50	50	50	50
CPEPS _ Respect	r		,875"	,414"	,203	,389"	,323'	,318'	,565"
	p		,000	,003	,157	,005	,022	,024	,000
	N		50	50	50	50	50	50	50
CPEPS _ Total	r			,346'	,300'	,360'	,282'	,335'	,537"
	p			,014	,035	,010	,047	,017	,000
	N			50	50	50	50	50	50
Self- efficacy _Performan ce	r				,134	,298'	,074	,256	,690"
	p				,355	,035	,607	,073	,000
	N				50	50	50	50	50
Self- efficacy _ Psychologic al	r					,062	,015	-,033	,295'
	p					,667	,918	,821	,038
	N					50	50	50	50
Self- efficacy _Teaching	r						,296'	,469"	,797"
	p						,037	,001	,000
	N						50	50	50
Self- efficacy	r							,118	,441"
	p							,416	,001

_Personalit	N							50	50
y									
Self-	r								,617"
efficacy									
Manageme	p								,000
nt	N								50

According to Table 9, regarding the relationship between CPEPS and self-efficacy, there is a positively directed and statistically significant relationship between CPEPS total point averages and self-efficacy total point averages ( $p=0,00$ ).

This relationship can also be seen between CPEPS responsibility sub-dimension with CPEPS total ( $p=0,00$ ), respect sub-dimension ( $p=0,00$ ) and psychological sub-dimension ( $p=0,24$ ). Again, there is a significant relationship between CPEPS respect sub-dimension with self-efficacy total ( $p=0,00$ ), ruling ( $p=0,24$ ), personality ( $p=0,22$ ), teaching ( $p=0,05$ ) and performance sub-dimensions ( $p=0,03$ ). Moreover, another significant relationship is between CPEPS with self-efficacy total point averages and all sub-dimensions. This finding shows that coaches who have a high level of self-efficacy display ethical behaviors.

## DISCUSSION AND CONCLUSION

Correct behavior patterns that are called moral principles in social life are called ethics in business life as well as they are valid for each occupational group. One of those groups is coaches. This study that scrutinized the compliance with professional ethical principles and self-efficacy levels of coaches revealed that coaches who participated in this study have high professional ethics values. Certel et al., (2018) surveyed to evaluate the level of compliance of the coaches working in various branches and clubs with the principles of professional ethics from the viewpoint of coaches and athletes. For their findings, coaches comply with professional ethical principles. This result jibes with our findings.

In this study, there is a statistically significant difference in levels of compliance with professional ethical principles in the responsibility sub-dimension in favor of females by gender ( $p=0,03$ ). However, there is no significant difference in total and respect sub-dimension by gender. There are different results in studies on this issue. Other studies that were conducted by Certel et al., (2018) and Caz (2019) found no difference by gender. On the other hand, Dolasır and Büyüköztürk (2009) and Güvendi et al. (2016) researched levels of compliance with professional ethical principles and found a significant difference in responsibility and other sub-dimensions by gender while males comply with ethical principles more than females. Regarding our study, female coaches have higher point averages for all the dimensions compared to males. This result reveals that female participants in our survey comply with professional ethical principles more than males. The reason for the difference with another research result might be athletes' characteristics and sports branches.

In this study, there is no significant difference regarding the level of compliance of female and male coaches with professional ethical principles by age, educational background, marital status, and experience. Similarly, Certel et al., (2018) found no difference by educational background. However, another study that was performed by Güvendi et al., (2016) revealed that the older coaches had a better level of compliance with ethical principles, and the married coaches had higher scores than the single coaches.

Coaches, who set an example for younger generations as educators, have to improve themselves in every aspect, and their self-efficacy reflects their work. Self-efficacy of coaches in this study was found as high while there is a statistically significant difference in teaching and ruling sub-dimensions by gender. There is no significant difference in other sub-dimensions.

Koçak (2019) made a research to review the self-efficacy levels of coach candidates and found significant differences by gender. This difference was in character formation sub-dimension while male coaches had a higher self-efficacy compared to female coaches. In this study, the teaching and ruling sub-dimension point averages of females are higher than the same point averages of males. We can say that female coaches have a higher level of self-efficacy belief in observing athlete development, contributing to the career management of athletes, and targeting for them. Köksal (2008) and Toklu (2010) conducted a study on coaches and athletes and found no difference in self-efficacy by gender.

In this study, there is a statistically significant difference between self-efficacy level teaching sub-dimension and self-efficacy total scores of coaches by age. The young (18-24 age) have a higher self-efficacy level about improving teaching, talent selection, and efficient teaching techniques compared to older ones.

Ermiş et al.,(2019) made research on tennis coaches and expressed that the age variable significantly differentiates under 25 years. Köksal (2008) observed a difference between age and self-efficacy in the study about the self-efficacy of coaches. These results jibe with the findings of our study. This situation may be due to the fact that young coaches are new graduates, have new knowledge, are open to innovations, are idealistic, more excited, and active. However, there are different results as well. Koçak (2019) worked with coach candidates and also Toklu (2010) worked with coaches; they both revealed that the level of self-efficacy does not vary by age variable. Another study was conducted by Güllü and Donuk (2019) with football coaches; there was found a difference in gender by age; however, as the age increases, self-efficacy in coaches increases at the same time. This result shows the difference in the experience.

In this study, there are significant differences between teaching and personalizing sub-dimension by educational background. Self-Efficacy belief scores are higher in coaches who have bachelor's and master degree compared to coaches graduated from high school. The difference of education, as an educator, displays itself here. However, the highest point average in personalizing dimension belongs to coaches who have high school degrees only. Toklu (2010) made research with tennis coaches and found no difference in self-efficacy by educational background.

There was found a positively directed and significant relationship between compliance with professional ethical principles and self-efficacy total score averages. This result shows us coaches with higher self-efficacy comply with professional ethical principles too.

In conclusion, coaches in our study have a high level of compliance with professional ethical principles and self-efficacy levels.

It is seen when the levels of compliance with professional ethical principles are compared in terms of gender that there is a statistically significant difference in responsibility dimension in favor of females. Again, it is seen when the same comparison is made in terms of gender that there is a significant difference in teaching and ruling sub-dimension. A significant difference can be observed in the total and teaching dimension when the comparison is made in terms of age. Regarding a comparison in terms of educational background, there is a significant difference in teaching and personality dimensions.

Moreover, there is a positively directed and significant relationship between compliance with professional ethical principles and self-efficacy. Conducting the study with a larger sample group in different cities and with different branch coaches will contribute to the literature in terms of more realistic results.

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## Students' Evaluating Art Education through Distance Education during the Pandemic Period

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### ABSTRACT

The purpose of this research is to identify the difficulties in art education at the university due to the transition from face-to-face education to distance education due to the Covid-19 outbreak. The universe of the research is the Faculty of Education Fine Arts Education Department, Conservatoire and the Faculty of Fine Arts undergraduate and graduate students in the spring term of 2020-2021. The sample consists of 715 students from this population who answered the online questionnaire.

In the research, "distance education problems" question list was used. The questionnaire consists of 13 personal information questions, and the scale consists of 68 questions in 7 sub-problem areas. The data were collected on the internet using the survey google academic. An announcement was made to the students by contacting the academicians of the relevant department. Frequency and percentages were determined in order to determine the level of the problems in the analysis of the data. t test statistical analysis was used for comparisons.

According to the opinions of art education students: 1) Distance education is not successful in art teaching. 2) Face-to-face training is more effective. 3) Teachers and students have not received training regarding distance education; and they had to adapt to this new condition in the process and by experiencing it. 4) It was concluded during the distance art education that the participation of the students in courses and being prepared for these courses were not sufficient.

**Keywords:** Distance Education, Art Education, Pandemic, Covid-19

### Introduction

#### 1.1. Global Coronavirus (COVID-19)

A total of 27 cases of pneumonia of unknown etiology were detected in the city of Wuhan, the capital of the Hubei Province of China on 31 December 2019. Then, on January 7, 2020, the causative agent of this disease was called SARS-CoV-2 by the Chinese Center for Disease Control and Prevention because of its similarity to Severe Acute Respiratory Syndrome (SARS-CoV), and the disease was called Coronavirus Disease 2019 (COVID-19) by the World Health Organization (Sohrabi et al., 2020). Coronavirus (CoV) is an enveloped, single-strand RNA virus of the Coronavirinae subfamily, and has a positive polarity. Probably, the CoV genome is the largest known viral RNA (Fehr, Perlman, 2015; Li, Fan, Laivd, 2020). It was reported that it is transmitted by contact with the mucosa and by breathing the air in the same environment with a patient. Although the contagious period of the disease is not known exactly, it is considered that it can continue until the 14<sup>th</sup> day after infection. Symptoms such as cough, fever, and respiratory distress are observed in mild cases, and severe acute respiratory tract infection and mortality can be seen in severe cases (FDA, 2020).

#### 1.2. The Pandemic Concept, Fighting Methods, and Related Problems

When the Coronavirus began to affect the world population widely, the World Health Organization declared it an international public health emergency on January 30, 2020, and then a global pandemic on March 11, 2020 (Akca, 2020). After it was declared a pandemic, a great fight began against the pandemic. During the fight against the pandemic, healthcare employees undertook the most important task, and worked devotedly, taking the risk of being infected with the disease, regardless of long working hours. Vaccinations started in the

advancing period of the pandemic, and healthcare workers continued to fight with patients and vaccination. This selfless work in the fight against the pandemic was greatly admired.

Educators also had duties like healthcare employees during the pandemic process. At the beginning of the pandemic process although it was considered that face-to-face education would be interrupted for only 3 weeks, this took much longer than expected. As in art education, it was decided to switch to distance education not to interrupt education in all fields with applied course contents; and as a result, education and training were continued by creating distance education infrastructures in institutions or by strengthening the existing ones. Also, a flexible working system was introduced to institutions to minimize contact among individuals. The mask, distance, and hygiene concepts started to gain importance in the fight against coronavirus. Because of the respiratory transmission of the disease, it became impossible to hold one-to-one and collective courses that required the student and teacher to be together, such as workshop lessons, individual instruments, and orchestra courses in art education. It became also difficult for students to reach the materials and instruments that are necessary for practice in art education.

### **1.3. Distance Education in the Pandemic**

Distance education, which is an interdisciplinary field, started to be performed frequently with online settings with the developing information communication technologies and the spread of the internet. It has become especially necessary in the last two decades to conduct studies on different dimensions of the field in terms of developing good implementations in online distance learning (Akgün, Özberk, 2015, p. 120).

Some measures were implemented in the following days after the first case in Turkey on March 11, 2020; and the total number of cases increased to 2 on March 12, 2020. In this process, R.T. Ministry of National Education and HEB took a compulsory break from education; however, infrastructure works were done for the distance education model and legal legislation was prepared. With a subsequent decision, it was announced that the mid-term break, which was planned to start on April 6 in the normal curriculum for primary, secondary, and high schools, was taken forward, and would start as of March 16, 2020. Distance education decision was also taken for the week after the mid-term break (Ince, Evcil, 2020, p. 237; Tuba, 2020). The distance education decision continued for a long time, and although face-to-face education started gradually in other institutions for a short time, universities continued in line with the same decision in the fall semester of 2020-2021 Academic Year.

### **1.4. Distance Education Methods and Learning Settings with Online Tools**

Distance learning with online tools can be performed in two ways the first of which is the Synchronous Education, and the other is Asynchronous Education. These methods are divided into two as one-way and two-way.

- One-Way Simultaneous Education: TV/Radio broadcast, web-based broadcast,
- Two-Way Simultaneous Education: Video conferencing, web-based conferencing, telephone conferencing,
- One-Way Asynchronous Education: Book, handouts, video and audio recording, internet,
- Two-Way Asynchronous Education: E-mails, correspondence, fax, interactive internet medium, and learning platforms (Ruippo, 2003).

Platforms such as Udemy and MasterClass provide online learning opportunities in many music education areas. Also, it is possible to argue that the platform called YouTube has been one of the most used platforms in this respect. Platforms such as the Center for Distance Education and Research (UZEM), Microsoft Teams, Perculus, and Moodle are among the platforms used widely by universities.

Distance education provides an opportunity for active communication among teachers and students, as well as an individual and collaborative working setting that is independent of many variables (Altıparmak, Kurt & Kapidere, 2011, p. 320). Learning environments that involve online tools offer students the opportunity to access videos, presentations, and visual resources whenever and wherever convenient. Such environments also provide the opportunity to learn, repeat, and increase by communicating with each other with options such as e-mail, chat, and sharing knowledge and skills through discussions. With these systems, students who miss classes or those who want to do revision can watch the videos later.

One of the most important drawbacks of the present online learning settings is their inability to take into account the different individual characteristics of students. The fact that individuals have different personality traits, different learning styles, process information in different ways, and prefer to use different information sources cause that their learning needs also differ when they use the same environment (Riding and Rayner, 1998). These environments have been accepted by many educational institutions because they have low costs, and bring the

opportunity for the instructor to provide education service independent of time and place, and the convenience in transmission (Varol & Türel, 2003). The resources presented to online learning settings vary according to the institution providing online learning opportunities. There are books, audio resources, pdf resources, visual resources, tests and assignments, video resources, and virtual/live lessons.

Music performance is naturally a simultaneous experience. In other disciplines, although many university programs face rapid transition to asynchronous online teaching, music programs seem unlikely to do so because of their synchronous nature (Dammers, 2009).

### **1.5. Distance Education and Art Education Applications Provided to Fine Arts Teacher Candidates during the Pandemic Period**

Education is an integrated whole with all its elements; and art education is an inseparable element of social and cultural life. It is the first stage of understanding and making sense of art. The general aims of art education are learning the past and making sense of the present and the future. The way our culture is shaped and its beliefs can be grasped with all the details about the concept of art with this education (Mercin, Alakuş, 2007b, p. 17). An art education that will be provided with the right planning is an indisputable element for all individuals in the society manifesting itself through the accumulation of experiences in the individual, and appeals to everyone. Although the individual does not prefer to produce, s/he becomes a good consumer who adopts that sensitivity, does not hesitate to think, understands and supports art (Artut, 2006, p. 97). In formal education, there is a need for a planned art program to train well-equipped individuals who have verbal and numerical skills and specific creative skills. It will be inevitable to raise a generation that is beneficial to society and its culture, aware of beauties, and has a developed aesthetic perception with this training program (Akkurt, Boratav, 2018, p. 55).

With the pandemic period, in the current situation, although there are negative results in many aspect, there is an effort to turn the negative results faced in educational sense into positive outcomes by providing art education to teacher candidates in a way that can keep up with the requirements, changes, and innovations of the present age. Almost all teacher candidates receiving arts education around the world have been affected negatively by the fact that education was interrupted in schools because of the pandemic and then an unprepared distance education process was initiated. Distance art education has also become inevitable in such an extraordinary situation, which continued during the two education periods and which is expected to continue in the third term. In this process, teacher candidates have the pleasure of expressing their feelings in art works if the subject described in fine arts works in distance art education includes their life experiences. In other words, as a result of this, they can find themselves in the works of art. In such a condition, the individual's needs of creation, relaxation, and freedom of expression are covered. With this aspect, art education also undertakes the task of being a therapy, especially during this pandemic period.

*"Efforts are made to elevate the human spirit, liberate people, satisfy the spiritual needs of individuals, and create a balanced, contemporary, and sensitive society at the core of the purpose and necessity of art education. Art education is a subjective and detailed field of the socio-cultural life and personal experiences of individuals"* (Artut, 2006, p. 111).

It must not be forgotten that art education also provides teacher candidates with human, social, cultural, and ethical values. In distance education, art education provides advantages in line with the possibilities to cover the continuity of art education and the needs of teacher candidates such as understanding, freedom of expression, and emotional relaxation. Teacher candidates uploaded the designs they had previously made from the program and performed their applications in live lessons, which included applications such as art workshop, elective art workshop, and pattern and basic design in visual arts education to cover these requirements in the distance education process. They also worked with the techniques suitable for the materials they obtained in line with the opportunities provided. The studies of the teacher candidates were followed step by step by the instructor in live lessons. When it was considered necessary, the teacher candidates sent the images of their works to the instructor through the system.

Distance education is a form of education applied in many fields such as engineering, foreign language learning, economics, physical and social sciences, as well as various branches of art, music, painting, and photography (Özer, 1990).

Many universities provide online and mixed education opportunities at undergraduate and graduate levels in other fields of music education, especially in the field of music technologies (Sherbon & Kish, 2005).

Instructors and students must interact in an accurate way for distance education to be successful in music. According to Sherbon and Kish (2005), university administration and lecturers are responsible for providing information about the requirements of the program with regular online meetings for students during the distance education process.

It emerged as a necessity with the pandemic period to conduct art education with the distance education method. However, as a result of technological developments, music education was carried to classroom environments many years ago to increase the performance of music students with various digital resources (Tecimer, 2006).

#### **1.6. Distance Education Activities of Fine Arts Teacher Candidates in the Pandemic Period**

Teacher candidates also need artistic activities as is the case for students at all levels of art education. Distance education systems were evaluated to cover these needs during the pandemic process. Experiencing art in the field of fine arts, producing artistic products, and sharing these with activities are important in art education, as is the case in face-to-face education. These activities contribute to adapting to this period, realize the importance of interaction between art disciplines, and encourage production in the pandemic. It also supports the formation of a happy, peaceful, environmentally sensitive, and harmonious lifestyle by enabling individuals to find solutions to problems rationally and creatively, which is also among the aims of Art Education (Yolcu, 2009).

Different activities were performed with teacher candidates in the field of fine arts with distance education in the pandemic period. Some of these activities are in the scope of community service. The steps in manufacturing a product were videotaped and were then shared. Also, videos consisting of the works of teacher candidates were prepared, and art exhibitions and concerts were organized with this method. The effects of art education on the training of teacher candidates who can accurately express themselves with organized activities, establish relations between products, and question and find answers to questions are undeniable.

According to Dammers (2009), music performance necessitates synchronicity because it involves the element of playing together, and distance education is less likely to be performed asynchronously when compared to other disciplines because of the nature of the music field.

When the relevant literature was reviewed, it was seen that it was preferred that music lessons be held simultaneously with platforms such as WhatsApp, Skype, and Zoom, and it is reported that it is easier for the teacher to interfere with the student when compared to asynchronous education Aksoy, Güçlü & Nayir, 2020.

The delay in the internet connection and the disruptions in the transmission of images/sounds affect the performance of playing together negatively, especially in chamber music and similar courses, which require collective playing (Dammers, 2009).

Distance education is considered to be important especially in terms of providing access to instrument lessons for students in rural areas (King, Prior & Waddington-Jones, 2019). However, although distance education eliminates the difficulties in delivering music education to large masses, it is not adequate in providing a successful education-teaching environment when factors such as sound quality and sound transmission are considered (Orman & Whitaker, 2010).

#### **Method**

The purpose of this research is to identify the difficulties in art education at the university due to the transition from face-to-face education to distance education due to the covid-19 outbreak. The universe of the research is the Faculty of Education Fine Arts Education Department, Conservatoire and the Faculty of Fine Arts undergraduate and graduate students in the spring term of 2020-2021. The sample consists of 715 students from this population who answered the online questionnaire. Of the 715 university students studying art, 59.9% study Faculty of Education / Painting education. 90.6% of the participants are undergraduate (1st-4th grade) students. (Table 1)

In the research, "distance education problems" question list was used. The questionnaire consists of 13 personal information questions, and the scale consists of 68 questions in 7 sub-problem areas. The data were collected on the internet using the survey google academic. An announcement was made to the students by contacting the academicians of the relevant department. Frequency and percentages were determined in order to determine the level of the problems in the analysis of the data. t test statistical analysis was used for comparisons.

## Findings

73.1% of the students have not received training on the use of computer programs used in distance education. 32.7% of students do not have a quiet, independent room at home that they can use for distance education lessons. 25.0% of students do not have an internet connection that they can use for distance education lessons at home (Table 1)

Table 1. Sampling Frequency Distribution

		f	%
3) Your School / Faculty / Department?	• a) Conservatoire	37	5,2
	• b) Faculty of Education / Painting education	428	59,9
	• c) Faculty of Education / Music education	152	21,3
	• d) Faculty of Fine Arts / Painting & Sculpture	98	13,7
4) Your level of education as a student?	• b) Undergraduate (1st / 2nd class)	360	50,3
	• c) Undergraduate (3rd / 4th grade)	288	40,3
	• d) Master's Degree	45	6,3
	• e) Doctorate / Proficiency in Art	22	3,1
10) Have you taken training on the use of computer programs used in distance education?	• a) No	523	73,1
	• b) Yes	192	26,9
11) Do you have a quiet, independent room in your home where you can do your distance education lessons?	• a) No	234	32,7
	• b) Yes	481	67,3
12) Do you have an internet connection that allows you to do your distance education lessons at home?	• a) No	179	25,0
	• b) Yes	536	75,0
Total		715	100,0

The programs most used by students in virtual classroom education in the distance education process are as follows:

- Microsoft Teams (48,0%)
- Distance Education of the Institution (46,3%)
- Zoom (43,1%)
- Google Meet (22,5%)
- Google Classroom (13,0%)

Table 2. Programs that you used in virtual classroom education during the distance education process?

	Frequency	Percent
13 • f) Whatsapp, Telegram	395	55,2
13 • c) Microsoft Teams	343	48,0
13 • a) UZEM-Distance Education of the Institution	331	46,3
13 • b) Zoom	308	43,1
13 • h) SMS, email	230	32,2
13 • d) Google Meet	161	22,5
13 • e) Google Classroom	93	13,0
13 • i) Other	43	6,0
13 • g) Skype, Duo, Hangout, Viber	18	2,5
Total	715	100,0

The applications that are not distance education program that students use most in virtual classroom education are as follows:

- Whatsapp, Telegram (55,2%)
- SMS, email (32,2%)

In e-learning practices during the pandemic process, it is observed that teachers and / or students cannot use virtual classroom management programs specific to distance education effectively. It is understood that they use social networks and other online communication channels extensively for the purpose of distance education. (Table 2).

Problems in distance education and arts education (sub-scale average of  $\mu = 0,350$ ) are at middle level. While interpreting the tables, it should be kept in mind that the minimum score in the scale is zero and the maximum score is one. According to the opinions of the students, the areas where distance education problems are more in art education are as follows:

- Problems related with internet and computer ( $\mu=0,495$ )
- Problems based on the content/acquirements of the course ( $\mu=0,443$ )

According to the opinions of the students, the areas where distance education problems are less in art education are as follows:

- Problems related with teacher ( $\mu=0,201$ )
- Problems based on the computer distance education program ( $\mu=0,261$ )

The distance education method used in art teaching due to the pandemic contains problems according to students' opinions (Table 3 )

Table 3. Distance education problems at the subscale level

	N	Mean	Std. Deviation	Skewness	Kurtosis
14) Problems related with internet and computer	715	0,495	0,231	0,082	-0,629
16) Problems based on the content/acquirements of the course	715	0,443	0,306	0,299	-0,892
17) Problems related with students (you or your friends)	715	0,371	0,263	0,602	-0,333
Problems related with distance education	715	0,350	0,184	0,520	-0,006
19) Problems based on measurement and evaluation	715	0,329	0,271	0,664	-0,502
15) Problems based on the computer distance education program	715	0,261	0,257	0,069	-1,622
18) Problems related with teacher	715	0,201	0,236	1,313	1,094

In arts education with distance education, the problems related to internet and computer ( $\mu = 0.499$  subscale average) are at high level. According to the opinions of the students, the areas in which distance education problems related to internet and computer are more in art education are as follows:

- Internet connection interruption / freezing ( $\mu=0,752$ )
- Poor internet connection ( $\mu=0,580$ )

According to the opinions of the students, the areas in which distance education problems related to internet and computer are less in art education are as follows:

- Poor image quality ( $\mu=0,386$ )
- Having slow working computer ( $\mu=0,406$ )
- Poor sound quality ( $\mu=0,410$ )

According to the opinions of the students, the distance education method used in art education during the pandemic period includes problems related to the internet and computer (Table 4).

Table 4. Problems related with internet and computer

	N	Mean	Std. Deviation
• d) Internet connection interruption / freezing	715	0,752	0,432
• e) Poor internet connection	715	0,580	0,494
Scale total	715	0,499	0,303
• c) Asynchronous internet connection	715	0,459	0,499
• f) Poor sound quality	715	0,410	0,492
• a) Having slow working computer	715	0,406	0,491
• b) Poor image quality	715	0,386	0,487

According to students' opinions, the distance education method used in art teaching during the pandemic period not includes utility/program based important problems (Table 5 ).

Table 5. Problems based on the computer distance education program

	N	Mean	Std. Deviation
• a) Capabilities of the program are very limited	715	0,262	0,440
Subscale total	715	0,261	0,257
• b) The program is not useful	715	0,260	0,439

In arts education with distance education, the problems related to content and acquirements of the course ( $\mu = 0,443$  subscale average) are at high level. According to the opinions of the students, the areas in which distance education problems related to content and acquirements of the course are more in art education are as follows:

- Insufficient mutual communication ( $\mu=0,625$ )
- Being a lesson to be learned by doing ( $\mu=0,615$ )

According to the opinions of the students, the areas in which distance education problems related to content and acquisitions of the course are less in art education are as follows:

- Requires immediate individual feedback ( $\mu=0,376$ )
- Requiring physical correction of the student's action ( $\mu=0,368$ )
- Requiring repetition/imitation of the teacher ( $\mu=0,235$ )

According to the opinions of the students, the distance education method used in art education during the pandemic period includes problems related to the content and acquisitions of the course (Table 6).

Table 6. Problems based on the content/acquisitions of the course

	N	Mean	Std. Deviation
• d) Insufficient mutual communication	715	0,625	0,484
• g) Being a lesson to be learned by doing	715	0,615	0,487
• c) Being a skill-based course	715	0,484	0,500
Subscale total	715	0,443	0,306
• b) Sometimes involving a one-to-one master/apprentice relationship	715	0,396	0,489
• a) Requires immediate individual feedback	715	0,376	0,485
• e) Requiring physical correction of the student's action	715	0,368	0,483
• f) Requiring repetition/imitation of the teacher	715	0,235	0,424

In arts education with distance education, the problems related with students ( $\mu = 0,371$  subscale average) are at middle level. According to the opinions of the students, the areas in which distance education problems related with students are more in art education are as follows:

- Lack of motivation ( $\mu=0,698$ )
- Low active participation in class ( $\mu=0,551$ )
- Technical inadequacy in computer and program ( $\mu=0,497$ )

Table 7. Problems related with students (you or your friends)

	N	Mean	Std. Deviation
• i) Lack of motivation	715	0,698	0,459
• c) Low active participation in class	715	0,551	0,498
• b) Technical inadequacy in computer and program	715	0,497	0,500
• f) Indifference	715	0,401	0,491
• k) There is no suitable physical environment (quiet room etc.)	715	0,387	0,488
Subscale total	715	0,371	0,263
• e) Not watching the lesson carefully	715	0,348	0,477
• l) Taking distance education lightly	715	0,331	0,471
• g) Turning off the camera	715	0,284	0,451
• a) Not doing the exercises	715	0,273	0,446
• d) Not being prepared for the lesson	715	0,262	0,440
• j) Arbitrariness in participating in synchronized lessons	715	0,255	0,436
• h) Not reading resources	715	0,161	0,368

According to the opinions of the students, the areas in which distance education problems related with students are less in art education are as follows:

- Not reading resources ( $\mu=0,161$ )
- Arbitrariness in participating in synchronized lessons ( $\mu=0,255$ )
- Not being prepared for the lesson ( $\mu=0,262$ )

According to the opinions of the students, the distance education method used in art education during the pandemic period includes problems related with students (Table 7).

In arts education with distance education, the problems related with teachers ( $\mu = 0,201$  subscale average) are at low level. According to the opinions of the students, the areas in which distance education problems related with teachers are more in art education are as follows:

- Teacher explains the online lesson in a monotonous voice ( $\mu=0,324$ )

- Seems like not used to distance education ( $\mu=0,313$ )
- Insufficient technique to use the live curriculum ( $\mu=0,292$ )

Table 8. Problems related with teacher

	N	Mean	Std. Deviation
• e) Teacher explains the online lesson in a monotonous voice.	715	0,324	0,469
• m) Seems like not used to distance education	715	0,313	0,464
• c) Insufficient technique to use the live curriculum	715	0,292	0,455
• g) Teacher is unsuccessful to add the student to the live class	715	0,270	0,444
• a) Teacher can't motivate us	715	0,257	0,437
• l) The teacher is lack of managing virtual classroom skills	715	0,215	0,411
<b>Subscale total</b>	<b>715</b>	<b>0,201</b>	<b>0,236</b>
• h) Teacher cannot give feedback to the student	715	0,169	0,375
• d) Teacher does not use additional material (film, slide, etc.) in the live class	715	0,159	0,366
• f) Teacher does not upload enough additional material for course preparation	715	0,157	0,364
• b) Teacher does not upload enough presentations before the live class	715	0,155	0,362
• i) Teacher is unwilling	715	0,147	0,354
• j) The teacher's live class environment is not suitable	715	0,136	0,343
• k) The teacher does not turn on the camera	715	0,124	0,330
• n) Underestimates distance education	715	0,097	0,295

According to the opinions of the students, the areas in which distance education problems related with teachers are less in art education are as follows:

- Underestimates distance education ( $\mu=0,097$ )
- The teacher does not turn on the camera ( $\mu=0,124$ )
- The teacher's live class environment is not suitable ( $\mu=0,136$ )

According to the opinions of the students, the distance education method used in art education during the pandemic period not includes problems related with teachers (Table 8).

In arts education with distance education, the problems related with measurement and evaluation ( $\mu = 0,329$  subscale average) are at middle level. According to the opinions of the students, the areas in which distance education problems related with measurement and evaluation are more in art education are as follows:

- Skill-based gains cannot be measured ( $\mu=0,491$ )
- They give a lot of homework ( $\mu=0,484$ )

According to the opinions of the students, the areas in which distance education problems related with measurement and evaluation are less in art education are as follows:

- My auditory works cannot be measured properly ( $\mu=0,148$ )
- Assessment with only homework is insufficient ( $\mu=0,262$ )

According to the opinions of the students, the distance education method used in art education during the pandemic period includes problems related with measurement and evaluation (Table 9).

Table 9. Problems based on measurement and evaluation

	N	Mean	Std. Deviation
• a) Skill-based gains cannot be measured	715	0,491	0,500
• c) They give a lot of homework	715	0,484	0,500
• d) Labor is on par with cheating homework	715	0,371	0,483
• k) The result is being evaluated, the process cannot be taken into account	715	0,364	0,481
• e) My visual works cannot be measured properly	715	0,358	0,480
<b>Subscale total</b>	<b>715</b>	<b>0,329</b>	<b>0,271</b>
• g) Objective assessment possibility is poor	715	0,326	0,469
• b) Cognitive gains cannot be measured	715	0,301	0,459
• l) Acquirements that cannot be expressed in writing cannot be measured	715	0,290	0,454
• i) Unfair results with copy in online exams	715	0,277	0,448
• h) They cannot prevent cheating in online exams	715	0,276	0,447
• j) Assessment with only homework is insufficient	715	0,262	0,440
• f) My auditory works cannot be measured properly	715	0,148	0,356

Male students are of the opinion that problems related to students are at a higher level than female students. There is no difference in other dimensions according to gender (Table 10).

Table 10. Comparison of the distance education problems experienced by art students by gender

		N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
14) Problems related with internet and computer	• a) Female	546	0,502	0,230	1,321	713	0,187
	• b) Male	169	0,475	0,233			
15) Problems based on the computer distance education program	• a) Female	546	0,269	0,257	1,572	713	0,116
	• b) Male	169	0,234	0,256			
16) Problems based on the content/acquirements of the course	• a) Female	546	0,449	0,300	0,977	713	0,329
	• b) Male	169	0,423	0,324			
17) Problems related with students (you or your friends)	• a) Female	546	0,371	0,253	0,018	713	0,986
	• b) Male	169	0,370	0,294			
18) Problems related with teacher	• a) Female	546	0,210	0,238	1,870	713	0,062
	• b) Male	169	0,172	0,228			
19) Problems based on measurement and evaluation	• a) Female	546	0,338	0,267	1,648	713	0,100
	• b) Male	169	0,299	0,283			
Problems related with distance education	• a) Female	546	0,357	0,178	1,726	713	0,085
	• b) Male	169	0,329	0,201			

Visual arts students experience more problems in the dimension of "Problems related with internet and computer" compared to auditory arts students. There is no difference between the views of the two student groups in the other sub-dimensions and in total (Table 11).

Table 11. Comparison of the distance education problems experienced by visual arts students and auditory arts students

		N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
14) Problems related with internet and computer	Visual arts students	526	0,484	0,225	-2,290	713	0,022
	Auditory arts students	189	0,528	0,243			
15) Problems based on the computer distance education program	Visual arts students	526	0,257	0,259	-0,727	713	0,468
	Auditory arts students	189	0,272	0,250			
16) Problems based on the content/acquirements of the course	Visual arts students	526	0,441	0,295	-0,247	713	0,805
	Auditory arts students	189	0,447	0,334			
17) Problems related with students (you or your friends)	Visual arts students	526	0,373	0,254	0,472	713	0,637
	Auditory arts students	189	0,363	0,287			
18) Problems related with teacher	Visual arts students	526	0,210	0,234	1,681	713	0,093
	Auditory arts students	189	0,176	0,240			
19) Problems based on measurement and evaluation	Visual arts students	526	0,335	0,260	1,088	713	0,277
	Auditory arts students	189	0,310	0,299			
Problems related with distance education	Visual arts students	526	0,350	0,176	0,023	713	0,981
	Auditory arts students	189	0,350	0,203			

Those who do not receive education related to the distance education computer program experience more problems in all dimensions except "problems with the teacher" and "problems caused by the computer distance education program" and generally in total distance education compared to those who receive education. (Table 12)

Table 12. Have you taken training on the use of computer programs used in distance education?

		N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
14) Problems related with internet and computer	• a) No	523	0,513	0,233	3,478	713	0,001
	• b) Yes	192	0,446	0,218			
15) Problems based on the computer distance education program	• a) No	523	0,270	0,257	1,506	713	0,132
	• b) Yes	192	0,237	0,255			
16) Problems based on the content/acquirements of the course	• a) No	523	0,472	0,310	4,268	713	0,000
	• b) Yes	192	0,363	0,281			
17) Problems related with students (you or your friends)	• a) No	523	0,385	0,269	2,383	713	0,017
	• b) Yes	192	0,332	0,245			
18) Problems related with teacher	• a) No	523	0,212	0,240	1,941	713	0,053

	• b) Yes	192	0,173	0,223			
19) Problems based on measurement and evaluation	• a) No	523	0,345	0,269	2,700	713	0,007
	• b) Yes	192	0,284	0,271			
Problems related with distance education	• a) No	523	0,366	0,185	3,929	713	0,000
	• b) Yes	192	0,306	0,171			

Students who do not have a quiet, independent room where they can take distance education lessons at home, experience more problems in all dimensions except teacher-related problems and in total distance education in general compared to students with silent rooms (Table 13).

Table 13. Do you have a quiet, independent room in your home where you can do your distance education lessons?

		N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
14) Problems related with internet and computer	• a) No	234	0,556	0,233	5,006	713	0,000
	• b) Yes	481	0,466	0,224			
15) Problems based on the computer distance education program	• a) No	234	0,308	0,261	3,428	713	0,001
	• b) Yes	481	0,238	0,252			
16) Problems based on the content/acquirements of the course	• a) No	234	0,476	0,293	2,042	713	0,041
	• b) Yes	481	0,426	0,311			
17) Problems related with students (you or your friends)	• a) No	234	0,449	0,269	5,650	713	0,000
	• b) Yes	481	0,333	0,252			
18) Problems related with teacher	• a) No	234	0,226	0,268	1,931	713	0,054
	• b) Yes	481	0,189	0,218			
19) Problems based on measurement and evaluation	• a) No	234	0,385	0,288	3,882	713	0,000
	• b) Yes	481	0,302	0,258			
Problems related with distance education	• a) No	234	0,400	0,191	5,163	713	0,000
	• b) Yes	481	0,326	0,175			

Students who do not have enough internet connection at home to do distance education lessons experience more problems in all sub-dimensions and total scale than students who have (Table 14).

Table 14. 12) Do you have an internet connection that allows you to do your distance education lessons at home?

		N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
14) Problems related with internet and computer	• a) No	179	0,617	0,221	8,536	713	0,000
	• b) Yes	536	0,455	0,220			
15) Problems based on the computer distance education program	• a) No	179	0,335	0,247	4,534	713	0,000
	• b) Yes	536	0,236	0,255			
16) Problems based on the content/acquirements of the course	• a) No	179	0,505	0,310	3,173	713	0,002
	• b) Yes	536	0,422	0,302			
17) Problems related with students (you or your friends)	• a) No	179	0,462	0,287	5,459	713	0,000
	• b) Yes	536	0,340	0,248			
18) Problems related with teacher	• a) No	179	0,261	0,279	3,955	713	0,000
	• b) Yes	536	0,181	0,216			
19) Problems based on measurement and evaluation	• a) No	179	0,416	0,288	5,073	713	0,000
	• b) Yes	536	0,300	0,259			
Problems related with distance education	• a) No	179	0,433	0,193	7,214	713	0,000
	• b) Yes	536	0,322	0,172			

## Conclusion

According to the opinions of the art teacher candidates:

- Distance education is not successful in art teaching.
- Face-to-face training is more effective.
- Materials in art education with distance education are insufficient.
- Teachers do not know distance education.
- Participation in live lessons in distance education is low.
- Students do not prepare for the lesson.
- Students were not educated about the programs used in distance education.

- Measurement and evaluation processes in distance education are problematic.

In the present study, the opinions of students who receive art education about distance education during the Covid-19 pandemic process were discussed. It was found as a result of the study that the success levels of the distance education method in art education are quite low when compared to face-to-face education. Bennet (2010) reported in his study that music researchers demonstrated the benefits of using online video conferencing platforms to provide simultaneous music education to individuals who are far away and difficult to reach with the widespread understanding of face-to-face education in music education. However, when considered in terms of the limitations of distance education, parallel with the results obtained in this study, Dammers (2009) concluded that although some basic level acquisitions are achieved in online trumpet lessons by students, distance education is only complementary in these lessons because of the problems of simultaneity and limited visual interaction. Similarly, Brändström, Wiklund, and Lundström (2012) reported that distance education can be a complementary method for face-to-face education. However, in his study conducted with an advanced piano student, Pike (2020) reported that his student also acquired vocalization, phrasing, articulation, rhythmic and pedagogical aspects, during distance education as in face-to-face lessons, which he called “normal”. This can be interpreted as the distance education method in art education can be effective on advanced students rather than at the beginner level. On the other hand, Karahan (2016) reported that there were no significant differences between simultaneous piano education, traditional face-to-face piano education, and distance education methods in terms of success, and Okan and Arapgirli (2018) in terms of acquiring basic skills for beginner violin students. In the light of all these studies, the results obtained in the present study based on the opinions of many students studying in many different institutions and in many branches of art education show that it is not sufficient to perform art education with the distance education method.

It is also among the results of the study that teachers do not have knowledge of distance education methods. This result is in line with the studies of Sakarya and Zahal (2020), in which it was reported that teachers are not subject to any in-service training for distance violin education. In this respect, it is understood that teachers are learning distance education methods by doing and experiencing in this process.

Although it is seen that distance education has negative impacts on art students in motivation and preparation for courses, it was also found that the active participation of students in courses was low. When this is considered especially in terms of collective lessons in art education, which require performance, it is open to interpretation that students avoid performing. Also, the limitations of the access of students to digital resources can be considered as one of the reasons preventing active participation in courses. Sözen (2020) concluded that academic achievement differences will deepen because of the differences in opportunities (i.e. computer and internet access) among students from different socioeconomic environments. It is also among the remarkable results of the study that students lack the canvas, paint, instrument, music stand, etc. It seems possible that these inadequacies can be considered among the factors negatively affecting the participation of students in courses. It was found according to the opinions of the students that they faced problems such as disconnection/freezing of the internet connection, poor internet connection, low image quality, a slow computer, and poor sound quality during distance education. Orman and Whitaker (2010) emphasized that although distance education is convenient for reaching large audiences, the sound quality has a limiting effect. King, Prior, and Waddington-Jones (2019) reported that there are limitations in communication and accompanying music in music lessons provided over Skype. According to Dammers (2009), live online community performance is not possible because of the latency that is caused by the compression and transmission of the signal.

It was revealed in terms of measurement and evaluation processes in distance art education that there are problems such as the inability to measure skill-based acquisitions and the inadequacy of homework evaluations. Performance evaluations, which came to the forefront in the evaluation of practice-based courses, may be interrupted because of the abovementioned technical and material-based disadvantages, and measurement and evaluation may face the danger of losing objectivity.

### Recommendations

Recommendations based on the findings of the research are as follows:

- Pre-service and in-service trainings should be given to teachers on the following topics in order to adapt to new paradigms.
  - Using distance education programs
  - To prepare distance education course materials
  - Using distance education and training techniques
  - Classroom management in the distance education process
  - Measurement and evaluation techniques in distance education

- Communication skills in virtual environments
  - Face-to-face and distance education in art education should be designed as a hybrid model.
- Activities can be performed to increase the motivation of students and teachers towards distance education.
- The method of embezzling materials periodically can be used through institutions for students who do not have access to such materials.
- Students can be encouraged to organize periodical artistic events, exhibitions, and concerts in the virtual environment.
- Online masterclasses can be organized for students.

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## Teachers' Voices: Strengths and Weaknesses of the Current Model of Continuing Professional Development in a Rural SA District

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### ABSTRACT

South Africa is no exception to the trends of education reforms, hence, the founding of many professional growth initiatives to develop teachers in schools. The Teacher-led Cluster (TLC) is one example of a widely employed intervention programme of Continuing Professional Development (CPD) in the South African context for both urban and rural schools. Using a qualitative case study research design, this study aimed to elicit teachers' voices on the current model used in the TLC programs in a rural SA district. Data were collected through interviews and document analysis with six participants purposively selected and analyzed through content analysis. The study found that, while the participating teachers appreciated the CPD programs offered to them, the model used for the TLC programs has weaknesses that do not address their professional needs such as duration and frequency, strength of administration, provision of transport, refreshments, and resources. Cognizant of the foregoing, the paper argues that teachers' voices and opinions play important roles in determining CPD programs that might work to fulfil their present and anticipated needs in their unique settings. Therefore, there should be teacher consultations on program development to avoid rejection by teachers, as teachers' suggestions could help in adapting or creating professional development models that work in rural settings.

### CONTEXTUALISING THE SETTING

This article focuses on teachers' CPD in a rural setting in South Africa (SA). Contextualising the study is necessary to understand the uniqueness of the area and its particular needs regarding the growth and development of its teachers. South Africa is a developing country – considered as one of the richest countries in Africa – with nine provinces, that has come a long way since its political transition from the Apartheid era to the advent of democracy in 1994; yet, its transition 27 years after, remains incomplete (Amnesty International, 2020; Hanusch, 2018). The alleviation of poverty, quality education for all, eradication of inequalities in all contexts are some of the central goals in the policy frameworks of the country. However, although these policy frameworks have resulted in notable gains in poverty reduction since 1994, the country continues to face the challenge of high poverty, high inequality, and high unemployment rates (Plagerson & Mthembu, 2019). Consequently, the ills of these inequalities are largely felt in the quality of education as it remains very poor, mostly in historically deprived rural areas, where some schools do not even meet the basic learning infrastructure requirements such as access to laboratories, libraries, and internet connections and have less qualified educators (Statistics South Africa, 2016).

The Eastern Cape Province, which is the area where the study was conducted, lies along the southeast coast of SA, priding itself on its tourist attractions such as its beautiful scenery and diverse cultures. However, the province is one of the most rural and deprived provinces in the country. Fobosi (2013) attested that the Eastern Cape Province continues to be one of the provinces with the highest levels of poverty, underdeveloped infrastructure, and unemployment. The education system in the province has had to address high levels of inequality within the province, such as fusing the previously marginalized education departments from the Ciskei, Transkei, and former Republic of South Africa (Ncanywa, 2014). The province, according to Ncanywa (2014), is characterised by different types of schools such as the village, farm, township, and town schools with a large number of village schools in the former Transkei, a former so-called homeland where the study was conducted. The education system in the province experiences challenges as it continues to live with the consequences of the political and economic decisions made during the Apartheid era (Amnesty International, 2020). These consequences are due to, among others, taking over the previously poorly managed homeland system that had schools of poor infrastructural quality such as shack schools, mud schools, and prefabricated schools with some areas having no schools at all (Ncanywa, 2014). CPD in this area has been implemented with high hopes of growth and improved quality in schools which have not been achieved to

the level expected. The question then arises about the purpose of CPD and the nature of programs implemented in South African rural schools.

### **CONTINUING PROFESSIONAL DEVELOPMENT**

Teacher professional learning is of increasing interest as one way to support the increasingly complex skills students need to learn in preparation for further education and work in the 21st century (Darling-Hammond, Hyler, & Gardner, 2017). Teacher professional development (PD) is highly significant to teachers as it plays an important role in changing teachers' teaching methods and assisting them to move beyond the comprehension of the surface features of a new idea or innovation, to a deeper understanding of a topic (Pitsoe & Maila, 2012). With student learning and achievement being so greatly impacted by increasing demands for the enhanced quality of teaching, effective teacher development has become extremely important for any educational system to remain competitive in a global arena (Bayar, 2014).

Several scholars have identified the concept of continuity of PD as significant to ensuring teacher quality, hence, CPD has increasingly become a priority in most countries worldwide (Kennedy & McKay, 2011). As such, the drive for policy formulation on the CPD of teachers has been accepted over the last several decades by many researchers, educators, policymakers, and teachers' unions (Bayar, 2014).

South Africa is no exception to this trend of educational reform of teacher PD programs, hence, the founding of many growth initiatives such as the Teacher-Led Cluster (TLC) program of PD by the Department of Basic Education to improve the competencies of teachers in classes (Tsotetsi & Mahlomaholo, 2015). The TLC program is one of the recently adopted and popular forms of CPD in South Africa (Mokhele & Jita, 2012). This entails PD led by teachers themselves to help one another improve the quality of their teaching and learning. Stacy (2013) advocated that teacher empowerment can emerge within the current system through teacher-led PD. Teacher-led PD creates opportunities to enhance professional autonomy, emphasizes professional judgment, and provides space to validate teacher voices, all essential components of teacher empowerment (Stacey, 2013).

However, despite efforts and enthusiasm, very little seems to have shifted in teachers' practices especially for teachers in rural Eastern Cape schools. Mokhele and Jita (2012) sanctioned that in South Africa, the challenge has been to find CPD formats and practices that have the potential to change teachers' knowledge and classroom practices for the better.

Several reasons for failure have been raised. Tsotetsi and Mahlomaholo (2015) contended that one important aspect which has influenced the failure of the CPD programs for teachers has been not listening to teachers when the programs are designed. The Department of Education has designed CPD programs including the TLC, from a uniform "one-fits-all" perspective, therefore, while CPD has been provided, it has not always been relevant to the realities of teachers in rural areas (Ono & Ferreira, 2010; Tsotetsi & Mahlomaholo, 2015). Most of the rural schools reflect a largely different context when compared to other schools. Many are poorly equipped, while some of these rural schools do not even meet the basic requirements for resources, presenting yet more challenges for teachers attending the CPD programs (Stack, Beswick, Brown, Bound, Kenny, & Abbott-Chapman, 2011). Given the poor performance of South Africa on CPD, close attention must be paid to how both new and experienced educators in rural schools are trained and supported (Bernadine, 2019). The scholar further purported that one of the distinguishable factors of CPD is that it is an integral part of teacher education because only continued learning and training assures a high level of expertise and ensures teachers keep up-to-date with new research on how children learn, the emerging technologies for the classroom, and new curriculum resources.

### **THEORETICAL FRAMING OF CPD IN THE CONTEXT OF THE STUDY**

Many professional development programs have been proposed (Mokhele, 2013), with various models viewed as enhancing the effectiveness needed for the aims of CPD to be realised. There is substantial evidence on components that have been adopted as essential by several countries (Kennedy, 2016) for effective PD programs, and researchers agree on these several components as features that are likely to support educators' practices (Desimone & Garet, 2015; Kennedy, 2016; Luft & Hewson, 2014). These include (a) active learning; (b) content focus; (c) collective participation; (d) coherence; and (e) sustained duration. Darling-Hammond et al.'s (2017) review study confirmed and expanded upon this five-part framework by adding two more features that underlie powerful teacher PD which are: (f) uses models and modelling of effective practice; and (g) offers opportunities for feedback and reflection. Successful PD models as the scholars posited generally feature a number of these components simultaneously.

Mokhele's (2013) Alternative Model for Professional Development in South Africa is set as a lens in the study. The structure of the model, designed for a South African context, includes most of the features specified by the above scholars, though some features have been modified – it is the most followed and used model for CPD in South African schools, including the TLC programs. The model has the following five key components:

- Structure of PD program – This feature refers to the way a PD program is structured, such as the form of the activity used which may be a study group or a teacher network etc., as opposed to the traditional workshop. Additionally, the feature emphasizes the use of group work activities as well as visits from experts in the field of study.
- Teacher collaboration – A feature that explains the importance of teachers from different schools meeting and conducting many of the activities as a group. Besides the specific content knowledge that the teachers discuss in their clusters, they also share and discuss their problems regarding pedagogy and classroom practices.
- The content focus and teaching in the rural setting – Focusing on subject matter content in a PD program is viewed in the model as important. Moreover, a CPD program needs to be modified to suit the needs of the participating teachers. For example, some schools may be rural while others may be urban and, as such, the focus should be varied to suit the individual needs of those schools.
- Time of engagement – According to this feature, the model promotes that the amount of time spent in PD activities must receive consideration because PD, by its nature, should happen while the teachers are engaged in their work and profession.
- Personal transformation and growth – The model's fifth and final feature suggests that personal transformation and growth are important for teachers who participate in a PD program. Teachers are attracted to the PD programs not only because of the four aspects discussed earlier but also because such programs have the potential to fundamentally change them for the better.

All these components, as the model illustrates, are alleged to increase knowledge and skills and change beliefs and ways of teaching, leading to improved student learning (Mokhele, 2013). Mokhele (2013) further posited that literature contends that PD leaders, for example, often attempt to modify teachers' beliefs about certain aspects of teaching or the desirability of a particular curriculum or instructional innovation. As this study set out to hear the experiences of teachers of TLC CPD programs, the framing by Mokhele (2013) mostly followed and used model for CPD in South African schools, including the TLC programs, will be engaged to aid as a guide to measure what, when, and how teachers experience TLC programs, specifically in the OR Tambo District, in the former Transkei homeland situated in the Eastern Cape, South Africa.

### **Need for and Focus of the Study**

As a former educator and current researcher who has been born and bred in the province, specifically in the Transkei and worked in the Eastern Cape Department of Education for more than two decades, I gained vast experience of the realities and many challenges the education system in the province struggled with. The villages are scattered with some locations deeply entrenched in rugged hills, mountains, and valleys, but, it is one of the areas where you find the friendliest people, where it is still a norm to greet one another, come together and share a meal. Schools are developing and under-developed, with most of the schools far from larger centers or towns, under-resourced, some overcrowded, with poor learner attendance, high learner dropout, insufficient funding from government, lack of parental involvement in education and gravel roads that are mostly poor and muddy when it is raining. It is standard practice for some learners to travel long distances by foot, struggle with school uniforms and have no transport, as many come from poor socio-economic backgrounds. The teachers are subjected to multi-grading, are underqualified, often have less access to support services, poor transport services to work as the schools are remote and far apart.

The Eastern Cape Department of Education is demarcated into various districts. The OR Tambo District, where the study was conducted, is further sub-divided into circuits levels, with each circuit level comprising 23 or more schools. The TLC programs were implemented as a CPD initiative to professionally develop teachers, framed by the Mokhele (2013) model structure. The schools are clustered according to circuit levels for the CPD programs. Teachers attend the TLC CPD programs and are developed on various important aspects that play a role, directly or indirectly, in their teaching and learning environments. As teachers, we would travel the long distances to the programs, expensive as it was for many of us to get to the centers – using money out of our pockets – soldiering on with a zeal to be developed. Despite all efforts, little change was and is seen in teachers' practices and student achievement, which is the primary focus of the model used for the TLC CPD programs. Questions regarding their effectiveness, and whether teachers benefitted from the program and the programs attained their goals arose. To gain an insider perspective on the matter

and see whether the Mokhele (2013) model was suitable for the rural areas of the Eastern Cape or if possible improvements were needed, a study was undertaken that set out to answer the following two questions:

- Are teachers in a selected rural area of South Africa satisfied with all aspects of the CPD programs they undergo?
- If not, what changes need to be considered?

The purpose was to make use of teachers' voices to explore whether modifications were needed to the current model followed for the TLC programs in the selected rural area.

## RESEARCH METHODOLOGY

### Research Approach and Design

This paper uses a qualitative research approach and explores teachers' experiences of the TLC programs offered to them by the Department of Education. The data collected relied on participants' in-depth responses on how they constructed or understood their experiences of the TLC programs, based on open-ended questions. A case study design was used. In the context of the discussion not only were the statements and perspectives of the direct participants in the observed situation taken into account but the environment of the participants and the interaction between them was also observed – this helped in being deeply immersed in the context of the investigated phenomenon (Silveman, 2020). The researchers investigated each participant as a single case to obtain an in-depth analysis of the TLC programs (Yin, 2014).

### Participants and Study Setting

The population of the small-scale study was selected from educators participating in a TLC CPD program in the OR Tambo Inland district in the Eastern Cape Province, South Africa. The participants were selected purposively – therefore, experienced, and information-rich participants were chosen based on their qualities being relevant to the study. This study formed part of a larger study and comprised of six participants, which included two principals, one deputy principal, and three educators who participated in the PD programs. However, for this specific paper, the focus is only on four teachers' perceptions of TLC CPD programs. The participants were involved in the programs as educators and as cluster leaders who led the programs at different stages, except for one participant, Katongo, who, despite being a novice, had the knowledge and experience. Because of their exposure and experiential knowledge, participants could communicate experiences and opinions in an articulate, expressive, and reflective manner (Etikan, Musa, & Alkassim, 2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics 2016). Confidentiality and anonymity are ethical practices designed to protect the privacy of human subjects while collecting, analyzing, and reporting data. The participants' pseudonyms used were Tuma, Somiso, Katongo, and Bryson.

**Tuma:** A female, vastly experienced teacher who started teaching in 1986. She holds an Honours degree in education from the University of Pretoria. Tuma is employed as a school principal at a senior primary school in the Mthatha District. She teaches Mathematics and Natural Sciences to grades 4-7.

**Somiso:** A male teacher whose teaching career spans over 20 years. He is a school principal, currently teaching Mathematics and Life Skills to grades 4-7.

**Katongo:** A female Ghanaian, post-level professional teacher who is a temporary citizen in South Africa. She started teaching in 2008 in her country before she emigrated to South Africa in 2012. She is currently teaching Mathematics to grades 4-6 and has been for three years. She is referred to as a novice teacher because she recently joined the teaching profession in South Africa.

**Bryson:** A male deputy principal who holds an Advanced Certificate in Education and a teaching diploma majoring in Mathematics and General Science. He started teaching in 1981, took a break in 1990, and re-joined in 1999. He has 26 years of teaching experience. Bryson taught Mathematics, Science, and History in grades 7-9 and in 2013 started teaching Mathematics in grades 8 and 10.

### Data Collection Methods

For the part of the study reported in this paper, data were collected through the use of open-ended questions in semi-structured individual interviews, often accompanied by further probing (Newcomer, Hatry, & Wholey, 2015) and field

notes. The semi-structured interviews provided the researchers with an opportunity to deeply explore unforeseen issues more deeply through a guided interview protocol.

### **Data Analysis**

Data in this study were analyzed through a qualitative content analysis approach. The objective in qualitative content analysis assisted the researchers to systematically transform a relatively large amount of text into a more organized and concise summary of key results. It is believed that this procedure added to the validity and reliability of the study and would enable different coders to arrive at similar results when the same body of material is examined (Erlingsson & Brysiewicz, 2017; Silverman 2011). Data were categorized into themes based on patterns that emerged from transcribed interviews and field notes.

### **Ethical Considerations**

Permission was sought from all the relevant stakeholders. All the participants signed informed consent letters validating their willingness to participate in the study. After the findings were finalised, they were sent back to the participants to ensure that they had the opportunity to authenticate what was attributed to them. Furthermore, researchers should also take into consideration how they are going to ensure privacy and confidentiality. To ensure the anonymity and confidentiality of the participants, pseudonyms were used, and participants are consulted before any publication is submitted.

## **FINDINGS AND DISCUSSION**

### **Strengths of the TLC Model**

In the analysis of the data gathered from the participants, three key themes were identified and came to the fore as strengths in the TLC model in use, namely: structure of professional development, teacher collaboration, the content focus, what enables teaching in diverse classrooms, and teacher growth and confidence. These aspects are illuminated below.

### **Structure of professional development**

Clustering in African states such as South Africa, Zimbabwe, Namibia, Republic of Guinea, Ethiopia, and many more have emerged as an important form of reaching teachers on PD. According to various scholars, for all these states (Maphosa, Mutekwe, Severino, Wadesango, & Ndofirepi, 2013; Mphahlele, 2012), the purpose of establishing this type of teacher-led PD is an alternative strategy to reach teachers due to the failure of the traditional approach of programs used for decades. The teachers agreed that CPD programs are structured in clusters by the department to reach out to smaller groups of teachers for improved teacher empowerment.

Tuma stated that: “We decided at district level to form circuit clusters and have cluster leaders. We organise a gathering for teachers for the various circuits at different times and share the content knowledge or teaching style we have received. They nominated us as science teachers by clustering schools so that we were not overcrowded.” Bryson explained: “Yes, there is a cluster activity going on. ... I was a cluster leader for approximately three to four years in Mathematics. I was given the duty by the department, in fact, both the department and the teachers entrusted me to be the person who would organise cluster meetings on Mathematics whenever needed.”

Tuma and Bryson voiced that the CPD program is organized in TLCs which group teachers together according to circuits to share knowledge and help develop each other's practices. Mokhele (2013) also contended that the aspect of structure on the form of activity used may be of a reformed type, such as a study group or a teacher network, as opposed to the traditional workshop or conference. Furthermore, as an additional strength to the structure of the TLC programs, the teachers explained that the model uses group work activities that actively involve all the teachers. Bryson confirmed that “there are usually a lot of activities. The activities are conducted for a group of teachers with a lot of hands-on. It is a lot of hands-on. One other thing that inspires me is that we are involved hands-on. We are given opportunities to present also, to prepare a lesson and then present it.”

A similar sentiment was shared by Katongo, who pronounced that, “it was a very hands-on meeting. They do not come to impose on us, but they try to see to it that we can all engage in what has been identified as problem areas common in our schools. We were all having a say and very much actively involved.”

The teachers attested that the clusters make use of a group-work approach when the cluster activity is in progress thus getting teachers involved, which is an aspect the teachers are passionate and enthusiastic about. Darling-Hammond et

al. (2017) confirmed that active learning engages teachers directly in designing and trying out teaching strategies, providing them with an opportunity to engage in the same style of learning they are designing for their students. Correspondingly, the last characteristic of high-quality professional development by Borko, Jacobs, and Koellner (2010) is structural characteristics, which represent structuring the activities of the PD to be ongoing, sustainable, providing teachers with opportunities to engage in cycles of experimentation and reflection.

The teachers further shared that the programs are led by cluster leaders but at times there would be visits from experts on certain concepts. The participant, Tuma, shared the following: “At times, an expert would be present to share new important concepts and pedagogies viewed as effective for their classroom practices. Someone good in the area to show us how to teach – they would lead the cluster meetings; for example, we also have a lot of misconceptions on terms, so we correct those misconceptions. One time, for example, we attended a workshop, as we usually call them, on balancing equations by a Mrs Zamdela from one of the Mthatha schools. We were then expected to go and use her method of teaching back at our schools and this helped us a lot.” Another participant, Somiso, stated that, “most of the programs are organised by circuit cluster leaders for Mathematics to be specific. Because I had a period when I was a cluster leader, until 2013, so I used to attend workshops organised by the DoE as a cluster leader so that I can be able to filter the information to the other teachers at large. However, at times an expert would be present to share new important concepts and pedagogies viewed as effective for their classroom practices.”

Thus, it became clear from the teachers’ point of view that having a visit from an expert (even if it is a teacher from another school) brings in waves of hope and excitement. It was observed that for them, the visits mean more growth and development in their teaching and learning contexts. Such growth presents a series of positive and inspiring atmospheres in their classrooms, which help in reaching their desired outcome which is always an improved learner performance. The findings of the study align with Mokhele (2013) establishing that the network or cluster approach should be run by experts to cover content gaps as well as improve the pedagogical styles of teachers, create lasting opportunities for networking and for building professionalism to improve teaching and learning in schools. Interaction, as the teachers testified, brings a sense of mentoring and reliance on each other. As Mokhele (2013) positioned, it is therefore important to consider the structure of the program when planning a CPD intervention for teachers.

### **Teacher collaboration**

In this theme, the teachers evidenced an atmosphere of teacher collaboration as one of the most significant strengths of the teacher-led clusters. Katongo explained: “Yes, they are very important for us to attend because we learn new methods. Now we are having new ideas from different people. So, there are a lot of things that we have to add to what we know already. So, we go there to refresh our minds and then see that we are on track.” Tuma believed that, “clusters are very important because it is where one voices their difficulties and it is where they get advice and they go back to classes being refreshed and revived. As we are facing the problem of shortage of teachers, especially in Maths and Science, having clusters help the disadvantaged schools because the teachers who teach those subjects get some advice on how to teach certain topics.” Another participant, Bryson explained why he thought TLC CPD programs are important: “When you start teaching, you do not know everything. You learn many things as you execute your duties. You learn a lot from your colleagues because of their experience, which you may not have.”

Interaction, as the teachers testified, brings a sense of mentoring and reliance on one another. Thus, the collaboration in a cluster program enables participating teachers to gain a substantial degree of ownership from their involvement in decision-making and by being regarded as true partners in the change processes experienced by teachers who can then confidently produce better performing learner achievements. The teachers’ experiences of teacher collaboration in TLC CPD programs, besides the specific content knowledge that the teachers discuss in their clusters, is the sharing and discussing of their problems regarding pedagogy and classroom practices. Stacey (2013) maintained that teachers in a collaborative setting have opportunities to share their expertise as classroom professionals, develop common practices, and assess how those practices improve student learning. Maphosa et al. (2013) argued that the common purpose of clusters or teacher communities is to operate on the premise that learning is a social process and that it requires people to collaborate and share information and ideas. As the scholar posited, the revelations of the teachers also defined collegiality between the teachers, allowing them the freedom and openness to interact with each other as best they could. Each teacher’s voice, therefore, is heard and given attention and as such, a sense of belonging and dependence on each other’s knowledge is promoted.

### **The content gap and pedagogical focus enables effective teaching**

An important variation to the Mokhele model emerged in this theme as participants did not relate the TLC CPD programs to their contexts as specified in the model used. From the data collected, participants showed that the issue of rurality is not as relevant to their cluster programs, as most schools in the OR Tambo District are rural. The participants shared more on how the TLC programs focus on developing teachers on content mastery and pedagogical strategies they can use in their varied classroom contexts.

Tuma illustrated this: “In the cluster, a lot is covered. Like I said, we come together and discuss a theme as NS has four themes. We take one theme, although the time becomes against us sometimes, we make sure we cover the whole information needed to be known by a child on a theme. Per se, it is the curriculum, the teaching styles, remember we teach in schools with no resources, so we are shown how to improvise so that a lesson is simple. Sometimes we plan together one thing as we write common papers in June and December, set by the department, so we need our kids to be on the same level.”

Somiso felt the programs had made him a better teacher: “With me, I had a problem with teaching fractions and upon attending or having workshops on teaching fractions, through meeting with other teachers, they shared other strategies I didn’t know at all, and as a result, I am able to make my learners understand fractions. One other thing cluster programs have helped with is that most importantly, as early as grade four, I know that my learners must understand what fractions are. I am able now to show my learners the bottom line by looking at the real manner of fractions and not just telling.”

Whitehouse (2011) stated that a PD program ought to be driven by identified learning needs which involve an audit along the lines of what students currently know and how this is measured, followed by a statement of what the students need to know and a strategy for moving from the current state of students’ knowledge to the desired state. The participants further shared that as individual teachers they do not hold all the answers, and as the syllabus changes now and then, there is a need to have their knowledge refreshed. Additionally, the advancement of their skills is always needed as they are committed to the best interests of their learners and their schools. The following reflection from Bryson illustrates this: “And also, the content gap is attended to and some new methods or approaches are applied, and I just get excited you know. That content gap thing must not be thrown away. It must always be there because I could see how the teachers get so inspired after they have attended a cluster meeting. And the level of confidence is lifted and boosted.”

It is an accepted and commonly shared supposition that subject matter must be mastered by both new and older teachers for an effective teaching and learning environment. Whitehouse (2011) agreed that PD should be subject-specific as research shows that CPD is more likely to bring about improvements, particularly in teacher efficacy and pedagogical content knowledge, when it is subject-specific. Such development helps teachers to preserve a harmonious atmosphere in their classroom encounters and as such, the participant teachers emphasized that cluster programs do provide that. Bayar (2014) also brought to light the impact of high-quality teachers on student learning and achievement which has been debated, and the benefits that have been accepted over the last several decades by many researchers, educators, policymakers, and teachers’ unions. Therefore, as Desimone and Garet (2015) stated, it is of significance to ensure that CPD programs consider the issue of alignment with lessons more deliberately, and include support, guidance, and practice for teachers to integrate the knowledge or pedagogy into their daily instruction, rather than leaving that burden to them when they return to the classroom. Interestingly, what the teachers presented in their experiences shows that the cluster activities they have been engaged in have preserved such mastering, as the content of the subjects has been a priority in the TLC CPD programs. Therefore, as scholars have further argued, to be effective, PD must provide teachers with a way to apply that which they have learnt directly to their teaching (Darling-Hammond et al., 2017).

### **Teacher growth and confidence**

The growth the participants related to the TLC programs was of growing professionally which increased their confidence in teaching. In this theme, another variation to the Mokhele model emerged, as participants’ experiences were of growing professionally rather than personally. The growth is related more to teacher efficacy and confidence than to their personal development. Such development, as shared by the participants, helped them to be able to endure the difficulties they encounter in teaching and work with confidence with their learners.

Tuma expressed her thoughts on her journey: “You know what, these gatherings grow us. You grow as a person; you gain more confidence with your teaching especially with us in our disadvantaged schools. A teacher, no matter how experienced you are, you need such confidence to improve your student’s work and to stay motivated because iteaching sisi (sister) *iyagugisa* (makes one old).”

Bryson also felt that he had grown professionally: “I am old now and the experience I have is beyond because of such programs. When you start teaching you do not know everything. You learn many things when you are really in class. You learn a lot from your colleagues because of their experience which you do not have. So, the cluster workshops are a great gain in knowledge and skills needed in teaching.”

It was evident from the extracts that the teachers are grounded by a belief that for them to be effective in their classrooms, they need to be continuously redefined and as such, that keeps them motivated. It is important to note that teachers are attracted to PD programs, not only because of the four aspects discussed earlier, but also because such programs have the potential to fundamentally change them for the better (Mokhele, 2011). The pride of knowing who they are as a teacher was shared by the participants as an important factor that can contribute towards effective teaching and learning as the above quotes suggest. Furthermore, the high stakes and testing demands of the classroom need a teacher who has all the necessary skills of being a professional teacher. Such skills, as the teachers shared, are not acquired immediately after college, but are gradually acquired through attending developmental workshops; hence, the clusters need to provide that. According to Stacy (2013), teacher-led PD can help overcome standardization by providing opportunities to enhance professional autonomy. Both novice and experienced teachers encounter the daunting environment of teaching various subjects they are often not familiar with but are expected to produce quality results. The cluster programs, as the above quotes related, have opened the doors to growth in skills and knowledge beyond their ability, thereby ensuring broader goals that aim at improving their teaching strategies and the future of their learners.

### **Weaknesses of the TLC Model**

In the analysis of the data gathered from the participants, three more key themes were identified and came to the fore as weaknesses in the TLC model in use, namely: duration and frequency of engagement, weaknesses in monitoring and administrative support, provision of refreshments and transport services, and provision of resources. These aspects are illuminated below.

#### **Duration and frequency of engagement**

The teachers voiced dissatisfaction with the duration and frequency of the TLC CPD programs. The teachers shared that the cluster programs would run for a day only and were not held frequently. They pointed out that the short duration and lack of continuity limited the coverage of many important aspects whether it was subject matter content or pedagogical strategies.

Katongo explained how he would mitigate this: “If I were to plan or run a cluster program, I would start with time. I would take out the one-day workshop. Some things that I needed attention on were not done, so I realised that time was not adequate.” Tumi noted that, “normally, our workshops for a content gap, for example, run for a day only.” The following extract from Somiso illustrates this further: “What I have observed in the past is that if the workshop was meant to span four hours, it is easy to organise a one-hour workshop and you are done. I think it is also important that in terms of time, clearly, one-day workshops are not giving enough information. ... These must be held continuously and not once in a year as what is currently happening.” Bryson noted that, “these clusters were also very good, but the problem was continuity like we would hold one workshop or none in a year.”

As such, as the participants shared, the goals that the clusters are planned to accomplish seem unattainable. The time allocated to the cluster activities as the teachers alleged portrays a weakness of the TLC from fulfilling their intended outcomes. According to them, the time allocated to these cluster programs is a constraint that manifests in various factors that lead to the ineffectiveness of the CPD programs. One of the four critical elements, developed by Dyer (2013), that help make teacher professional learning meaningful and worthwhile is that learning is incremental. In a more collected statement, Pitsoe and Maila (2012) agreed with such a statement as they claimed that PD is not a static concept but a social construct and fluid in nature. The time allocated for these cluster programs, therefore, contradicts what scholars have argued for in terms of how important it is that the time allocated be enough for all the aspects planned to be covered. It also contradicts what Pitsoe and Maila (2012) argued for when proposing that future teacher PD policy aimed at the South African education system, should be integrated with district goals, and guided by a

coherent long-term plan. Murtaza (2010) contributed that PD of teachers does not take place in a once-off workshop but rather scholars have agreed that it is a continuous and dynamic process of learning opportunities. Mokhele (2011), therefore, established that CPD programs are viewed as systematic efforts to change the practices of teachers in the classroom, to change their attitudes and beliefs, and to change the learning outcomes of students. Such effectiveness, as the scholars have posited, is derived from the continuous implementation of PD programs as the participants aspire to for their clusters. Time is needed to challenge teachers' theories of practice, to apply new practices in their classrooms, and to measure the effects (if any) of the new teaching practices (Whitehouse, 2011).

### **Weaknesses in monitoring and administrative support**

One other weakness of the TLC model from the data analysis is that of providing close monitoring and administrative support to the cluster programs for fluid and effective progress. This theme modifies the Mokhele model, as it adds to what the participants would want to be engaged in, in their CPD programs. The data in the study showed consensus between the teachers who desperately need close monitoring of the cluster programs by the Department of Education officials. From the indications made by the teachers, insufficient planning, organisation, communication, monitoring and follow up from the Department of Education poses impediments to the effective growth process the cluster programs could bring to their teaching and learning. Somiso pronounced that, "in my view, I think the idea of organising clusters is a good one. However, the way they are organised and managed is problematic. I say so because sharing information is very good. But then, when those teachers meet in a workshop, someone must make sure that each teacher in that circuit attends the workshop. At times you find that there would not be good attendance because of logistical constraints. So, once the workshop is organised and educators come to the workshop, the cluster leaders become the sole drivers of the workshop or program, moving the plan, and organising all the materials and running the workshop."

Tuma confirmed that "As educators, we see the need for workshops to be conducted more often. They must be monitored in a better way than what the Department of Education is currently doing. They must make it a priority as a platform for the professional development of educators." Somiso further shared that, "if they are monitored, and you are not just thrown into the deep all by yourself, then it would work great. If there is no monitoring, you know educators always feel like it's a holiday, it is a half-day, so they will push so that you finish early, but if it is monitored, it will be fine. Once that has been done, then a system of monitoring every school must be put in place."

The problems alleged by the participants of poor planning and lack of monitoring results in the cluster programs being non-continuous and consistently unproductive as there have been no changes for the better in most districts and the education system as a whole. Dyer (2013) claimed that supportive accountability within a PD program is essential. The scholar stated that changes in teaching practices are challenging and requires both support and accountability. Therefore, as cluster programs provide teachers with the opportunity to develop personal action plans, to report back to the group what happened as a result of implementing those plans, to reflect and receive feedback (support) from colleagues who are working on the same changes in practice, it becomes dire that they are monitored correctly (Dyer, 2013)

Furthermore, as voiced by one participant who has experience of being a cluster leader, the Department of Education shows weaknesses in even helping out the cluster leaders at times in officialising the correspondence, which often leads to poor planning of the cluster programs and poor attendance. The cluster leader, Somiso, shared that, "if I see a teacher and give that teacher a letter and it becomes a problem when the teacher submits the letter to the principal because one it is not seen as an official letter because it is written by you without the departmental logo. So, at times you find that there would not be good attendance, there would poor attendance because of those reasons or logistics in terms of organising the workshops."

The shortcomings in administration were defined by the participants as an aspect that leads to cluster leaders feeling unprotected and not wanting to drive these programs as expected. The burden of being thrown into the deep end without any assistance, therefore, promotes cluster programs that are just white elephants with no one to accelerate them as needed. Whitehouse (2011) supported what the participants shared as the scholar stressed that there must be effective organizational structures for PD to be effective. The scholar stated that at the school level, CPD needs to be planned and organized because, without this, teachers are effectively left to organize their own professional learning, which will only work for those who are highly self-directed. Hismanoglu (2010) also asserted that CPD programs should enlist the support of the school and district administration, students, parents, and the broader school community.

### **Catering for the personal needs of attendees**

This theme is another prominent weakness and distinction of the currently used Mokhele model. The data analysis revealed a shortcoming in catering for the personal needs of the attendees regarding the provision of food and drink and transport services. The participants alleged that this distinction lies in acknowledging that a PD program must meet all the required elements that help hold the total focus of the teachers. For both these features, the participants stated that they should be acknowledged as important and taken into serious consideration as they asserted that sustenance and travel costs affect the effectiveness of TLC CPD programs as long distances have to be travelled that often take attendees away from their homes for long periods.

Katongo acknowledged: “One other thing is refreshments for teachers to motivate them to attend and enjoy the workshop because sometimes there’s not even water in these meetings. Subsidise their transport because sometimes a workshop is called at a time where teachers do not have money, even if that is done by schools and be made compulsory. So, because of that, teachers do not feel motivated to attend the workshops. So that when they are there, they will eat there so that their mind is focused on the workshop and we are able to discuss anything.”

These two features as the participants evidenced, tend to be a powerful influence on teacher PD as several of the participants elaborated that these aspects affect the number of teachers present and the time spent at cluster programs. As the participants claimed, availability of refreshments and subsidy of transport are the key factors that determine the time of departure and attendance statistics of a cluster program. In support, Bryson echoed that, “the refreshments also contribute a lot so they must always be available, or teachers will want to leave early.”

Additionally, Tuma unreservedly portrayed in her statement how teachers feel when these human needs are catered to in PD programs: “While in Cape Town I attended a science project for grade 7 teachers, where we were trained how to conduct science experiments on electricity. They transported all the teachers teaching science in this grade to Bellville after school.”

It is clear that the teachers’ central focus changes to the information conveyed at PD programs if their personal needs are taken care of. Guskey (2002) has long argued that important questions for PD workshops and seminars also include, was the coffee hot and ready on time? Was the room at the right temperature? Were the chairs comfortable? However, to some, questions such as these may seem silly and inconsequential but experienced professional developers know the importance of attending to these basic human needs (Guskey, 2002). However, the European Commission (2011) asserted that states, districts, and schools often cut PD costs with the belief that shrinking budgets do not compromise the basic operation of the school’s teaching and learning program. This perception contradicts the participants’ perceptions who directly linked the fulfillment of basic human needs as determinants of an effective CPD program. Therefore, to ensure the effective implementation of high-quality PD, provinces and districts must have a plan for financing the costs of professional learning activities (Archibald, Coggshall, Croft, & Goe, 2011).

### **Provision of resources**

Desimone and Garet (2015) asserted that several states provide free videos which give examples of several ways to teach to particular state standards, and teachers can use these as real-time resources as they plan their daily lessons. The participants also suggested the importance of being provided with resources such as CDs and pamphlets from these cluster meetings as such resources help them when in the classroom and minimises the time spent away from the classroom. For example, Tumi shared that, “the only problem we face when running the cluster is that, while we are at cluster meetings, the kids are left alone and since there are a few teachers in our schools due to rationalisation, the school becomes chaotic and the kids become unruly. I would advise the department to give each school a CD to run on the computer where the training will be viewed at school instead of only just attending it at Trinet.”

Bryson felt that resources such as pamphlets could be used: “These pamphlets were very motivational; they showed various ways on how to teach Mathematics. So even though I did not attend the workshop, when I looked at those pamphlets, I was motivated myself.” Somiso also expressed the need for more resources: “You find that in order for the learners to understand certain concepts you need resources and yet there’s no provision out of what you have been developed in terms of having subject resources.”

The teachers shared that resources are needed when going back to their schools which could help them to balance the information received at TLC CPD programs with the classroom environment.

## CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the study focused on hearing teachers' voices in a selected rural area of South Africa regarding their views on aspects of the CPD programs they attend. The focus was to investigate if the teachers were satisfied with the model the CPD employed and if not, what changes needed to be considered. The findings revealed that the CPD programs are an essential tool that contributes to the advancement of educators' instructional skills. The findings conferred as teachers shared their experiences led to uncovering three distinct aspects the participants voiced, they were satisfied with and therefore are strengths of the CPD model. Moreover, the findings conferred four weaknesses which are aspects the participants voiced they were dissatisfied with. Teachers' voices and opinions play an important role in determining CPD that might work to fulfil the present and anticipated needs in their unique settings. To avoid rejection of these programs, there should be teacher consultations on program development so that teachers can continually give their input on what works and what does not in the current and future PD models. It is important, therefore, to listen to the teachers' voices for effective CPD programs that teachers may want to enlist for. We recommend that workshops and negotiations with authorities to discuss a customized CPD/TLC model for rural schools should be conducted to implement an adapted model. Furthermore, the study recommends that further research be conducted with more teachers, especially from other rural areas in SA, as the population of the study was limited.

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## Using Infographics in Teaching Turkish as a Foreign Language

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### ABSTRACT

Infographics, which can present the message to be conveyed to the target person or audience by combining multiple coding systems such as text, line, picture, photograph, video, map, sound, enable the regular, effective and efficient transfer of large amounts of complex information, data or knowledge. They, which have become increasingly popular lately, are frequently encountered in areas such as the press, public transportation, marketing and advertising. It is thought that they can be used in educational activities. The facts that human brain's ability to analyze and interpret visuals in a shorter time than a written text and to store them for a longer period of time and today's students, who see living in the virtual world as much more than a hobby, need more concise and understandable content with the increasing interaction of digital screens compared to previous generations, makes the place of infographics in educational activities clear. Based on this information, it is aimed to present a perspective on the ways of using infographics in teaching Turkish as a foreign language with this research. In order to achieve this objective, scientific publications on infographics and their use in education, the Common European Framework of Reference for Languages, Turkish Maarif Foundation Teaching Turkish as a Foreign Language Curriculum are scanned, and suggestions are offered on how the aforementioned material can be used in teaching Turkish as a foreign language.

**Keywords:** Infographic, Educational activity, Listening and watching, Teaching Turkish as a foreign language.

### INTRODUCTION

The current century is witnessing rapid changes and developments in information technologies. Especially with the diversification of electronic devices with screens, people are exposed to audio-visual messages more than previous generations in their daily lives. Due to this density, they tend to the messages prepared with coding systems that they can make sense of in a short time and more easily. Now, instead of reading long written texts, they prefer texts that are coded only with audio-visual coding systems or that are supported by short writings. Infographics are materials that can be presented to the reader/viewer by blending more than one audio-visual coding system with less written text in such a time period and therefore frequently used in many fields.

It is seen that many definitions were made on the infographic when the literature was scanned. According to Damyanov and Tsankov (2018), Ross (2009), Siricharoen and Vinh (2016) an infographic is 'visual representation of information, data or knowledge'. Meirelles (2013, 11) defined it as 'infographics stand for visual displays in which graphics (illustrations, symbols, maps, diagrams, etc.) together with verbal language communicate information that would not be possible otherwise.' Li et al. (2014, 11) said that 'Information graphics (infographics), are effective visual representations of complex information.' From the Krum's (2013) point of view, it is the way of presenting information by employing various visuals and written texts in a visual form within a certain flow. Many components such as pictures, graphs, charts, flow diagrams and texts can take part in it. In Simicklas's (2012, 3) book, more formal (according to him) definition was presented: A visualization of data or ideas that tries to convey complex information to an audience in a manner that can be quickly consumed and easily understood. The above definitions focus on visual and text in terms of the coding systems that infographics contain. However, it should not be forgotten that infographics may contain audio. Indeed, Lankow et al. (2012) and Schroeder (2004) stated that video, animation and sound can be added to interactive infographics after dividing them into types. In line with all these definitions and opinions, infographics can be defined as follows:

A material that can present the message to be conveyed to the target person or audience by combining multiple coding systems such as text, line, picture, photograph, video, map, audio and enable the regular, effective and efficient transfer of large amounts of complex information, data or knowledge.

### Infographic Types

Infographics based on the invention of line, bar and pie charts by 18th century Scottish engineer and economist William Playfair (Otten et al., 2015) were classified according to different points of view. Albers (2015) divided the infographics into four groups: *Bullet list equivalent, snapshot, flat information, information flow/process*.

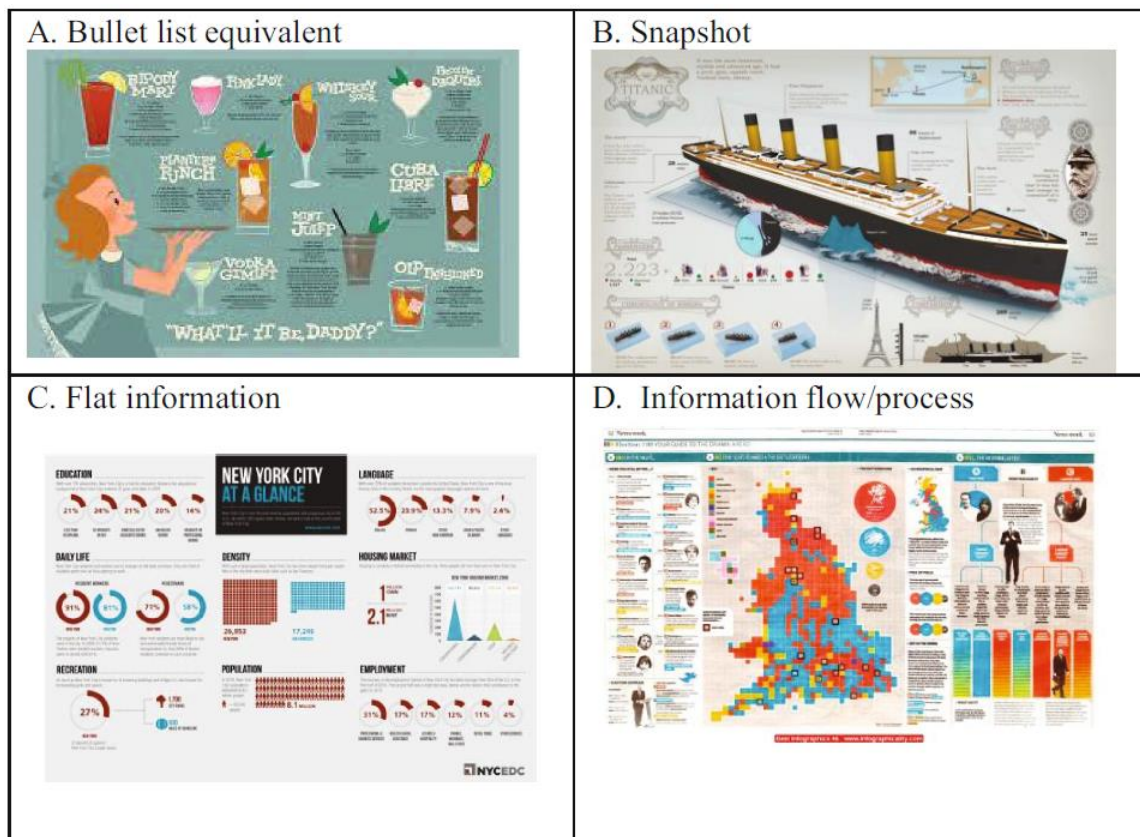


Figure 1. Albers' infographic classification (2015, 269)

Damyantov and Tsankov (2018) grouped them as *static*, *interactive*, *video infographics*. In Hassan's (2016) dissertation, infographics grouped as *static* or *animated*. According to Lankow et al. (2012), they can be divided into three groups as *interactive*, *semi-interactive* and *non-interactive* in terms of the multimedia elements they contain. While Otten et al. divided infographics into three groups as 'data graphics, maps and diagrams' or 'static, animated and diagrams', Ashton (2013) classified them as follows: *The quizzical: X facts about (topic)*, *the challenging: visual answer to a question*, *the engaging: flowchart*, *the controversial: versus infographic*, *the infallible: how-to*, *the good old: guide to (topic)*, *the traveler: x around the world*, *the listicle: x ways/tricks/tips to (topic)*, *the wannabe: x lessons/habits from (successful people)*.

All the classifications above are taken into account; it can be said that infographics can be divided into types according to whether they contain movement or allow interaction. Accordingly, an infographic is either static or animated. As Mortensen (2020) said, static infographic is the most widely used type and can be easily designed, shared, and printed. Animated infographics, on the other hand, are designed to be displayed on the screen in order to attract the attention of the reader and make the message transfer more effective, but they are more expensive and very difficult to print. Complex scientific subjects, events and processes, which are really difficult to explain and visualize with static infographics, can be easily grasped by the readers thanks to the new dynamic environment in which they take place (Hassan, 2016; Mortensen, 2020).

On the other hand, infographics can be classified according to whether they allow interaction or not. Interactive ones give readers the opportunity to make choices and access information based on those choices (Lankow et al., 2012) or to enter their own data so that they can personalize them (Mortensen, 2020). For example, when clicking on an image or text on the infographic, more information or video content about the subject appears, the reader can choose one of the options in the content and proceed or give readers the opportunity. Infographics that do not offer this opportunity to the reader are non-interactive. These may contain animated elements such as video and animation, but they do not offer any interaction to the reader.

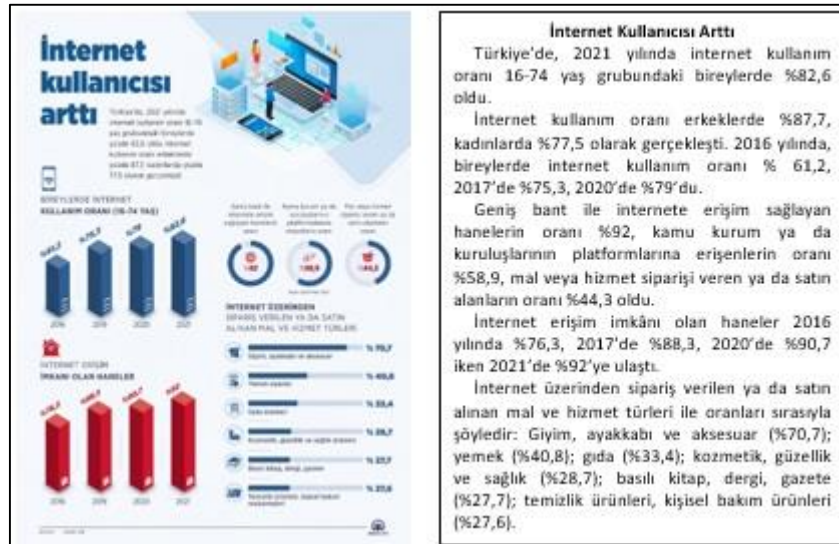
### Leveraging Infographics in Education

In this century, the Y (millennials) and Z generations (centennials) live and interact with their screen devices, and from the moment they wake up with their smart phone alarm clock to the last social media posts of the day. They also use them to connect, learn and run their academic tasks. As they are used to these devices, they want to see and use them in their classroom environments. Especially there is a noticeable difference in the shortened attention

spans of centennials, their visual ability portion of cognitive functions more increased than predecessors, so the visual forms of learning more attractive and interesting for them (Chun et al., 2017). Teaching based entirely on direct instruction method can be extremely challenging for them, as ‘tend to have a low tolerance for boredom and require high levels of stimulation to remain focused (Roehling et al., 2011)’. In the other words ‘Auditory learning (lecture and discussion) is very strongly disliked by this age group (Rothman, n.d.).’ Student-centered curriculums and classroom environments that take into account their interests or preferences and making them active participants should be created by instructors (Hernandez-de-Menendez et al., 2020). Infographics which present large amounts of information, data or knowledge in a compressed and easy-to-understand format (Siricharoen and Siricharoen, 2015) could play an important role at this point.

Of the 12 pairs of nerves (cranial nerves) coming out of the brain, 6 are connected to the eye (Acarkan, 2017). Therefore, the importance of seeing in sensation and perception is obvious. As Medina (2008) stated, the more visual the input, the more likely it is to be recognized and remembered. In addition, Nelson's ‘Theory of Picture Superiority’ explains how people learn concepts more easily through visuals rather than just reading written texts (Clark & Mayer, 2011). These facts reveal that infographics as contain visual coding systems (charts, icons, symbols, pictures, videos, etc.) should be used in educational activities effectively.

*When visuals are used effectively, they serve to help people understand abstract, complicated, and complex information, especially when people are unfamiliar with the concept and do not have a pre-existing mental model to assist with the comprehension of new information (Dunlap and Lowenthal, 2016, 44).*



**Figure 2.** Same messages presented in an infographic (Anadolu Agency, 2021) and a written text

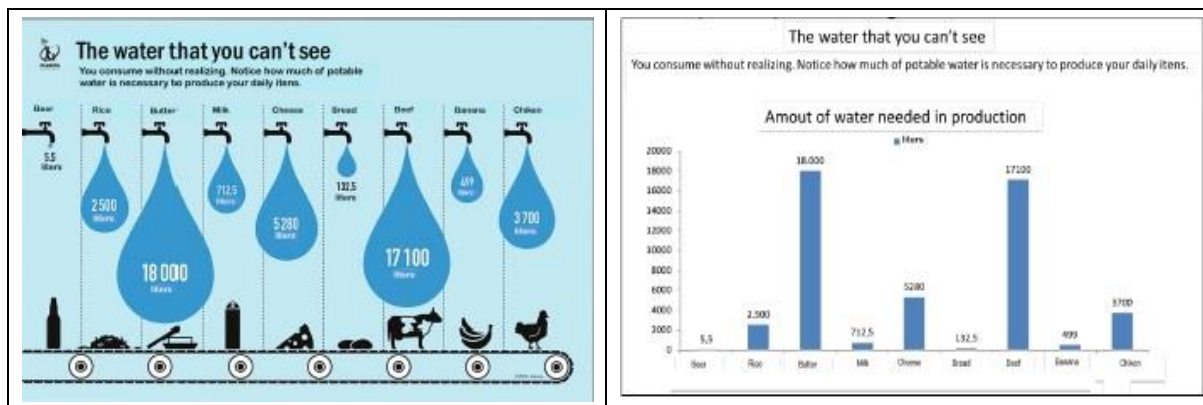
It is thought that the infographics created by adding sounds to the visuals would be more successful in the effective learning of individuals with different intelligence types and learning styles, especially when millennials and centennials taken into account. In fact, thanks to the interactive infographics, more senses (touch) of the students are addressed and their motor skills are included, so teaching and learning becomes more efficient.

*Retention of what is learned is likewise related to sensory experience. These senses are critical when it comes to improving instructional outcomes in the classroom. Each sensory within itself can dramatically enhance students learning experiences and provide students with extra support that will develop their memory and recall of information (Aja et al., 2017, 15113).*

In a study conducted by Shridevi et al. (2013), students who were exposed to audio-visual method performed better and enjoyed this learning way. In this regard, Aggarwall (2017, 274) stated the following:

*Audio-visual aids provide significant gains in informational learning, retention and recall, thinking and reasoning activity, interest, imagination, better assimilation and personal growth and development. The aids are the stimuli for learning 'why', 'how', 'when' and 'where'.*

Lyra et al. (2016) found that students who learned the same content through infographics remembered longer than those who learned it through graphics+text. This case indicate that infographics can better support robust learning.



**Figure 3.** An infographic and a graphic+text which have the same content, used in the research of Lyra et al. (2016, 367)

Uyan Dur (2014) emphasized that well designed infographics are important tools to persuade, direct and mobilize people. Therefore, teachers whose task is to eliminate the attitude and behavior disorders of their students and to create new attitudes and behaviors in them (Deniz, 2018) should use well-designed infographics.

Infographics that include art in the staid world of digital data (Davidson, 2014), are materials that can be easily shared when produced in digital format (Marabella, 2014). It can be easily distributed to large audiences via social media platforms or e-mails. Thus, while designing and developing materials for the Y and Z generation (which also has an important place in distance education), the ground for interaction is prepared.

According to Davis & Quinn (2013, p. 16) 'Infographics can support reading comprehension and writing while strengthening critical thinking and synthesizing skills.' By adding audio(s) an infographic can stimulate students auditory channel and thus it can also be used to improve their listening skill. Furthermore, based on the content of this type of material, writing and speaking activities could be conducted. In addition to these, infographics, which can also be called "story graphs" because they present the data in a narrative flow (Otten et al, 2015; Weinschenk, 2011), have also become a good way of storytelling. In the other words, they can be utilized in language education courses as story texts. Stories help students understand data and establish cause-effect relationships; infographics also enable the communication of data by being visualized and presented as a story (Weinschenk, 2011).

Infographics, unlike standard written texts that are long and dense, present information in layouts which often include graphs or boxes to separate them, white space, larger gaps between sentence lines, and so can be used to help students understand the relevant text thanks to their ability to present information in visual format (Marabella, 2014).

Using and creating infographics would improve students' visual literacy skills, which would help teachers gain students' ability to make sense of and evaluate visual information. In addition, through the activity of designing a visual representation of complex ideas, their comprehension would be deepened by keeping them engaged with the content for a long time (Naparin and Saad, 2017), and their ability to express themselves could be developed.

### Structure of an Infographic and How to Design It?

A teacher or an instructor should not only use well designed infographics, but also design them. In order to achieve this, it is necessary to know the structural features of infographics.

An infographic consists of three major parts in generally. According to Thatcher (2012) and Siricharoen (2013), these parts are *visual*, *content* and *knowledge*. Colors, maps, icons, (Tatcher, 2012) charts, symbols, pictures, illustrations etc. make up the visual part of an infographic. These construct the content of it: References, time frames, facts, text, etc. (Tatcher, 2012). Lastly, 'conclusion to express the stories or messages (Siricharoen and Siricharoen, 2015, 558)' refers to the *knowledge* part of it. These three pieces have to be successfully organized by the teacher.

Creating an infographic is based on its designer's creativity, so it is unlimited. Since the main purpose of infographic is to make readers summarize information quickly in the world full of flooding information (Siricharoen and Siricharoen, 2015), a teacher sometimes has to act as a graphic designer or an artist and have to take into account aesthetic. If he/she is going to do these in digital environment, should have the ability to use the necessary devices (computer or smart phone), programs or applications. There are a lot of applications on the web which offer the opportunity to prepare different types of infographics easily and online. Also they have ready

templates. Teachers should benefit from these platforms.

Determining the objective could be the first step of preparing an infographic. Teacher should ask himself/herself this question at this stage: What skills do I aim to teach my students, and what do I aim to teach them through the infographic I will prepare? The second step could be choosing the appropriate infographic type. As presented above, there is a wide variety of infographic types available. Answers to questions such as ‘Will it be horizontal or vertical, interactive or non-interactive, static or animated, consist of one page or more?’ should be sought. Which data, information or knowledge will be presented should be determined at the third step. These can be many, the important thing is that they are as short and concise as possible. The following quote attributed to Albert Einstein comes to mind at this point: ‘If you can't explain it simply, you don't understand it well.’ The fourth step is deciding which coding systems to use. Such question can be asked: Will it only include visual coding systems? Or will it be a mix of text and visuals? Will it have sound effects or music? Finally, teacher should think about the visual stance of the infographic. Determining the positions of the elements that make up the infographic based on their relationships with each other, using separator spaces and dividing lines to separate content and sections, employing bold fonts and subheadings to highlight certain words, placing bullet points, adding correct guiding elements (orientation arrows, various symbols or signs, etc.) on the page, choosing the right colors are the points to be considered at this stage.

As Otten et al. (2015, 1902), citing from Ovens (2014), stated ‘The least effective infographics tend to be visually overwhelming, using excessive or extraneous data or “noise,” or present information in a way that is confusing or makes it appear insignificant.’ For this reason, a teacher should choose content suitable for the level of the students (age, gender, background information, etc.) and present them in a concise manner. In addition, as Balliet (2012) underlines, he/she should give the most visual weight to the most important information.

Consistent design, text-image harmony, grabbing and holding attention, connecting with the reader (power of kindling images, emotions and memories) are important for a successful infographic (Dunlap, 2016). In addition to these, the message should be conveyed without giving too much space to the text and by using visual coding systems as much as possible. In theory, an infographic should make sense to the reader without adding words or text (Marabella, 2014).

Carrying out effective educational activities with infographics prepared by considering design principles will help to achieve the determined goals and gain skills. It is thought that these materials can be used effectively in teaching Turkish as a foreign language.

## METHODS

In this research based on literature review, scientific publications on infographics and their use in education, the Common European Framework of Reference for Languages (CEFR), Turkish Maarif Foundation Teaching Turkish as a Foreign Language Curriculum (TMFC) were scanned and accordingly suggestions on how to use infographics in the process of teaching Turkish to foreigners were presented through examples.

### Using Infographics in Teaching Turkish as a Foreign Language

Many researches have been carried out on infographics and their usage in education. However, no study has been encountered on the use of infographics in teaching Turkish to foreigners as a result of search in databases [Elton B. Stephens Company Open Dissertations, ProQuest Dissertations & Theses (PQDT), Higher Education Council Thesis Center, TR Index, DergiPark Academic, Education Resources Information Center (ERIC), Taylor & Francis, Science Direct-Elsevier] with the keywords ‘Infographic, Information Graphic, Teaching Turkish, Teaching Turkish as a Foreign Language’. Based on the current deficiency in the literature, it is aimed to present a perspective on how to use infographics in teaching Turkish as a foreign language.

### *Teaching emotional words*

Emotional words are among the topics covered in the early stages of teaching Turkish to foreigners. When the TMFC and CEFR are scanned, it is seen that the said skill is acquired at A1 level. 5 of these words (mutlu, korkmuş, kızgın, şaşkın, üzgün) can be taught through the animated infographic that has 3 pages below:



**Figure 4.** First page of an infographic to be used in teaching emotional words  
(<https://view.genial.ly/612b78d08ae5140dc46523d1/interactive-content-emoji-moments>)

On the first page, students are told that ‘there are words that reflect the inner world of people in every language (Temur and Arslan, 2018)’. After this, students are asked to guess the Turkish words that represent 5 emotional states supported by emojis. Thus, their foreknowledge about whether they know the words aforementioned is determined. And then, teacher switches to the next page.



**Figure 5.** Second page of an infographic to be used in teaching emotional words

The second page shows what these words are. When attention is paid, various information about emotions are given on the right and left sides. Students are provided to read this information. Attention is drawn to unfamiliar words. They may be asked to talk about them. Attention was paid to the fact that the sentences on the pages were active, and passive sentences were not included. Because passive sentences are not taught to students at this level yet. However, passive sentences can be added to the material in later stages.



**Figure 6.** Third page of an infographic to be used in teaching emotional words

On the last page, students are asked to say how they feel and why within these five words. This allows them to speak, albeit briefly.

### Teaching idioms

Infographics can also be used while teaching idioms in Turkish. The animated and interactive infographic below has been prepared for the purpose of teaching a few idioms that contain the word ‘kuş (bird)’ in Turkish. The student can see the meaning of that idiom from Dictionary of Turkish Language Institution and its usage in a sample sentence by moving the mouse cursor of their computer over the idioms or touching their finger on the related idiom. They can also hear the sounds of sea waves and seagulls in the background, in accordance with the context.

Idiom teaching also has an important place in terms of cultural transfer. Therefore, it can be said that it would be appropriate to use infographics that can convey complex information through few signs in the teaching of these language structures that can tell a lot with few words.



**Figure 7.** An animated and interactive infographic to be used in teaching idioms  
(<https://view.genial.ly/612b70fb9606e30dbd28500c/interactive-content-gulls-list>)

### Teaching vocabulary

Vocabulary knowledge plays vital role in second language learning, as limited vocabulary means limited communication (Alqahtani, 2011; Cook, 2013; Nation, 2011; Schmitt, 2000). In this context, examples of infographics prepared for the words taught in Turkish as a foreign language according to TMFC and CEFR are presented in this section.

An example of an animated and interactive infographic for teaching words representing parts of the body, which was first taught at A1 level, is given below:



**Figure 8.** An animated and interactive infographic to be used in teaching vocabulary about birds (<https://view.genial.ly/612aa921dabd400dbd0d585d/interactive-image-kuslarin-vucut-kisimleri>)

Birds are animal from the learners' close circle. For this reason, an infographic was designed that shows the names of the body parts of the birds and gives simple information about this animal species. This material also includes a piece of information about the number of bird species in Turkey and a graphic on this subject within the scope of cultural transfer. The conjunction 'but', some numbers, percentiles, adjectives, spelling of some punctuation marks and present tense can also be taught through this infographic. The teacher can add the language structures he/she wants to teach by making changes on the content according to the level.

Through the following infographic example, simple present tense and present continuous tense, modals (can/could), noun and adjective clauses, numerical expressions, units of measure, comparison expressions can be taught. It can also benefit from this material in teaching vocabulary. In addition, the sentences in this material, which consists entirely of verbs with active voices, can be made passive by changing them for advanced levels.

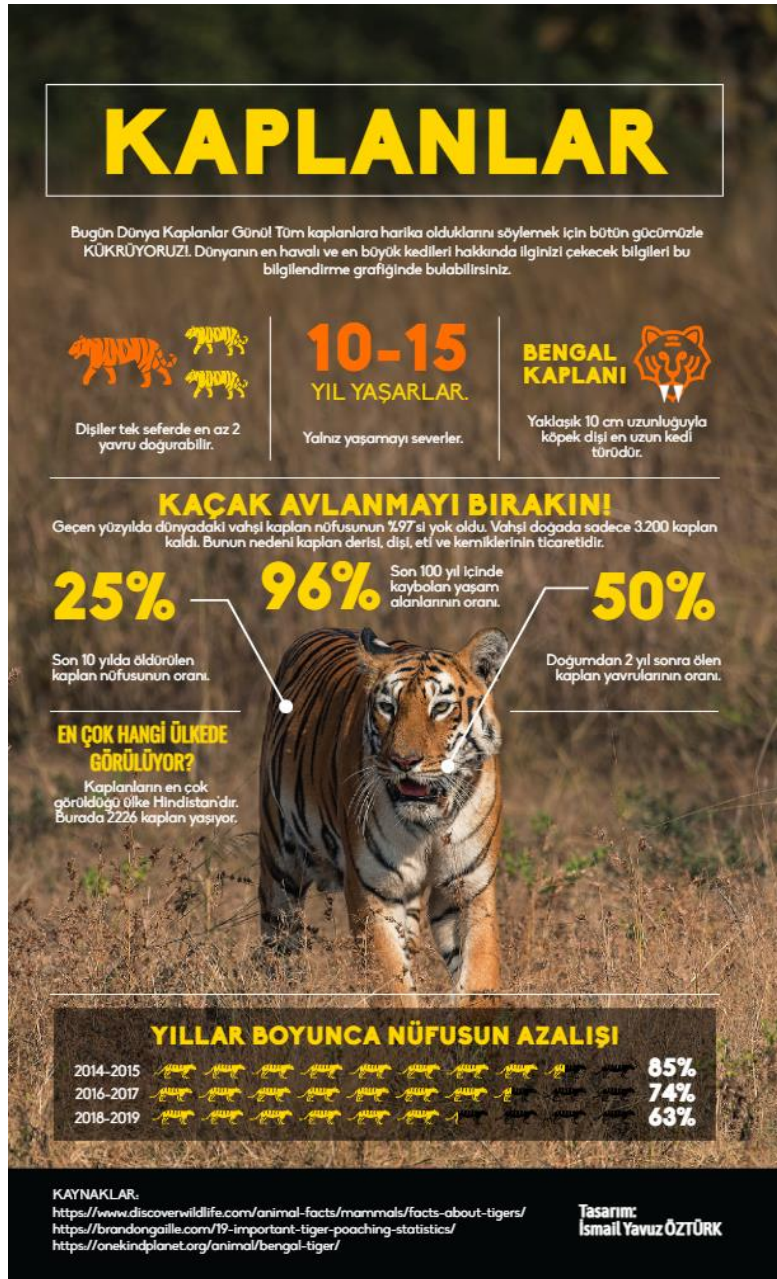


Figure 9. An infographic to be used in teaching vocabulary about tigers

### Gaining Ability to Follow Instructions

According to the CEFR and TMFC, the learner is also expected to gain the ability to follow the descriptions and instructions for doing a job at A2 level. For this purpose, the following infographic design can be used. The preparation of dry beans dish, one of the famous dishes of Turkish cuisine, is explained in five steps, supported by short instructions and visuals:

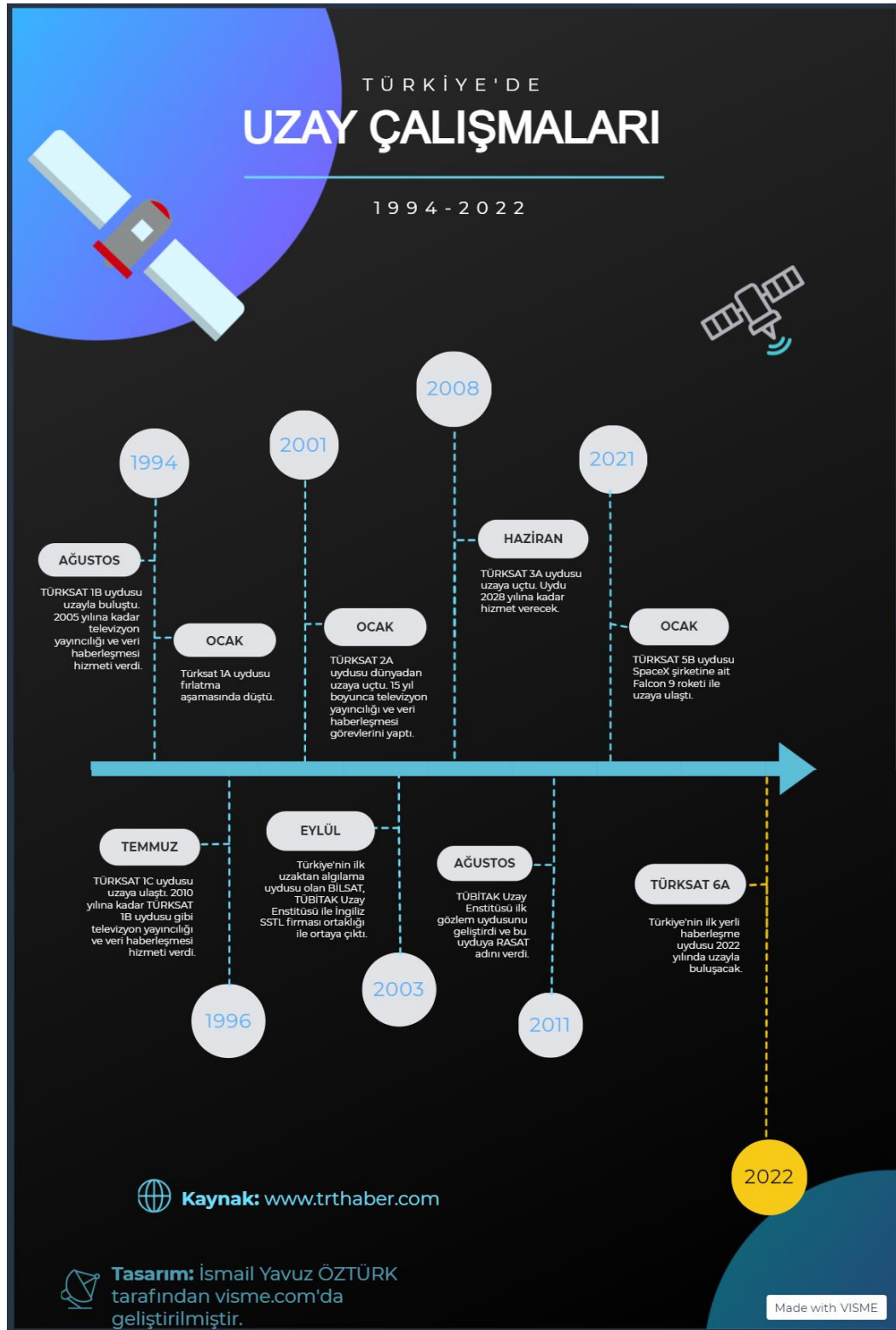


Figure 10. An infographic to be used in gaining ability to follow instructions

Numbers, quantity expressions and imperatives are taught as well as giving the learner the ability to follow instructions thanks to this material.

#### *Gripping information expressed in a timeline*

One of the skills that learners are expected to acquire in second language learning is to understand the expressions in the timeline correctly. The following sample infographic, prepared to help learners acquire this skill, which starts from A1 and continues to B2 according to CEFR and B1 according to TMFC, deals with space studies in Turkey since 1994:



**Figure 11.** An infographic to be used in gripping information expressed in a timeline

Lines of different colors are used to separate the past and future events. Simple past tense, simple future tense, active voices and passive voices (from B1 according to TMFC), verbal adverbs ['e kadar (until)' in this material (from A1 according to the TMFC)], numbers, noun and adjective clauses, some abbreviations can be learned via this infographic.

## CONCLUSION

Infographics, effective and efficient way of presenting large amount of complex messages by combining multiple coding systems, should be used in educational activities as well as other areas. Especially when Y and Z generations are taken into account, the necessity of infographics in educational activities emerges. Although there are many classifications in the literature, it is thought that infographics can be divided into two as interactive/non-interactive or static/animated. According to this categorization, an infographic may be animated and may or may not allow interaction from another point of view. Although it is difficult to develop, it can be said that using interactive, at least animated infographics in education is more effective. In addition to visual coding systems, including audios will be more beneficial in order to increase the effectiveness of teaching by addressing more senses. The fact that these materials can be produced in digital format and easily delivered to more people also increases the interaction in teaching process. There are studies showing that infographics are also effective in language and thinking educations. Therefore, these materials can also be used in teaching Turkish to foreigners. In this paper, after emphasizing the design steps and the points to be considered at these steps, it is aimed to present a perspective on how infographics can be used in teaching Turkish to foreigners based on 6 sample materials. It is thought that it would be beneficial for teachers working in the field to design various infographics by making use of these examples and paying attention to design principles. Both printed and digital infographics should be added to the textbooks. In addition, in the next process, studies should be carried out to investigate the effectiveness of these type of materials using experimental designs.

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## Examination of Social Science Teachers' Opinions on Digital Citizenship

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### ABSTRACT

It is possible to specify the concept of "digital", which is defined as "displaying data electronically on a screen" in the Turkish Dictionary, as an area in which human beings are most directly or indirectly affected. The digitalization moves of states with a systematic structure, especially in social issues, can be shown as the best example of this. In this context, developments in technology, communication and scientific studies, as well as showing their effects, made it necessary to reconsider the perception of citizenship in the social sense. The digitization of citizenship in the digital age also lets human beings re-evaluate economic, social and technological conditions. It also tries to determine what kind of position the human being, who is in a rapid and effective change, will be in this process. In this context, it can be stated that the importance of education will increase much more today, as it was in the past, in the integration of human beings, who are social beings, both to the society in which they live and to the world in a universal sense. Considering Turkey in particular, it can be said that the social studies course will be the course that the young individuals will encounter directly in schools within the framework of these issues and within the scope of the research topic. It also emerges that the content of the social studies course should consider the citizenship approach in the digitalized world in the context of the past, present and future of the individuals in this context. It is undeniable that it is important to determine the views of teachers who teach social studies in the teaching dimension about the phenomenon of digital citizenship and to make inferences about it. In this context, the research was shaped in a case study pattern and suggestions were presented within the framework of the results obtained.

**Keywords:** Digital Citizenship, Social Studies, Opinion, Case Study.

### INTRODUCTION

In the current century, rapid developments are experienced especially in information technology. These developments directly affect societies and individuals, and thus change the meanings attributed to the concept of citizenship by the human being, who is a social being. Within the framework of the digitalization process experienced in many fields, from economy to health, from trade to education, it is seen that citizenship has also evolved towards digitalization.

In such a period when new concepts such as "constitutional citizenship, world citizenship, European citizenship" emerge (Ersoy, 2013, p. 70), being an active and effective citizen requires digitalization as well as interaction with the physical environment. Because societies are being transformed and affected by people in the digital world (eTwinning Central Support Service, 2016).

The concept of "digital citizenship", which first emerged with Prensky's (2001) work called "Digital Natives, Digital Immigrants", includes the understanding that educational activities should be developed especially based on technology. According to Çubukçu and Bayzan (2013), a digital citizen is a citizen who criticizes when using information and communication technologies, understands the moral consequences of online behavior, uses technology in a way that does not harm others, can use his right to communicate on the internet, displays the right attitude in his sharing and cooperation, and encourages others to act in this direction. Karaduman and Öztürk (2014), on the other hand, define a digital citizen as a person who can understand, write, read, share the information on the internet and use the internet effectively. Ribble et al. (2004, 33) express the three principles that those who use the digital environment need in order to use technology responsibly and to be digital citizens in the form of *respect for self and other people, self-education and connecting with other people and protecting self and other people*.

Mossberger, Tolbert, and McNeal (2008) list the reasons that have recently come to the fore and discussed the concept of digital citizenship as follows:

- The positive effect of information technology on society and economy,
- Ensuring equal opportunity for economic access and use of the Internet
- Promoting the active participation of citizens in society and democracy
- Internet access and use policies create a situation of inequality for low-income and educated people and

minorities.

Ribble (2011) examined the studies on the dimensions of digital citizenship and stated that many different classifications were made. These are “digital communication”, “digital etiquette”, “digital access”, “digital literacy”, “digital commerce”, “digital rights and responsibilities”, “digital law”, “digital health and wellness”, “digital security” (Ribble et al., 2004, 34). “Digital communication” is knowing when it is appropriate to take advantage of digital communication tools (e-mail, video conferencing, instant messaging, etc.) for the purpose of communicating and when it is appropriate to use them (Ribble, 2011). “Digital etiquette” is knowing when and how to use digital tools while respecting the rights of others (Çubukçu & Bayzan, 2013). “Digital access” is accessing fast and high quality digital technology from anywhere and using them effectively (Çubukçu & Bayzan, 2013, Orhon, 2019). “Digital literacy” is learning, teaching and using digital technology appropriately (Ribble, 2011). “Digital commerce” is the awareness and practice of buying goods or services online, protecting the confidentiality of banking system data, and making transactions on secure websites (Çubukçu and Bayzan, 2013). “Digital rights and responsibilities” means that everyone can freely use digital tools, express themselves comfortably with them, and use the right to complain against crimes and unfair situations that occur in digital environments (Çubukçu and Bayzan, 2013). “Digital law” is taking responsibility for actions by being knowledgeable about the rules, policies, laws and regulations in the digital environment and warning those who do not pay attention to them (Ribble, 2011). “Digital health” is the individual's physical and psychological attention to herself/himself while benefiting from technology that has a direct or indirect effect on health (Çubukçu & Bayzan, 2013; Elçi, 2015). “Digital privacy and security” means network security, protection of system hardware; It is related to the establishment of person, school and community safety (Ribble, 2011).

According to the results of research conducted in recent years, it is understood that with the increasing use of the Internet - when the digital citizenship dimension is taken into account - children experience problems in terms of accessing the online environment, privacy, security, health, ethics and communication (Karaduman & Öztürk, 2014). Therefore, the importance of education emerges in the integration of the individuals of the future both to the society they live in and to the world, as in the past years. In Turkey, it is thought that the course that has a direct impact on the education of children in this direction is the social studies course. In this context, the content of the social studies course should also be based on the citizenship approach in the digitalized world in the context of individuals' past, present and future. Based on the current situation, it is thought that it would be appropriate to determine the opinions of the teachers who teach the social studies course about the phenomenon of digital citizenship and to make inferences about it. However, it would be appropriate to emphasize that there has been no research conducted in this way, and that the studies mostly focus on social studies teacher candidates.

In this context, the research seeks answers to the following questions:

1. What do the teachers think about the definition and content of citizenship education in social studies course?
2. What are the teachers' views on the conformity of the digital citizenship phenomenon to the structure of the social studies course topics and the nature of the social studies field?
3. What are the teachers' views on the advantages and disadvantages of digital citizenship within the scope of social studies course?
4. What are the teachers' possible suggestions for digital citizenship within the scope of social studies course?

## METHODS

This research which was conducted within the scope of qualitative research model, is in case study pattern. According to Merriam (2013), the case study is a research design that focuses on finding a holistic description and explanation. In addition, as Yıldırım and Şimşek (2006) stated that this study pattern allows the researcher to examine a phenomenon or event that cannot be controlled by the researcher based on ‘how’ and ‘why’ questions. In this study, ‘typical case sampling’, which is one of the purposive sampling methods and aiming to reveal the typical or normal (Glesne, 2013, 61) was applied. 21 social studies teachers working in public schools affiliated to Mersin Provincial Directorate of National Education were reached in the 2020-2021 academic year in this context. Information about the working group is given below:

**Table 1.** Information about the study group of the research

		<b>n</b>	<b>%</b>
<b>Tenure</b>	1 – 5 year	2	10
	6 – 10 year	5	24
	11 – 15 year	10	47
	16 – 20 year	4	19
	20 + year	0	0
	<b>Total</b>	<b>21</b>	<b>100</b>

<b>Gender</b>	Female	7	33
	Male	14	67
	<b>Total</b>	<b>21</b>	<b>100</b>
<b>Age</b>	25-30	3	14
	31-35	4	19
	36-40	9	43
	41-45	3	14
	46-...	2	10
	<b>Total</b>	<b>21</b>	<b>100</b>

According to the Table 1, 14 (67%) of the participants are male and 7 (33%) are female. It is seen that teachers who work for 11-15 years are more than the others in terms of their tenure. In addition, when looking at the age range, the majority of teachers are 36-40 years old.

## FINDINGS

In this section, the findings obtained in order to answer the sub-questions of the research are given. The opinions of the teachers based on their answers to the question 'Please write your views on the definition and content of citizenship education in social studies course.' were tabulated in 7 themes:

**Table 2.** Opinions about the definition and content of citizenship education in social studies course

Themes	n	%
Active Citizenship	19	17
Important	18	16
Insufficient	17	15
Responsibility	16	14
Right	15	13
Separate Course	15	13
Comprehensive	13	12
<b>Total</b>	<b>113</b>	<b>100</b>

19 of teachers (17%) stated *active citizenship* theme, 18 (16%) of them stated *important* theme, 17 (15%) of them stated *insufficient* theme, 16 (14%) of them stated *responsibility* theme, 15 (13%) of them stated *rights* theme, 15 (13%) of them stated *separate courses* theme and 13 (12%) of them stated *comprehensive* theme. In questionnaire no. 13, one participant said:

*Citizenship education in social studies sessions aims to protect and maintain the political existence of the state. Citizenship education aims to raise democratic individuals who know the political, socio-cultural and structure of the society and adapt to it. In citizenship education, it is very important for individuals to learn and use their rights and to have a sense of duty and responsibility. Another important point in citizenship education is to create a well-equipped active citizen type who will serve the development of the state in a world that is experiencing rapid change and development and has reached the skills, abilities and competencies required by the age.*

In addition, a participant, who filled out the form no. 12, said 'Citizenship education given with social studies course is the education of individuals who are loyal to their state and national culture, who know their rights and responsibilities. Citizenship education is lacking in terms of its content and form in terms of social practices. The training provided has deficiencies in practice.'

**Table 3.** Opinions about the conformity of the digital citizenship phenomenon to the structure of the social studies course subjects and the nature of the social studies field

Themes	n	%
Appropriate	17	37
Should be increased	15	33
Deficient	12	26
No idea	2	4
<b>Total</b>	<b>46</b>	<b>100</b>

For the second sub-problem of the study, 'What are your views on the conformity of the digital citizenship phenomenon to the structure of the social studies course topics and the nature of the social studies field?', 17 (37%)

of the participating teachers stated that it was appropriate, 15 (33%) stated that it should be increased, 12 (26%) stated that there was a deficiency, and 2 (4%) did not have any ideas. The participant who filled out the form 14 for this sub-problem said following:

*I think that the phenomenon of digital citizenship is definitely suitable for the subjects and nature of the social studies course. I can definitely say that digital citizenship education should be included in our textbooks within the scope of rights, freedoms, duties and responsibilities, and moral values and that education should be given in the social studies course. Due to the nature of social studies this should be done.*

**Table 4.** Activities carried out by teachers in social studies lessons within the scope of digital citizenship

Themes	n	%
Current Events	14	18
Brainstorming	12	15
Poster Preparation	11	14
Shopping	9	11
Communication-Media	8	10
Digital Platforms	8	10
Content Preparation	7	9
True False	6	7
I did not attend any activity.	5	6
<b>Total</b>	<b>80</b>	<b>100</b>

For the third sub-problem of the study, 'Please write down the activities you have done within the scope of digital citizenship in Social Studies classes.', the participants classified the activities they did in the classroom under nine themes: Current events (14 teachers, 18%), brainstorming (12 teachers, 15%), poster preparation (14%), shopping (11%), communication-media (10%), digital platforms (10%), content preparation (9%), true false (7%). 5 teachers (6%) stated that they did not attend any activity. The teacher who filled out the form 13 said following on this subject:

*In this context, I teach that by opening the e-government application from the smart board, we can practically do many transactions from where we are. I make them realize the areas where they use the digital world such as homework research, internet games, social media, e-commerce by asking questions and brainstorming.*

The teacher with form 7 said 'I'm sorry to say, I did not attend an event on digital citizenship'.

**Table 5.** Opinions on the advantages and disadvantages of digital citizenship in the scope of social studies course

Themes	n	%	Themes	n	%
Advantages			Disadvantages		
Ease	14	24	Internet network	18	18
Teaching	13	22	Information pollution	17	16
Saving on time	12	20	Security	17	16
Awareness	10	17	Addiction	15	15
Reducing intensity	10	17	Out of purpose	13	13
			Equality	10	10
			Psychological problems	8	8
			Content	4	4
<b>Total</b>	<b>59</b>	<b>100</b>	<b>Total</b>	<b>102</b>	<b>100</b>

For the fourth sub-problem of the study, teachers answered this question: 'Please write your views on the advantages and disadvantages of digital citizenship within the scope of social studies course.' To this question, teachers reported 5 themes as ease (24%), teaching (22%), saving on time (20%), awareness (17%) and reducing intensity (17%) as the theme of advantage. In the disadvantage part, teachers stated nine themes under the headings of internet network (18%), information pollution (16%), security (16%), addiction (15%), out of purpose (13%), equality (10%), psychological problems (8%), and content (4%). The teacher who filled out the form 16 said following:

*In today's communication age, every citizen is also a digital citizen. People who receive digital*

*citizenship training will be advantageous in this regard. It is very advantageous in terms of making communication fast, easy and cheap. It is very advantageous for accessing and sharing information. However, there are disadvantages in the use of digital platforms due to their features such as security problems, problems with the protection of personal information, inability to access correct information, abuse, inappropriate opinions and ideas. In order for legal sanctions and environments to be followed closely, expert teams should be formed and correct usage training should be given.*

Another teacher said on form 4:

*The most important advantage of digital citizenship is that it saves time, works are carried out quickly on the internet, can be followed up, direct examples and explanations can be shown during the lessons, the issue of rights is perceived especially better. As for the disadvantages, the most important is security. In the digital environment, security problems can arise at any time. In addition, students' incorrect and inappropriate use is another disadvantage.*

**Table 6.** Possible suggestions for the phenomenon of digital citizenship within the scope of social studies course

Themes	n	%
Should be a separate course	17	16
Topics should be increased in the curriculum	16	16
Interactive activities should be prepared	14	14
Digital literacy issues should be	13	13
Digital support units should be established	11	11
Awareness should be increased	10	10
Digital citizenship projects should be carried out	8	8
Disadvantages should be eliminated	7	6
In-Service training should be given	7	6
<b>Total</b>	<b>103</b>	<b>100</b>

For the fifth and the last sub-problem of the study, teachers answered this question under nine themes: ‘Please write your possible suggestions for digital citizenship within the scope of social studies course.’ 17 teachers (16%) stated that there should be separate course, 16 teachers (16%) stated that the subjects in the curriculum should be increased. In addition, these themes were also explained: interactive activities should be prepared (14%), digital literacy issues should be (13%), digital support units should be established (11%), awareness should be increased (10%), digital citizenship projects should be carried out (8%), disadvantages should be eliminated (6%) and in-service training should be given (6%). In this context, the teacher who filled out the form 18 said the following:

*Students should be introduced to the concept of digital citizenship. The benefits and harms should be explained, and this information should be included in textbooks and educational platforms. Teachers should be informed through in-service training. Parents should be informed and the necessary values for domestic use should be determined. Age status, content features, security vulnerabilities, obtaining correct information, protection of personal information and legal status should be explained to citizens.*

The teacher who filled out the form 8 said:

*Most of the students' families shop online, but they are not aware that it is digital shopping. Finding book summaries, doing homework, playing games, but what is a digital citizen? it freezes. Students can be educated on this subject. Even though we touch on these issues in the media literacy lesson, especially in our last unit, there is not enough learning. In particular, the issue of digital security cannot be grasped.*

## CONCLUSION

In this study, examining the views of social studies teachers on digital citizenship, participants in the study group stated about the definition and content of citizenship education in social studies courses, effective citizenship, important, insufficient, responsibility, right, separate course and comprehensive themes.

The majority of the participants stated that the phenomenon of digital citizenship is suitable for the structure of the social studies course subjects and the nature of the social studies field. There are also participants who stated that this phenomenon should be increased and that there are deficiencies.

It has been concluded that within the scope of digital citizenship, teachers carry out activities in the context of current events, brainstorming, poster preparation, communication-media, digital platforms, content preparation,

true-false.

For the advantages and disadvantages of the digital citizenship phenomenon within the scope of the social studies course, our teachers consider the themes of convenience, teaching, saving on time, awareness and decrease in intensity as advantages; on the other hand, it has been concluded that there is a disadvantage with the themes of internet network, information pollution, security, addiction, out of purpose, equality, psychological problems and content.

According to the results of the research, the participants made suggestions for the subject of digital citizenship under the themes of separate courses, increasing the topics in the curriculum, interactive activities, digital literacy, digital support units, awareness, digital citizenship projects, elimination of disadvantages and in-service training.

Based on the results, the following recommendations can be made:

1. Citizenship education course can be evaluated as a separate course.
2. The phenomenon of digital citizenship can be given more space in different units in the social studies course.
3. The subject of digital citizenship can be associated with other courses and discussed in the skill dimension with interactive activities.
4. Training on digital literacy can be increased.
5. Projects can be made on digital citizenship and digital literacy.
6. Digital citizenship public service announcements can be prepared and events can be held in schools.

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## Examination of Middle School 8th Grade Students' Problem Solving Attitudes in terms of Various Variables

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### ABSTRACT

This study was carried out to determine the problem-solving attitudes of 8th grade students in mathematics and to reveal whether they differ according to the variables of gender, family income, achieve in mathematics course and the status of connection mathematics with daily life. The status of the variables associated with the attitudes towards problem-solving was also determined. The study was carried out with 177 (96 female and 81 male) 8th grade students selected by simple random sampling method in a state secondary school in a province. The research data are gathered with the personal information form and the scale of mathematics problem solving attitude. To analyse the data, descriptive statistics, independent sample t-test, one-way analysis of variance and Scheffe test were performed. Pearson product moment correlation coefficients was calculated to examine the relationship between the variables as well. At the end of the study, it was found that attitudes toward problem-solving of students were positive level, and there was a significant difference in terms of mathematics achievement and the status of connecting mathematics with daily life, and there was no difference in terms of gender and family income. Also, a medium level of positive correlation was found between students' problem-solving attitude and the "teaching" sub-dimension, and a high-level positive correlation between the "enjoyment" sub-dimension. The findings of this study may help to reveal the profiles of students' attitudes towards problem solving.

**Keywords:** Mathematics achievement, connection, student attitudes, problem-solving.

### INTRODUCTION

A problem is a task for which the solution or goal cannot be achieved immediately; the problem does not have a clear algorithm for the student to use, the student's first reaction to the problem is that there is no solution and it is blocked (McLeod & Adams, 1989). The problem is a difficult task for the individual trying to solve the problem, and this difficulty is described as an intellectual rather than a numerical impasse (Schoenfeld, 1985). The solution is the whole process from the first encounter with the problem until it is finished. The answer is a component that emerges as a result of the resolution process. According to Kaur (1997), problem solving is the essence of learning mathematics. Problem solving enables students to understand and explain the processes used to arrive at solutions, rather than remembering and applying a set of procedures (Klerlein & Sheena Hervey, 2020), allowing them to think and reason systematically (Salleh & Zakaria, 2009). Mathematical problem solving is a complex activity that involves many cognitive actions and relies on a wide variety of knowledge and skills. This means that the problem-solving instruction must be designed very carefully to address all relevant processes, knowledge and skills. Such instructions should be provided comprehensively, but when this is not provided it is not surprising that many students find mathematical problems in solving such a problem (Garafolo, 1985). The purpose of effective mathematics teaching is to develop students' problem-solving skills (Pimta, Tayruakham & Nuangchalerm, 2009). It is important for the individual to have sufficient mathematical knowledge to solve a mathematical problem (Polya, 1957; Schoenfeld, 1985). Because problem solving is so complex, students must be given carefully designed problem-solving training, gain extensive problem-solving experience, and be exposed to a wide variety of mathematical problem-solving techniques, strategies, and situations. Since most of the students are not guided, they cannot develop expertise in problem solving and therefore have difficulty. For this reason, students should be assisted in problem solving in mathematics teaching because problem solving offers a powerful approach to

expand mathematical concepts and skills (Szabo, Körtesi, Guncaga, Szabo, & Neag, 2020) and supports learning mathematics.

Problem solving is accepted as the 21st century teaching approach related to academic achievement (Arslan, Yavuz & Deringol-Karatas, 2014; Szabo, Körtesi, Guncaga, Szabo, & Neag, 2020; Wirth & Klieme, 2003). Because problem solving skill is not only aimed at learning the subject, but also emphasizes developing the thinking skill method (Pimta, Tayruakham & Nuangchalem, 2009). For this reason, the structure of problem solving and the increase in achievement in problem solving are issues addressed by many educators and psychologists (Arslan, Yavuz & Deringol-Karatas, 2014). Attitude is among the factors that affect problem solving in mathematics (Foong, 2002). Mathematical problem solving attitude is the positive or negative tendency of an individual regarding a mathematical problem and its solution process (Çanakçı, 2008). In other words, mathematical problem solving attitude is the mental structure of the student to respond positively or negatively to problem solving in mathematics. Positive attitudes towards problem solving can most likely improve students' ability to learn mathematics. Students who develop a positive attitude towards mathematics display willing, anxiety-free, consistent and self-confident behaviors while solving mathematical problems (Ministry of National Education, [MoNE], 2015). Otherwise, students who have negative attitudes towards problem solving in mathematics increase their mathematics anxiety and accordingly, their achievement in the course may decrease. Therefore, students' achievement can be affected by their attitudes towards problem solving (Mohd & Mahmood, 2011).

In school mathematics, problem solving is assumed to be a part of life. However, there are certain groups of students who cannot reach the desired potential and achievement in mathematics. Girls, under-numbered (unsuccessful) students in the classroom, and students from low socio-economic backgrounds do not participate in math and math-related activities to the extent their abilities predict (McLeod & Adams, 1989). Therefore, this situation causes students to exhibit negative attitudes towards problem solving. An important factor affecting learning and problem solving is learners' ability to connect. Students should connect mathematics with daily life in order to better understand, learn and maintain the mathematical concepts, problems and basic information learned in school mathematics. However, students who are successful in mathematics cannot exhibit the expected achievement when they encounter a real life situation (Umay & Kaf, 2005), which can negatively affect their problem solving success. Mathematical connection is a component of a schema or a linked schema group in a mental network (Arjudin, Sutawidjaja, Irawan & Sa'dijah, 2016). Establishing mathematical connection is a process that takes place in the mind of the student, and this connection is the student's own mental structure that exists in his mind (Businskas, 2008). For this reason, students should be given the opportunity to make mathematical connections in order to be more successful in learning mathematics (Arjudin et al., 2016).

Mathematical connection is part of a network of knowledge linked to other sciences consisting of basic concepts for understanding and establishing relationships between mathematical ideas, concepts and procedures (Baiduri, Putri, & Alfani, 2020). It provides a strong structure for students to learn mathematics and is an essential component for the development of problem-solving skills. Learning can be more effective in teaching where mathematical connections are made. In cases where effective and meaningful learning can be achieved, the attitude towards mathematics and, in parallel, the attitude towards problem solving develops. However, in environments where meaningful learning does not occur, positive attitudes cannot be expected. Because of differences in knowledge, experience, ability, or interest, what is a problem for one person may not be a problem for another; a problem for one person at a certain time may not be so at another time (Kaur, 1997). In some contexts, as students develop their mathematical abilities, problems may initially turn into exercises after some practice (Kaur, 1997). It is desired that the teaching methods applied in school mathematics facilitate learning for the student, support it and be interesting. It is inevitable that 8th grade students who will take the entrance exam to high schools in particular, have the knowledge, skills and achievements to solve problems that they may encounter in real life (non-routine problems) together with the problems they see only in school mathematics and textbooks. Problem solving gains will be able to improve students' problem solving attitudes in a positive way. Gaining awareness of problem solving stages, methods and problem solving strategies and using them effectively and efficiently in the problem solving process are the basic components for learners to be successful. As students develop strategic competencies in solving problems, their attitudes and beliefs as mathematics learners will become more positive (National Research Council, 2001). Although students may have enough intuitive knowledge about problem solving, they should be taught how to think, reason and solve problems (Posamentier & Krulik, 2016). In other words, problem solvers are generally unaware of the emotions and problem-solving processes that affect them (McLeod & Adams, 1989). In this context, the importance of having knowledge about cognitive and affective factors that are thought to be effective on problem solving in learners emerges. It is also stated that beliefs, attitudes and emotions are important factors in affective field studies in mathematics education.

In the achievement of mathematical problem solving, the student; knowledge level, problem solving attitude and beliefs about problem solving are effective; If the student thinks that problem solving has an important contribution to his mental development (Doğan & Çetin, 2018), he will give more space to problem solving in his real life and have positive attitudes towards problem solving. In this context, the present study provides a basic approach to determine students' problem-solving attitudes and to reveal which factors are related. In addition, although the affective factors related to problem solving in the mathematics curriculum constitute an increasing focus, there are very few studies on problem solving attitudes in the literature. This deficiency creates a big gap in determining the profiles of students regarding their problem-solving attitudes. This study provides a basic approach to reveal the profiles of students' problem-solving attitudes and to determine the variables associated with problem-solving. Within the scope of this approach, the main purpose of our research is to examine the mathematics problem-solving attitudes of secondary school 8th grade students in terms of different variables. For this purpose, answers to the following questions were sought.

1. What is the level of middle school 8th grade students' mathematical problem solving attitudes?
2. Do the 8th grade students' math problem solving attitudes show a significant difference according to their gender, income status of their families, achievement in mathematics course and the status of connecting mathematics with daily life?
3. Is there a significant relationship between the mathematics problem-solving attitudes of the 8th grade middle school students and the sub-dimensions of enjoyment and teaching?

## METHOD

### Research Model

This study was designed in the general survey model, which is one of the quantitative research methods, in order to reach a general judgment about the problem solving attitudes of secondary school students in mathematics. The general screening model is the screening arrangements made on the whole universe or a group of samples or samples to be taken from the universe in order to reach a general judgment about the universe in a universe consisting of many elements (Karasar, 2012: 79).

### Research Group

The research was conducted with 177 (96 female and 81 male) eighth grade students selected by simple random sampling method, studying in a state secondary school in a province in the Southeastern Anatolia Region in the fall semester of the 2019-2020 academic year. Simple random sampling means that each member of the universe has an equal and independent chance of being selected; its advantages are the simplicity of the process and its compatibility with the assumptions of many statistical tests (Mertens, 2010: 318). For this reason, the use of simple random sampling method was preferred in the study. The reasons for conducting the study on eighth grade students are that these students encounter more problem-solving activities in the mathematics curriculum, their knowledge, attitudes and behaviors related to problem solving in mathematics have improved compared to other lower-level students, and they will take the LGS (High School Entrance Examination) exam at the end of the year. Students are between the ages of 13-15.

### Data Collection Tool

Personal information form and mathematical problem solving attitude scale were used as data collection tools in the study.

*Personal information form:* In this form developed by the researchers, there are four questions (gender, family income status, mathematics course achievement score, connecting mathematics with daily life) that are thought to be related to students' mathematical problem-solving attitudes.

*Mathematical problem solving attitude scale:* It was developed by Çanakçı and Özdemir (2011) to determine secondary school students' attitudes towards mathematical problem solving. The scale consists of a total of 19 items, 11 of which are positive and 8 of which are negative, in a 5-point Likert type and two sub-dimensions. Items between 1 and 10 are in the sub-dimension of "Enjoyment (reflecting the student's attitudes about whether he likes to solve problems, whether he is bored or difficult while solving problems)", and items between 11 and 19 are "Teaching (because it reflects the student's attitudes about the teaching process of problem solving)" sub-dimension. Substances; I completely agree (5), agree (4), undecided (3), disagree (2), and strongly disagree (1). During the analysis process, negative items (1, 2, 3, 4, 5, 7, 8 and 10) were scored in reverse. The highest score that can be obtained from the scale is 95 and the lowest score is 19. A high score indicates that the attitudes towards solving mathematical problems are developed and at a high level, while a low score indicates the opposite. In this study, the Cronbach-alpha reliability coefficient was calculated as .89 for the overall scale, .87 for the "enjoyment" sub-dimension and .73 for the "teaching" sub-dimension. Since the calculated values are above .70, the data

obtained from the scale are reliable and considered suitable for reporting the analyzes (Lance, Butts & Michels, 2006).

The data were collected in the first semester of the 2019-2020 academic year, by the first researcher, informing the participant students and the mathematics teacher before the lesson, in approximately 8 minutes, on a voluntary basis in the classroom environment, without taking the names of the students.

### Analysis of Data

The data were analyzed in IBM SPSS 24.0 package program. First of all, the scale of mathematics problem solving attitude and its sub-dimensions; it was tested whether it conforms to normal distribution and whether it shows a homogeneous distribution. The values of skewness and kurtosis coefficients were found between -1.0 and +1.0 for the test of the assumptions of conformity of the data to the normal distribution. In addition, it was determined that some calculated central tendency measures (arithmetic mean, mode and median) were close to each other. Since these two assumptions were met, it was determined that the problem solving attitude scale and its sub-dimensions showed normal distribution and it was appropriate to use parametric tests. After checking the normality assumption, the levels of students' problem solving attitudes and sub-dimensions were calculated with the help of arithmetic mean and standard deviation values. In the interpretation of the mean scores, arithmetic mean ranges were determined according to the "range of array/number of groups to be made" formula created by Tekin (1996). The arithmetic mean ranges used are "1.00-1.80=Very Low", "1.81-2.60=Low", "2.61-3.40=Medium", "3.41-4.20=High" and "4.21-5.00=Very High". The arithmetic means according to the evaluation intervals are given in the findings section.

The difference between students' problem solving attitudes according to gender and income status of the family was analyzed by independent sample t-test, the difference between problem solving attitudes according to mathematics course achievement and connecting mathematics with daily life was analyzed by one-way analysis of variance (ANOVA). For the analysis of variance, the assumption of normality was provided and the homogeneity control of the variances was made. Welch test findings were included in cases where the variances were not homogeneous ( $p < .05$ ). Scheffee test, which is one of the multiple comparison methods, was used to determine between which groups the difference between the group averages was. Because if the variances are equal, the Scheffe test is often used in the multiple comparison of the mean scores (Büyüköztürk, 2020), otherwise the Welch test can be used.

On the other hand, the relationship between mathematical problem solving attitude and "teaching" and "enjoyment" sub-dimensions was calculated using the Pearson product moment correlation coefficient. If the Pearson correlation coefficient is .29 and below this value, there is a low correlation, between .30-.69 there is a medium correlation, and between .70-1.00 there is a high correlation (Büyüköztürk, 2020).

### FINDINGS

In the study, normality values of mathematics problem solving attitude scale scores (dependent variable) were examined using skewness-kurtosis coefficient values and central tendency measures (mean, mode, median). The obtained results are given in Table 1.

**Table 1.** Normality test for problem solving attitude mean scores and sub-dimensions

Dimension	N	Min.	Max.	$\bar{X} \pm Sd.$	Mod	Median	Skewness	Kurtosis	Level
Teaching	179	3.00	5.00	4.16 $\pm$ .45	4.00	4.11	-.01	-.31	High
Enjoyment	179	1.40	5.00	3.15 $\pm$ .78	3.20	3.20	-.21	-.19	Moderate
PSA(Total)	179	2.58	4.79	3.63 $\pm$ .50	3.84	3.63	.14	-.65	High

Note. PSA: Problem solving attitude

From Table 1, it was seen that the skewness-kurtosis coefficient values related to the scores of the problem solving attitude scale and its sub-dimensions varied between -1.5 and +1.5 (Tabachnick & Fidell, 2013), while the mean, mode and median values were close to each other. Accordingly, since the problem solving attitude scores showed a normal distribution, parametric methods were used. In addition, the highest score the students got from the problem solving attitude scale was 4.79 and the lowest was 2.58. The highest score obtained from the "teaching" sub-dimension of the problem solving attitude scale was 5.00; the lowest score was 1.89; The highest score obtained from the "enjoy" sub-dimension is 4.00 and the lowest score is 1.40. Since the students' problem solving attitude point average (3.59) was between 3.40-4.20 according to the value range table, it was found that the students' problem solving attitudes were positive (high); According to the "teaching" sub-dimension average score (4.09), it can be said that students have high attitudes, and according to the "enjoying" sub-dimension average score (3.14), students have moderate attitudes.

Independent sample t-test was used to determine whether the mathematics problem solving attitude scale scores and sub-dimensions showed a significant difference according to the gender of the students. The obtained results are shown in Table 2.

**Table 2.** Independent sample t-test results of problem-solving attitudes and sub-dimensions by gender

Dimension	Gender	N	Mean	Sd.	t	p
Teaching	Female	96	4.21	.41	1.38	.16
	Male	81	4.12	.48		
Enjoyment	Female	96	3.19	.72	.64	.51
	Male	81	3.11	.86		
PSA	Female	96	3.67	.47	1.12	.26
	Male	81	3.59	.53		

In Table 2, it was seen that the mean score of females (3.67) was higher than the mean score of males (3.59), but this difference was not statistically significant ( $t=1.12$ ;  $p>.05$ ). In the teaching sub-dimension of the scale, the mean score of the females (4.21) was higher than the mean score of the males (4.12), but in the sub-dimension of enjoyment, the mean score of the females (3.19) was lower than that of the males (3.11) and was not statistically significant.

The income status of the families of the students is given in two categories as less than the net minimum wage of 2.826₺ and more than 2.826₺. Those whose income is less than the minimum wage are classified as “low income” and those with higher income are classified as “high income”. The independent sample t-test was used to analyze whether the scores and sub-dimensions of the mathematics problem solving attitude scale showed a significant difference according to the income status of the students' families. The obtained results are given in Table 3.

**Table 3.** Independent sample t-test results of problem solving attitudes according to income status

Dimension	Income status	N	Mean	Sd.	t	p
Teaching	Low	33	4.14	.45	-.39	.69
	High	144	4.18	.44		
Enjoyment	Low	33	3.31	.55	1.51	.13
	High	144	3.12	.83		
PSA	Low	33	3.71	.44	.81	.42
	High	144	3.62	.51		

When Table 3 is examined, it was seen that the mathematics problem solving attitude mean score of students with low family income (3.71) was higher than the mean score of math problem solving attitude (3.62) of students with high income status, but this difference was not statistically significant ( $t=.81$ ;  $p>.05$ ). While the same situation was in question in the sub-dimension of liking, it was determined that in the sub-dimension of teaching, this situation was in favor of students with high-income families and that the mean score of attitude towards solving mathematical problems in the sub-dimension of teaching was not significant.

The students' mathematics course achievement average score was coded as 0-44, 45-54, 55-69, 70-84 and 85-100. Since there were no students with a achievement score between 0-44 and 45-54, the data in this range were not included in the evaluation. ANOVA was used to analyze whether the overall scale and its sub-dimensions showed a significant difference according to the mathematics achievement score variable of the students. The obtained results are given in Table 4.

**Table 4.** ANOVA results of problem solving attitudes according to mathematics achievement score

Dimension	Achievement Score	N	$\bar{X}$	Sd.	Homogeneity Levene	p	ANOVA F	p	Dif.
Teaching	55-69 (A)	21	3.99	.38	1.03	.41	9.83	.000	A - C B - C
	70-84 (B)	48	4.03	.44					
	85-100 (C)	78	4.34	.42					
Enjoyment	55-69 (A)	21	2.68	.06	1.22	.36	7.74	.001	A - C B - C
	70-84 (B)	48	2.95	.54					
	85-100 (C)	78	3.35	.88					

PSA	55-69 (A)	21	3.30	.37	2.83	.06	13.88	.000	A - C B - C
	70-84 (B)	48	3.46	.42					
	85-100 (C)	78	3.81	.52					

According to Table 4, students with a mathematics achievement score between 85-100 have significantly higher mathematics problem solving attitudes and sub-dimensions than those with a mathematics lesson score between 55-69 and 70-84. As a result of the Scheffe test to determine between which score groups the difference between achievement scores is; The problem solving mean scores between 55-69 and 85-100 points and between 70-84 and 85-100 points were found to be statistically significant in favor of students who scored between 85-100 points.

ANOVA was used to determine whether students' problem solving attitudes and sub-dimensions showed a significant difference according to their connection of mathematics with daily life. ANOVA assumptions were provided for the problem-solving attitude scale and the enjoyment sub-dimension. In the teaching sub-dimension, it was determined that the data were normally distributed, but the variances were not homogeneous ( $p < .05$ ). At this point, the findings of the welch test, which has high statistical power and lower type error rate, are reported. The obtained results are presented in Table 5.

**Table 5.** ANOVA results according to problem solving attitude connecting mathematics with daily life

Dimension	Attribution status	N	$\bar{X}$	Sd.	Homogeneity		ANOVA		Dif.
					Levene	p	F	p	
Teaching	Sometimes (S)	63	4.07	.40	3.34	.03	2.62	.08	---
	Usually(U)	88	4.20	.41					
	Continuous (C)	26	4.30	.60					
Enjoyment	Sometimes (S)	63	2.72	.81	2.76	.06	18.71	.00	S - U S - C
	Usually(U)	88	3.35	.63					
	Continuous (C)	26	3.56	.78					
PSA	Sometimes (S)	63	3.36	.49	1.22	.29	18.88	.00	S - U S - C
	Usually(U)	88	3.75	.41					
	Continuous (C)	26	3.91	.51					

When the problem solving attitudes and sub-dimensions of the students in Table 5 are evaluated in terms of connecting mathematics with daily life; The mean score of those who connect mathematics with daily life "constantly" (3.85) is larger and statistically significant ( $F=18.81$ ;  $p < .05$ ) than those who connect mathematics with daily life "never", "sometimes" and "usually". Likewise, in the teaching and enjoyment sub-dimensions of the scale, the average score of those who connect mathematics with daily life "continuous" is higher than the average score of those who connect mathematics "sometimes" and "usually". The difference between the mean scores of the enjoyment sub-dimension was significant ( $F=18.71$ ;  $p < .05$ ), while the difference between the mean scores of the teaching sub-dimension was not significant ( $F_{welch}=2.62$ ;  $p > .05$ ). Scheffe test, which is one of the multiple comparison methods, was applied to determine between which group means the difference between the group averages was. The means of those who connect mathematics with daily life "sometimes-usually" and "sometimes- continuous" differed significantly in favor of those who connect mathematics "usually" and "continuous".

Pearson correlation coefficient was calculated to determine whether there is a relationship between students' problem solving attitudes and their teaching and enjoyment sub-dimensions. The obtained results are given in Table 6.

**Table 6.** The relationship between problem solving attitude and sub-dimensions

Dimension	Teaching	Enjoyment	PSA
Teaching	1		
Enjoyment	.19**	1	
PSA	.59**	.91**	1

According to Table 6, there is a moderately positive and significant relationship ( $r=.59$ ;  $p < .05$ ) between students' mathematical problem solving attitude and teaching sub-dimension, and a high-level positive significant relationship between problem solving attitude and enjoyment sub-dimension. ( $r=.91$ ;  $p < .05$ ). In addition, a low-level positive significant relationship ( $r=.19$ ;  $p < .05$ ) was found between the sub-dimensions of enjoyment and teaching of the problem-solving attitude scale.

## DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In this study, which was carried out to determine the problem-solving attitudes of 8th grade students in mathematics, it was determined whether there was a difference between the students' attitudes towards solving mathematical problems in terms of gender, income status, mathematics achievement and the status of connecting mathematics with daily life. In addition, it was also examined whether there is a significant relationship between problem solving attitudes and sub-dimensions in mathematics.

Middle school 8th grade students' problem solving attitudes in mathematics were found to be positive in the whole scale and in the "teaching" sub-dimension. In the sub-dimension of "enjoying", it can be said that the attitudes of the students are close to the positive level. This result for the overall scale and the "teaching" sub-dimension is an expected situation for good/successful problem solvers in general, and this situation reflects the positive attitudes of the students in the teaching process of problem solving. Because it is expected that good problem solvers have positive attitudes compared to unsuccessful/passive solvers. It can be thought that this situation can bring achievement in mathematics course for students. In a study, it was emphasized that the reason why the attitude towards the subject positively affects the problem solving of the students may be that the students have a good attitude towards mathematics and understand that learning is important in the process of applying knowledge in daily life (Pimta, Tayruakham & Nuangchalerm, 2009). As a matter of fact, in the study conducted on gifted students; It has been reported that students with a positive problem-solving attitude like solving mathematical problems, are interested, enjoy and excited (Doğan & Çetin, 2018). This situation may be due to the fact that gifted students perceive themselves as good problem solvers, have high self-efficacy beliefs and think that they can reach their current knowledge in the problem-solving process (Yazgan-Sağ & Argün, 2016), and have high self-regulation skills and self-confidence. . On the other hand, in the "enjoying" sub-dimension of the scale, it can be said that the attitudes of the students about whether they like problem solving or not, are close to positive. Mohamed and Waheed (2011) reported that middle school students' positive attitudes towards mathematics were moderate and there was no gender difference in their attitudes. However, there are studies that found that middle school students' mathematical problem-solving attitudes are weak (Akday & Katrancı, 2021).

Gender is an important variable that has been frequently emphasized in mathematics education research in recent years. In this study, it was determined that the difference between the problem-solving attitudes of female and male students was not statistically significant in general and sub-dimensions of the scale. From this point of view, it can be said that gender is not a significant variable on students' problem solving attitudes. In most of the studies on the subject, results were obtained that support the findings of this study. For example, Salleh and Zakaria (2009) found in their study that there was no statistically significant difference in students' attitudes towards problem solving by gender. Similarly, Mohd and Mahmood (2011) found in their study that there was no significant difference between gender and attitude towards problem solving. Özgen, Ay, Kılıç, Özsoy and Alpay (2017) found that there was no significant difference between the problem-solving attitudes of male students and the attitudes of female students in their study on secondary school students. Mohamed and Waheed (2011) found that gender did not make a significant difference in middle school students' math attitudes. On the contrary, Arslan, Yavuz, and Deringol-Karatas (2014) found in their study on primary school students that there was a significant difference between attitudes in favor of female students in the overall problem-solving attitude scale and in the "teaching" sub-dimension. The finding that they obtained the same result as our current study is that there is a non-significant difference in favor of female students in the "enjoyment" sub-dimension. Russo and Minas (2020) found that boys were more likely than females to have clearly positive attitudes towards learning math through problem-solving tasks. Students from families with low socio-economic status do not participate in mathematics and mathematics-related activities to the extent predicted by their abilities (McLeod & Adams, 1989). This situation causes students to exhibit negative attitudes towards mathematics and problem solving. In the current study, it was determined that students' mathematical problem solving attitudes did not show a statistically significant difference in general and sub-dimensions of the scale according to the income level of their families. In other words, the monthly income of the students' families does not make a significant difference on their problem solving attitudes and sub-dimensions. Accordingly, it can be said that the income status of the families of the students is not effective on their mathematical problem solving attitudes.

It is possible that better problem solvers have more positive attitudes towards problem solving than passive problem solvers, and students with good problem solvers and positive attitudes may be more successful in mathematics lessons. If students have an achievement motivation to solve math problems effectively, they will have a good attitude towards the subject, more concentration and will pay attention to the lesson, then they will have high abilities in math problem solving (Pimta, Tayruakham & Nuangchalerm, 2009).

Students who are successful in mathematics courses also have high attitudes towards mathematics. The results obtained from the studies showed that there is a strong positive relationship between students' attitudes towards

mathematics and their academic achievement (Lara & Lourdes, 2016) and problem-solving skills (Marchiş, 2013). In addition, achievement motivation is a factor that directly affects students' problem-solving abilities compared to attitudes towards mathematics (Pimta, Tayruakham & Nuangchalem, 2009). Therefore, in the study, the achievement of the students was discussed and it was examined whether it was effective on their problem solving attitudes. In the present study, it was revealed that students' problem solving attitudes showed a statistically significant difference in terms of their mathematics achievement. This difference was significant in favor of high-achieving students with a mathematics achievement score of 85-100 across the scale and in all sub-dimensions. Therefore, students with high achievement levels also have higher problem-solving attitudes, so they enjoy solving problems, solve them with pleasure and do not find it difficult. Their attitudes towards the usefulness of mathematics and their belief in the importance of problem solving are high, and these individuals can be called good or successful problem solvers. Studies on the subject have yielded results that support the findings of this study. Salleh and Zakaria (2009) found that successful students have a positive attitude towards problem solving. These students stated that they are willing to solve any problem given to them, they enjoy solving problems and they like solving challenging problems. In another study, they reported that the attitude towards mathematics affects the students' ability to solve mathematics problems by concentrating on the lessons, both directly and indirectly (Pimta et al., 2009). Özgen, Ay, Kılıç, Özsoy, and Alpay (2017) found that middle school students' attitudes towards problem solving differed significantly in terms of their mathematics achievement grades.

Students with highly positive attitudes in mathematics tend to be successful in daily life and are more advantageous than unsuccessful ones. Good problem solvers are able to better solve the problems and difficulties they may encounter in real life, thanks to their rich knowledge about problem solving. This is an important factor for them to exhibit positive attitudes towards mathematics and to acquire the knowledge and behaviors of connecting mathematics with real life. Problem solving is a tool used in daily life to help students develop their basic skills (Pimta, Tayruakham & Nuangchalem, 2009). A remarkable and important result obtained from this study is that students' problem solving attitudes show a statistically significant difference in terms of connecting mathematics with daily life. It has been determined that this difference is in favor of students who connect mathematics with daily life "continuously" in the overall scale and in the sub-dimension of enjoyment. The reason for this result is that students tend to perceive real life and mathematics as a whole. Russo and Minas (2020) stated in their study that the most important reason why students have positive attitudes about learning mathematics through problem solving is their belief that this teaching approach supports their mathematics learning. They stated that these beliefs of the students stemmed from the fact that they enjoy working on problems related to real-world scenarios and that they feel that these connections with the outside world make mathematics easier to understand. In addition, in our study, no significant difference was found between the problem solving attitudes of the students in the teaching sub-dimension in terms of connecting mathematics with daily life. Özgen, Ay, Kılıç, Özsoy, and Alpay (2017) found in their study that there is a significant difference between the problem-solving attitudes of secondary school students in terms of the perception of using mathematics in daily life. They stated that it may be due to the fact that students are more likely to encounter mathematical problems in real life and their beliefs about the benefits of problem solving. On the contrary, Bayazit (2013) found in his study that middle school students have serious difficulties in solving real-life problems.

Interesting, appropriate and effective learning activities based on student-centered constructivist learning approaches support students' positive attitudes towards problem solving and learning mathematics. In this context, it is important to investigate the variables positively related to problem solving attitude. In the present study, a moderately positive correlation was found between problem solving attitude and "teaching" sub-dimension, and a highly positive and significant correlation between "enjoyment" sub-dimension. In line with these results, the importance of students' willingness to do problem solving emerges in order to develop positive problem-solving attitudes. In addition, it was concluded in the study that there was a low-level significant positive relationship between the sub-dimensions of "enjoyment" and "teaching". Because of this result, it can be said that the attitudes and behaviors of the students who like to solve problems will develop at a positive level, and they will differ in other cases.

As a result, in this study, it was determined that the attitudes of middle school eighth grade students towards problem solving in mathematics were affected by variables such as mathematics achievement and connecting mathematics with daily life. When problem solving attitudes were evaluated according to mathematics achievement, it was seen that high-achieving students had higher problem-solving attitudes than others. In addition, it was determined that the problem-solving attitudes of those who constantly connect mathematics with daily life are higher. These results indicate that the variables that cause this difference between connecting mathematics with daily life and problem solving attitudes should be examined in detail and even examined with the help of different measurement tools in different designs. In addition, large-scale samples on all 5th, 6th, 7th

and 8th grades will be important in terms of revealing more generalizable results. Thanks to this study, a profile of middle school students' problem-solving attitudes in mathematics was formed.

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## Examination of Social Science Teachers' Opinions on the Education of Students with Special Learning Deficiency

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### ABSTRACT

Considering the desire and effort of human beings, who are social beings, to live together, each individual forming the society needs a particular importance. It is also necessary to support the desire of harmonious and healthy individuals to live together in a society consisting of different people in terms of quantity and quality, with different instruments. Apart from the communication, economics, law, theology, psychology, politics, demography, etc. fields, education and training activities come to the fore when the necessity of systematic learning and assimilation of different variables by individuals within a multi-disciplinary understanding. When the subject is considered from the point of view of individuals with specific learning difficulties, systematic studies are carried out through public or private institutions for their education in Turkey. Inclusive education is one of the practices that schools do in this context. The teachers of the social studies course, being one of the useful courses for the students to adapt and socialize with the society they live in, have important duties in terms of adapting the students with special learning difficulties to the society. It is thought to be necessary to determine the status, scope and purpose of educational activities for them and the suggestions presented in this framework. In this context, this research, which was conducted to determine the views of social studies teachers on inclusive education practices, was shaped in a case study pattern and suggestions were presented in accordance with the results obtained.

**Keywords:** Learning Difficulty, Social Studies, Inclusive Education, Opinion, Case Study.

### INTRODUCTION

Learning difficulty, which is thought to develop due to heredity or various environmental factors, is one of the educational barriers that can be overcome by employing the special education option.

Learning difficulty, a concept that can be defined as impairments in thinking, using language skills (listening/watching, speaking, reading, writing) or in one or more of mathematical calculations is a condition that should be identified as a result of teachers' evaluations through various activities. The process of determining this problem, which can cause disorders in affective, social and psycho-motor areas over time (Ministry of National Education, 2008; Polat, 2013), should be completed before students are directed to guidance and research centers (Doğan, 2012). It is ensured that students with specific learning difficulties continue their education with inclusive education in the same classrooms with their peers after receiving the necessary diagnosis.

Students with special learning difficulties receive education with the Individualized Education Program (IEP), which is based on the program for their peers in their classes, and their assessments are made accordingly. Each branch has a maximum of 2 inclusive students. If a suitable class cannot be found, arrangements are made to have a maximum of 5 inclusive students in a class. It is obligatory to establish an IEP Development Unit and a support training room in schools with these students. The courses to be taken by the students in need of special education in the support education room are determined at the beginning of the semester and can be arranged during the semester if deemed necessary. Social studies course is also among the courses that can be given in this room. In the whole assessment and evaluation process, arrangements are made in the educational elements (material, duration, environment, etc.) in line with their inadequacy and developmental characteristics. Necessary measures are taken for them in central system exams (Special Education Services Regulation, 2018).

With inclusive education, it is aimed to support the academic skills of students with learning difficulties as well as improve their social skills with their peers. Social studies course acts as a bridge in this context. Therefore, it is thought that it is necessary to determine the status, scope and purpose of educational activities for them and the suggestions presented in this framework. There are studies in the literature examining the views of teachers on students with special learning difficulties, but there are hardly any studies examining the views of social studies teachers on this subject. Yaylacı and Aksoy (2016) collected the opinions of social studies teachers about their competencies in inclusive education through a questionnaire. Accordingly, it has been determined that teachers consider themselves sufficient in planning and organizing the teaching process, but not in observing and evaluation and in enabling vocational development. In addition, it was determined that teachers supported inclusive education,

but found themselves inadequate in providing this education. Arslan (2019) conducted a study to determine the attitudes of social studies teacher candidates about inclusive education in terms of various variables, and the following results were obtained: Pre-service teachers' positive attitudes towards inclusive education are high. In addition, female pre-service teachers, pre-service teachers who take courses on disability types, pre-service teachers who are familiar with special needs individuals, and pre-service teachers who support the participation of individuals with special needs in inclusive practice have more positive attitudes. Based on the small number of studies and the reasons presented above, it is aimed to determine the views of social studies teachers, who are the course administrators, on inclusive education practices. Based on this main purpose, answers are sought for the following questions:

1. What are the opinions of social studies course teachers, who have students with learning difficulties, about their classroom activities?
2. What are the opinions of social studies course teachers on the suitability of the course topics for the structure of students with learning difficulties (inclusive education)?
3. What are the activities teachers have done for students who have learning difficulties in social studies sessions?
4. What do the teachers think about the advantages and disadvantages of social studies course subjects in the context of inclusive education?
5. What are the teachers' suggestions for inclusive education within the scope of social studies course?

## METHODS

In this research, which was carried out in accordance with the qualitative model, the case study pattern was taken as the basis. The case study is a research design that focuses on finding a holistic description and explanation (Merriam, 2013), and allows the researcher to examine a phenomenon or event that cannot be controlled by the researcher based on 'how' and 'why' questions (Yıldırım and Şimşek, 2006).

'Typical case sampling', which is one of the purposive sampling methods and aiming to reveal the typical or normal (Glesne, 2013, 61), was applied in the research. In this context, 21 social studies teachers working in public schools affiliated to Mersin Provincial Directorate of National Education were reached in the 2020-2021 academic year. Information about the working group is given below.

**Table 1.** Information about the study group of the research

		<b>n</b>	<b>%</b>
<b>Tenure</b>	1 – 5 year	2	10
	6 – 10 year	5	24
	11 – 15 year	10	47
	16 – 20 year	4	19
	20 + year	0	0
	<b>Total</b>	<b>21</b>	<b>100</b>
<b>Gender</b>	Female	7	33
	Male	14	67
	<b>Total</b>	<b>21</b>	<b>100</b>
<b>Age</b>	25-30	3	14
	31-35	4	19
	36-40	9	43
	41-45	3	14
	46-...	2	10
	<b>Total</b>	<b>21</b>	<b>100</b>

When looking at the table, 14 (67%) of the participants are male and 7 (33%) are female. It is seen that teachers who work for 11-15 years are more than the others in terms of their tenure. In addition, when looking at the age range, the majority of teachers are 36-40 years old.

The data were collected through an open-ended question form, which enables unexpected or unplanned answers to be obtained if participants are asked to answer freely (Büyüköztürk et al., 2014). In this way, it is thought that more comprehensive and detailed data on the subject can be reached. With the form, it was asked what they thought about the in-class activities that social studies teachers do for their students with special learning difficulties, the suitability of the course topics to the structure of this type of students, the advantages and disadvantages of social studies course topics in the context of inclusive education, and what can be done for inclusive education within

the scope of social studies course. The open-ended question form was given its final form after taking the opinions of three field experts.

In the analysis of the data collected through focus group interviews, content analysis was used, in which similar data were brought together around certain concepts and phrases and presented in a way that readers could understand (Yıldırım and Şimşek, 2006).

## FINDINGS

In this section, the findings obtained in order to answer the sub-questions of the research are given.

**Table 2.** Having a student with a learning disability

Themes	n	%
<b>Exist</b>	<b>15</b>	<b>71</b>
Absent	6	29
<b>Total</b>	<b>21</b>	<b>100</b>

**Table 3.** Activity themes

Themes	n	%
<b>Teaching with game</b>	<b>13</b>	<b>22</b>
Concretization	12	20
Re-reading and writing	9	15
IEP Plan	9	15
Material preparation	8	13
Communication	5	8
Current events	4	7
<b>Total</b>	<b>60</b>	<b>100</b>

71% (15) of the participants stated that there were students with learning difficulties in their classes, and 29% (6) stated that they were not in their classes to the question which is one of the aims of the research: ‘Do you have students who have learning difficulties in Social Studies courses? Please write your opinions about your classroom activities, if any.’. It is seen that the activity themes of the teachers, especially those who attend the classes of the students with learning difficulties and according to their previous job experiences, are grouped under the headings of ‘teaching with games, concretization, re-reading and writing, IEP plan, material preparation, communication and current events’. In form 7, a teacher said, ‘Of course there is. I’m trying to embody more. I try to explain the games or the materials they use in daily life, with materials close to them’.

**Table 4.** Opinions on the suitability of social studies course topics for the structure of students with learning difficulties (inclusive education)

Themes	n	%
<b>Not suitable</b>	<b>13</b>	<b>34</b>
Discrete / Hard	12	32
One-to-one education	9	24
Suitable	4	10
<b>Total</b>	<b>38</b>	<b>100</b>

Thirteen of the participants (34%) stated that the subjects were not suitable within the framework of the second sub-problem of the research [‘What are your views on the suitability of social studies course topics for the structure of students with learning difficulties (inclusive education)?’]. On the other hand, they stated that the subjects were difficult and abstract and that they were solved with one-to-one training, and 4 (10%) teachers stated that the subjects were suitable. In form 5, a teacher said, “For students with learning problems, the topics are a bit heavy. For example, let’s leave the literacy problem aside, it is very difficult to explain the wars of the Ottoman Empire to a student who does not know the capital of Turkey.

**Table 5.** Activities carried out by teachers for students with learning difficulties in social studies sessions

Themes	n	%
<b>One-to-one education</b>	<b>13</b>	<b>20</b>
Teaching with game	12	19

Concretization	12	19
Material preparation	10	15
Reinforcement	8	12
Simplification	7	11
We do not conduct much	3	4
<b>Total</b>	<b>65</b>	<b>100</b>

Thirteen of the participants (20%) reported a theme in the direction of one-to-one training within the framework of the third sub-problem of the research [‘Please write down the activities you have done for students who have learning difficulties in social studies sessions (inclusive education)’]. Considering the other themes, 12 (19%) of the teachers were teaching with games, 12 (19%) were concretizing, 10 (15%) were preparing materials, 8 (12%) were reinforcement, 7 (11%) were facilitating, and 3 (4%) stated that they do not do much of this type of activity. In form number 4, a teacher said, ‘We play the game who am I so that he gets to know his friends, increases his communication with them, and understands the role of student at school. Topics stay in mind by singing. Also, matching is more effective in puzzle games and they have fun.’

**Table 6.** Opinions on the advantages and disadvantages of social studies course subjects in the context of inclusive education

Themes (Advantages)	n	%	Themes (Disadvantages)	n	%
<b>Concretization</b>	<b>15</b>	<b>18</b>	<b>Discrete subjects</b>	<b>14</b>	<b>18</b>
Visualization	14	17	Concepts	13	16
Simplification	12	15	Session duration	13	16
Communication	10	13	Crowded Classrooms	12	14
Flexibility of Subjects	10	13	Long texts	12	14
Supportive	10	13	Boring	10	12
Reinforcement	9	11	Environment	8	10
<b>Total</b>	<b>80</b>	<b>100</b>	<b>Total</b>	<b>82</b>	<b>100</b>

While the themes of concretization (15), visualization (14), simplification (12), communication (12), flexibility of subjects (10), supportive (10) and reinforcement (9) indicate the advantages of the subjects, the abstractness of the subjects (14), the concepts used (13), insufficient course time (13), crowded classrooms (12), long texts (12), boredom of students with learning difficulties in the course (10), and environmental impact (8) themes were also stated as disadvantages of social studies course subjects within the framework of the fourth sub-theme of the research (‘Please write your views on the advantages and disadvantages of social studies course subjects in the context of inclusive education.’). In form 12, a participant said, ‘Actually, it is a disadvantage that the subjects are abstract and have too many concepts, but if we make such subjects concrete, we can turn this situation into an advantage in a suitable way. It can be an advantage to be able to find examples from life.’ he said.

**Table 7.** Possible suggestions for inclusive education within the scope of social studies course

Themes	n	%
Separate curriculums	15	19
Simple activities	14	18
Game cards	13	16
Sightseeing	10	13
Family participation	9	12
Decreased acquisitions	9	12
Concrete outputs	8	10
<b>Total</b>	<b>78</b>	<b>100</b>

Looking at the answers given by the participants within the framework of the last sub-question of the research (‘Please write down your suggestions for inclusive education within the scope of social studies course.’), 15 teachers (19%) stated that there should be a separate curriculum in the context of social studies course especially for students with learning difficulties, 14 teachers (18%) stated that there should be simply activity examples, 13 teachers (16%) stated that there should be game cards. 10 of them (13%) stated that there should be a sightseeing, 9 (12%) of them stated that there should be family participation. According to 9 of them (12%) acquisitions should be decreased and 8 of them there should be concrete outputs. While in form 5, a teacher said, ‘Games, puzzles,

matching, etc., suitable for their level, related to the subject, should be increased further. In order for these students not to isolate themselves in the classroom environment, their course activities should be increased in the school environment.', in form 13, a teacher said, 'Special textbooks and materials should be developed for mainstreaming students, audio-visual video studies and interactive studies should be prepared. Educational studies should be carried out in separate classrooms or institutions.'

## CONCLUSION

In this study, examining the views of social studies teachers about the education of students with special learning difficulties, it has been determined that the majority of teachers in the study group stated that they had students with learning difficulties. In the social studies classrooms in which these students were present, teachers stated the themes of 'teaching with games, concretization, re-reading and writing, IEP plan, material preparation, communication and current events.

A certain part of teachers in the study group stated that the subjects of social studies course are suitable for the structure of students with learning difficulties. On the other hand, it was concluded that the subjects are difficult and abstract and that they can be solved with one-on-one education.

Teachers stated that within the scope of inclusive education, they did activities on the themes of one-to-one education, teaching with games, concretization, material preparation, reinforcement and facilitation in the social studies lesson. It was determined that very few teachers could not do much activity. It can be said that this situation is parallel to the studies of Yaylacı and Aksoy (2016), who obtained the result that the participating social studies teachers considered themselves partially sufficient in the learning and teaching process.

The following results were also obtained in the research that concretization, visualization, simplification, communication, flexibility of subjects, supportive and reinforcement indicate the advantages of the subjects. The abstractness of the subjects (14), the concepts used (13), insufficient course time (13), crowded classrooms (12), long texts (12), boredom of students with learning difficulties in the course (10), and environmental impact (8) themes were also stated as disadvantages. Negative opinions about crowded classrooms are similar to the findings of Yaylacı and Aksoy (2016). One of the reasons of social studies teachers who do not support inclusive education in their study is that the classes are crowded.

Teachers in the study group offered suggestions for the preparation of a separate curriculum, simple activity examples, the use of game cards, organizing sightseeing, family participation, concrete outputs, decreasing acquisitions for inclusive education within the scope of the social studies course.

Based on the results, the following recommendations can be made:

1. Social studies course topics and activities might be prepared for students with learning difficulties.
2. Topics might be given with simple, understandable and concrete examples as much as possible.
3. Class hours might be reconsidered for students with learning difficulties.
4. Classrooms and the number of students might be determined according to the characteristics of students with learning difficulties.
5. Academic studies might be conducted in terms of multidisciplinary or interdisciplinary approaches for students with learning difficulties.

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