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Table of Contents

A Phenomenological Research on Preparatory Physical Exercises in Music Education[1]

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ABSTRACT
Musicians who play instruments may suffer from some musculoskeletal disorders due to intense and long working processes, wrong posture-holding, insufficient bodily awareness. Preparatory physical exercises can be used to prevent or alleviate these disorders. These are aimed at warming up, opening-stretching, strengthening the joints and muscles and maintaining the correct posture in order to prepare the body for playing. In this study, it was aimed to reveal the pre-service music teacher candidates' physical exercises for instrument practice. A qualitative method was used in the research; a semi-structured interview form was applied to the study group. In the analysis of the data, the thematic analysis technique was used. As a result of the analysis, 4 main themes including "exercise experience", "breath awareness", "physical pains" and "effects of exercise" and 9 sub-themes and 49 codes depending on these themes were revealed. As a result of the research, it was concluded that music teacher candidates did not do regular exercise work for instrument study, they experienced physical pain due to instrument study, their breath awareness was not at a sufficient level, and exercise had physical and psychological effects on instrument performance. In addition to medical treatments for musician injuries related to instrument playing, physical awareness and exercise training that prevent these disorders play an extremely important role. In instrument education, besides technical and musical concepts, it is necessary to research and apply ways to bring physical awareness to students.
Keywords: Music Education, Preparatory Physical Exercises, Musician Disorders, Breath Awareness, Posture.

INTRODUCTION
Instrument performance, which is carried out in a human-instrument-body relationship, requires a high level of focus, work, physical and mental endurance (Cüceoğlu, 2008). Musicians, just like athletes, go through intensive preparation and work processes to perform well (Heinan, 2008; Yağışan, 2002; Elbaum, 1986; Akçay & Duzak, 2021; Norris, 1997; Çimen, 2003). Despite the similarity between them, musicians, unlike athletes, are exposed to long-term microtrauma due to activities aimed at developing fine motor skills (Elbaum, 1986). Intensive work processes can cause some physical injuries in musicians. Disorders that occur due to playing an instrument include work related upper extremity disorders, overuse syndrome, misuse syndrome, RSI- repetitive strain/stres injuries (Çimen, 2003). Musculoskeletal problems such as entrapment neuropathies, hand cramps, spinal disorders are among these disorders (Joubrel et al., 2001). Each instrument has its own risk factors (Brandfonbrener, 1990). Symptoms that accompany overuse syndrome include squeezing, stiffness, cramping, fatigue, swelling, and numbness (Lederman, 2003; Johnson, 2009; Potter & Jones, 1995). Although dystonia seems to be the most common movement disorder among musicians, other movement disorders such as tremors, tics, parkinsonism, apraxia and motor control disorders can negatively affect musicians' performance and threaten their careers (Jankovic & Ashoori, 2008). Among instrumentalists, pain is the most common symptom leading to medical consultation (Lederman, 2003; Johnson, 2009).

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[1] This study was prepared with the approval of Trakya University Social and Human Sciences Research Ethics Committee. This study presented in INTE (July 28-29,2022).

Table 1: Causes of physical injuries in musicians playing instruments[2]

Overuse	Wrong instrument selection	Performance anxiety
Overload	Quality of the instrument	Fierce competition
Playing for a long time	Playing with the wrong technique	The pressure to play perfect
Insufficient rest	Repetitive movements	Gender (being female)
Sudden changes in practice routine	Carrying the weight of the instrument for a long time	Teacher exchange
Incorrect posture	The technical difficulty of the repertoire	Instrument change
Insufficient physical condition		
Failure to treat previous injuries		
Disregard for warm-up/relaxation exercises		

Preparatory physical exercises can be used to prevent or alleviate these disorders. These exercises are aimed at warming the joints and muscles, stretching, strengthening and maintaining the correct posture in order to prepare the body for playing. Correcting posture and increasing conditioning are effective in preventing injuries due to playing an instrument (Frederickson, 2002; Lederman, 1994). However, correct posture-holding and technical issues can be handled in the early stages of instrument learning and put into the background with the effect of performance anxiety in the advanced stages (Frederickson, 2002). The concepts of strength, flexibility and endurance stand out as components of an ideal exercise process (Norris, 1997). Regular, repetitive and planned/programmed movements for purposes such as endurance, strength, flexibility, body composition and neuromotor conditioning are called exercise (Arslan, 2021). In order to prevent musician injuries, an exercise program for these issues should become a part of the instrument lesson (Yağışan, 2002; Kava et al., 2010; Frederickson, 2002). For the purpose of preventing overuse, it will be effective to notice the signs of fatigue and take measures for this, and to do sports such as walking and swimming in order to reduce the possibility of injury (Akçalı, 2006). Individuals who play instruments should be made aware of their bodies and have the habit of self-control (Gökbudak & Tutun, 2005; Özübek, 2019). For these purposes, techniques such as Alexander Technique, Pilates, Yoga, Tai Chi can be applied (Ostwal et al., 1994; Özübek, 2019; Fehm & Schmidt, 2006; Fishbein et al., 1988). It is important to review the playing technique and to take rest breaks in eliminating the injuries caused by excessive use (Johnson, 2009; Lederman, 1998; Ostwald et al., 1994; Özübek, 2019; Solomon, 2007; Lockwood, 1989). Avoiding excessive tension and repetitive movements, using as large muscle groups as possible, practicing without instruments are among the methods that can be applied (Solomon, 2007). In addition, a balanced diet, paying attention to water consumption (Ostwald et al., 1994; Solomon, 2007) pre-workout meditation, breathing exercises and mental repetitions to reduce stress will significantly prevent anxiety and help prevent injuries and discomfort (Akçalı, 2006). Zaza et al., (1998), the first study to investigate musculoskeletal disorders caused by playing an instrument, showed that these disorders are personal, chronic and disabling health problems that affect people physically, emotionally, professionally and socially.

Developments in sports medicine laid the foundations for the concept of performing arts medicine (Lederman, 2003). Performing Arts Medicine is a broad field that includes the study of medical conditions and injuries suffered by dancers, instrumental musicians (Bejjani et al., 1996). In addition to medical treatments, physical awareness and exercise training play an extremely important role in preventing these disorders in musician injuries related to playing an instrument. In instrument education, besides technical and musical concepts, it is necessary to research and apply ways to bring physical awareness to students.

Aim
The problem of this study is to reveal the opinions of pre-service music education teachers about preparatory physical exercises.

METHODS
Study Design
This study is based on the qualitative method. Phenomenology design, one of the qualitative research designs, was used in the study.

Participants
The participants consist of a total of 24 students, 13 female and 11 male, who are studying in the 4th grade of the Trakya University Education Faculty Fine Arts Education Department Music Education Department. Their main instruments are flutes (n=4), violins (n=4), pianos (n=5), cellos (n=2), guitars (n=3), clarinet (n=1) double bass (n=1) and voice (n=4). Ages range from 21 to 33.

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[2]Table 1. created from Akçay & Duzak, 2021; Önder, 2021; Önder, 2013; Robinson & Zander, 2002; Norris, 1997; Lederman, 2003; Ostwald et al., 1994; Heinan, 2008; Kaufman-Cohen & Ratzon, 2011; Atasoy-Karaduman, 2015; Zaza et al., 1998; Çimen, 2003; Lockwood, 1989; Quarrier, 1993.

Data collection
In order to collect the study data, a semi-structured qualitative interview form was created. The questions were finalized by taking the opinions of three experts in the field of music and physical education. The participants were informed about the content and purpose of the study and that the interviews would be recorded. Their names were kept confidential in order to protect their personal information. Through a semi-structured interview form, the participants were asked whether they included exercise in their daily life (e.g. Do you exercise in your daily life? What kind of exercises do you do? What are your reasons for exercising/not doing it?), whether they exercise before the instrument starts to playing (e.g., Do you do warm-up/extension/stretching/strengthening exercises before playing the instrument?), whether they experience bodily pain (e.g., Do you experience any pain in your body due to instrument operation?), whether they have breath awareness (e.g., Do you include breathing exercises in daily life? Can you control your breath while playing the instrument?), and the effects of exercise (e.g., Does exercise affect your instrument work?). The interviews were face-to-face and lasted an average of 20-30 minutes.

Data Analysis
In this study, the data obtained were subjected to thematic analysis. Thematic analysis is an exploratory process (Rubin & Rubin, 1995) in which themes and concepts are revealed in six stages by examining the data in depth (Braun & Clarke, 2006). In the first stage, the entire data set was read without any analysis. In the second stage, the data set was read again and the initial codes were determined (e.g. "low back pain", "shoulder pain" as the "instrument-induced pain" sub-theme). Thus, sub-themes were gathered under the major themes. In the third step, three randomly selected datasets were analyzed by 3 different experts with a PhD in music education for the peer debriefing procedure (Lincoln & Guba, 1985). In accordance with the experts' views, the code, sub-themes and themes were re-edited. In the fourth stage, a thematic map was drawn. At the fifth stage, the names of the themes and their scope were determined precisely. In the sixth stage, some of the encoded data contents were analyzed again and quotations from remarkable student statements were made according to the themes. As a result of this process, the results of thematic analysis were reported.

RESULTS
As seen in Figure 1, 4 main themes and 9 sub-themes emerged as a result of the thematic analysis. Statements regarding the emerging themes and sub-themes are given below.
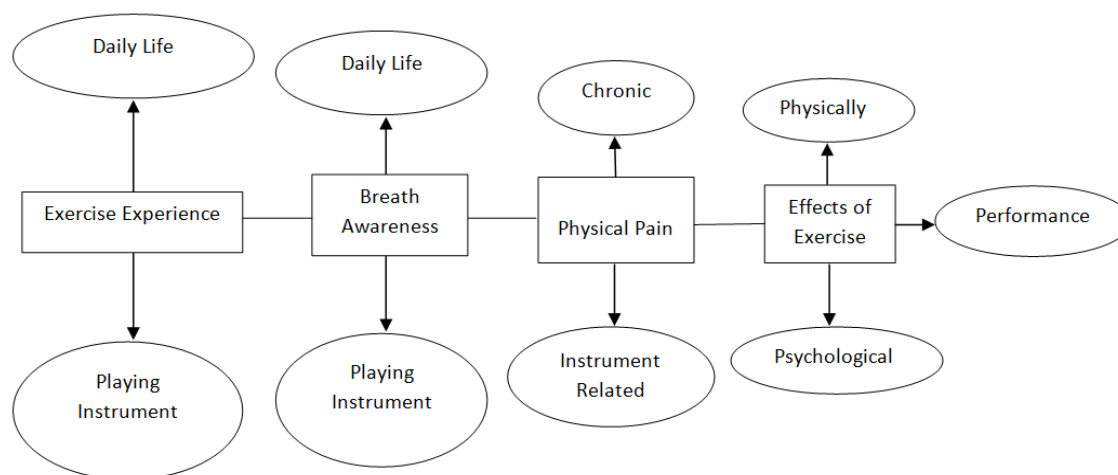
Figure 1: Main themes and sub-themes

Exercise Experience
In the study, two sub-themes emerged related to the main theme of "exercise experience". These are expressed as "daily life" and "playing instrument". Student statements regarding these two sub-themes are given below.

Daily Life
Only four of all participants in the study stated that they exercise regularly in daily life. It was understood that one of these participants had a history of stroke, one participant had Osteogenesis Imperfecta, and the other two participants exercised regularly in their daily life in order to stay fit and healthy. "I go to pilates regularly, three days a week. Since I have a stroke history, I am going both in terms of my muscles and in terms of being able to walk better and move more comfortably" (P1, Female, 22, Voice). "Yes I do, cardio, swimming and fitness. I continue to exercise to be fit and healthy" (P2, Male, 23, Voice).

Fourteen of the participants stated that they had previous experience of exercising, but they did not exercise regularly. Recently, they explained the reasons for not doing regular exercise with expressions such as school density, not being able to find time to prepare for KPSS, and not being able to adapt to the process after the pandemic. P3 (Female, 22, Flute), "I've done Judo before, but right now I don't do anything other than stretching myself. Usually when I get up in the morning… I don't have much time anyway." P7 (Female, 25, Cello), "No, I'm not doing it right now, but I was doing yoga before. I can't give a place due to the density at the moment. KPSS process, school…"

> I have been involved in a lot of sports in my past. I did volleyball, football and also fitness-based sports. I have not had such an exercise in the last year. After coming out of the pandemic, I couldn't adapt. Also, since I am a senior, this semester is very busy. That's why I didn't have much time (P16, Female, 21, Piano).

In Figure 2, the daily exercise experiences of the participants are given.

Figure 2: Exercises in daily life

Seven of the participants stated that they never did physical exercises in daily life. It was observed that these participants actually thought that they should do physical exercise, but did not know what to do and how to do it. It was remarkable that they stated that they did not have exercise habits or they did not think about it. P4 (Female, 22, Violin), "No, I'm not. I actually really want to do it. But I know it has to be. Maybe it's extra important for me as I play the violin, but I can't do it." P11 (Female, 22, Piano) "Sometimes I do, sometimes I don't. I don't do it every day. I cannot think of exercise." It was understood that the vast majority did not exercise regularly in daily life. Those who exercise regularly, on the other hand, exercise for health reasons and to look fit.

Playing Instrument
Only two of the participants stated that they exercised regularly before playing the instrument. One of this participant said that it was sufficient for her to exercise for a short time before starting the instrument, as she included these exercises in her daily life for about 4-5 months. It was understood that another participant only stretched her back, back, and arms for one minute before and during the study.

> I do finger strengthening. If stretching exercises took 45 minutes before, now 10 minutes is enough because my body is used to it. Because I do it every day. Not two days a week or just before work (P23, Female, 22, Violin).

> I stretch the fingers, flex my arms and so on, or flex my back. Before I pick up the violin, I always do 1 minute warm-up exercises in every practice. Sometimes when I take a break, I also do back stretches in the middle of work (P. 9., Female, 21, Violin)

Twenty-two of the participants said that they did not exercise regularly before playing enstrument. They emphasized that they do not have the habit of exercising, and that they do not need it. Many participants used voice warm up exercises, exercises to activate the diaphragm muscle, finger stretching, methods such as Marcel Moyse, scale and chromatic scale exercises, etc. They stated that they did the pre-warm-up work required by the

instrument lesson. They stated that they did not do regular exercise without an instrument for warming/stretching/strengthening their large muscles such as head, neck, shoulders and back. However, some students pointed out that they should exercise before playing the instrument, but they did not know what to do. For this reason, there are also participants who stated that preparatory physical exercises should be included before classes or studies, but that they should be given at the beginning by extending the course hours, by experts in this subject, as included in the official curriculum of the course. Based on these statements, it seems possible to interpret that the participants stated that these exercises can be carried out in a systematic and healthy way if they are performed by an expert instead of performing them on their own. In addition, one of the findings was that a participant thought that there was no possibility of injury while playing an instrument. "The difference between playing football and playing the flute is visibly clear. What could hurt me while playing the flute? So that's why… "(P6, Male, 22, Flute). "I do not do physical exercise. I rather open my finger on the keyboard. Sometimes I just stretch my back before I sit down. Ignorance is the reason why I don't do it" (P24, Male, 24, Guitar).

> Before I start playing the flute, I don't do anything other than flute warm ups. There are Marcel Moyse exercises, keeping a long note on the flute, playing the legato notes are exercise. I do not do any physical exercise. Actually, I knew something had to be done, but I didn't know what to do (P3, Female, 22, Flute).
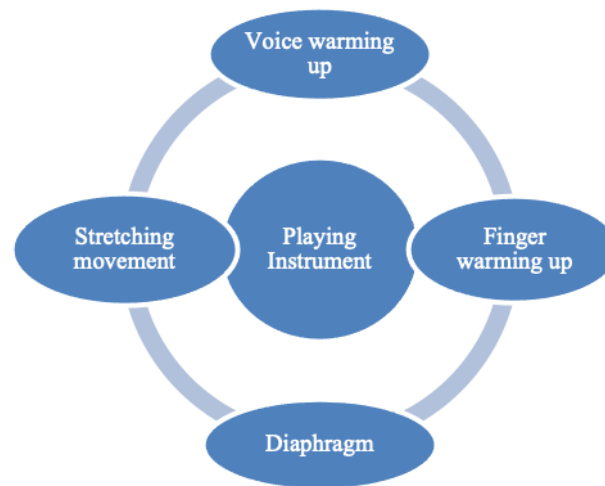
Figure 3: Exercises for instrument training

As it is understood from the participant's statements, only two participants exercised before playing the instrument, and the other twenty-three participants did not do any physical activity on the instrument other than finger or voice warming up exercises.

Physical Pain
Two sub-themes related to the main theme of "physical pain" emerged in the study. These are expressed as "chronic" and "instrument related". Student statements regarding these two sub-themes are given below.

Chronic
Eight of the twenty-four participants in the study stated that they had chronic diseases related to the spine, such as humpback and scoliosis, due to some previous diseases or genetically. A participant with a history of stroke experienced walking difficulties and fibromyalgia in addition to postural dysfunction. One participant suffered from chronic pain due to Osteogenesis Imperfecta disease. It was understood that the pains caused by these disorders were usually related to the back, neck, shoulder (left shoulder) and arm (left arm). It was revealed that these pains were not caused by the instrument, but increased as the instrument playing time extended. P5 (Male, 26, Piano), "I already have scoliosis. My back hurts when I sit too much."

> After practicing the guitar and piano, I guess I always play the piano hunched, because I paid attention. My back especially hurts. I also have fibromyalgia. It hurts at the slightest thing, especially my left side (P1, Female, 22, Voice).

Instrument Related
All of the participants in the study stated that they experienced physical pain. It was understood that the localization of these pains might vary according to the instruments, but they were usually located on the left side

of the body. However, the participants who exercised regularly expressed that the pain they were experiencing before decreased or disappeared. In addition, the severity of pain increases as the working time increases. This situation causes the desire to finish the study as soon as possible. Some participants continued to play despite the pain. There is also a participant who stated that starting the instrument at a young age and maintaining the posture constitute an obstacle to pain. All participants reported pain, regardless of gender. When analyzed in detail, half of the males stated that they experienced pain due to a secondary instrument other than the main instrument. It was observed that female participants reported more pain than male participants. P10 (Female, 22, Violin), "I try even though it hurts but it is uncomfortable."

> After playing the accordion for a long time, I had edema on my left shoulder and even got a treatment for it. When I played the piano for too long, I had contractions and pressure in the wrists and arms (P22, Male, 29, Cello).

> While playing the clarinet, my back hurts, but when I play the bağlama, I have no pain because my posture is correct. Correct posture and starting at a young age have an impact (P18, Male, 22, Clarinet).

Table 2 shows the distribution of regions where physical pain is localized according to participant statements.

Table 2: Distribution of pain locations by instruments

Instrument	Location
Voice	Waist, back, gripes area (left)
Guitar	Left shoulder, fingers (left), waist, left arm
Flute	Left arm, back, elbow, wrist, neck
Piano	Neck, waist, gripes area, hand, wrist, arm, back
Clarinet	Waist
Double bass	Shoulder, gripes area (left), back (left), foot
Cello	Left side of neck, left arm, right thumb, foot, back
Violin	Lower neck, spine, back, shoulder, arm, wrist
Accordion	Left shoulder

Effects of Exercise
In the study, three sub-themes as "physical", "psychological" and "performance" emerged related to the main theme of "effects of exercise" and participant statements regarding these sub-themes are given below.

Physical
As seen in Figure 4, the physical effects of exercising were expressed by the participants as feeling comfortable, preventing pain and injury, and improving endurance and posture. The statements of the participants regarding these are given below.

Figure 4: Physical effects of exercise

P (Female, 21, Violin), "I think that doing these exercises makes working more durable and stronger by prolonging the working time." P9 (Male, 22, Guitar), "My posture improves. My fingers move faster."
Psychological

In Figure 5, the effects of exercising on psychology according to participant views are given. These are playing more confident, increase in concentration and motivation and decrease in stage anxiety. The statements of the participants regarding these are given below.
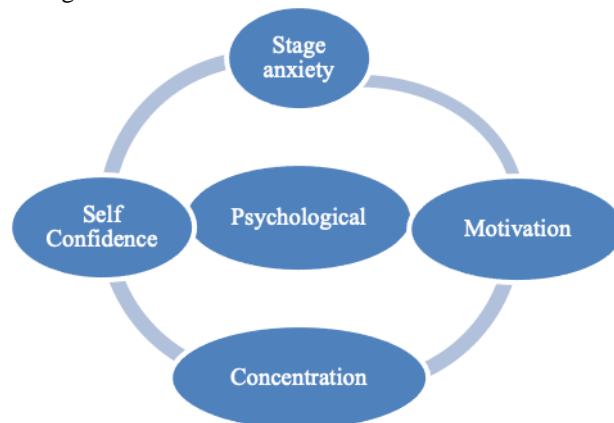
Figure 5: Psychological effects of exercise

It has psychological effects and it is reflected in performance. It reduces the trembling of my hands as it reduces stress. If I do not experience pain, the working time will be longer and I can work harder. I don't have to worry about my back while playing. This way I can focus more on the piece I'm playing (P13, Male, 22, Piano)

Warming up before working out helps the joints move more easily, I think. The time we spend with the instrument turns into a better quality. Because we don't linger with pain and we don't get distracted. Because if there is no pain, I will not stop working immediately, I will be able to work longer. My motivation will be higher (P22, Male, 29, Cello).
I play more confidently. My self-confidence increases (P18, Male, 22, Clarinet).

Performance
In Figure 6, there are participant statements regarding the effects of exercise on instrument playing performance. Accordingly, the participants used expressions related to effects on intonation, holistic playing, nuance, prolongation of practice time, finger agility, more effective work, and better tone quality. Participant statements regarding these are given below.
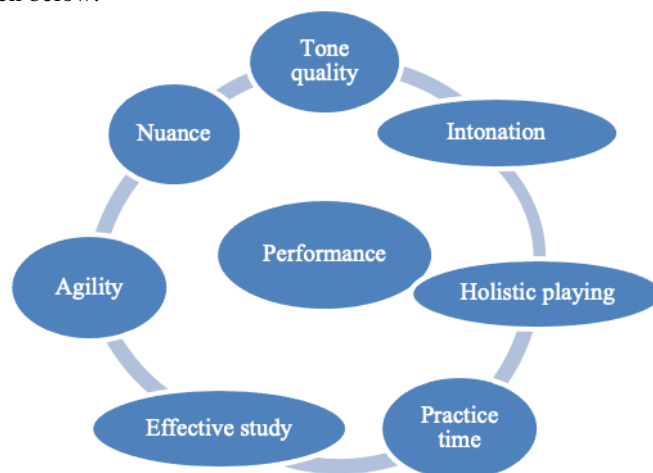
Figure 6: Effects of exercise on performance
It's always the pain that keeps me from practicing. Especially my back… That's why I take a break, lie down a little later, and start practicing again. If I exercise, I will not have pain and I will be able to work longer and more effectively. My desire to practice decreases due to back pain (P11, Female, 22, Piano).

It does affect performance, but only on a regular basis. It affects my tone positively. It even affects the nuances (P18, Male, 22, Clarinet).

Breath Awareness

In the study, two sub-themes emerged as "daily life" and "playing instrument" related to the main theme of "breath awareness", and participant statements regarding these sub-themes are given below.

Daily Life

In Figure 7, some exercises that the participants included in their daily lives related to breath awareness are given. Accordingly, the participants used expressions in their daily lives that they occasionally practiced breathing exercises during meditation, sound/breath therapy, yoga, and a technique called 4-7-8 breathing exercises. It was understood that breathing exercises in daily life had an effect on playing instrument.
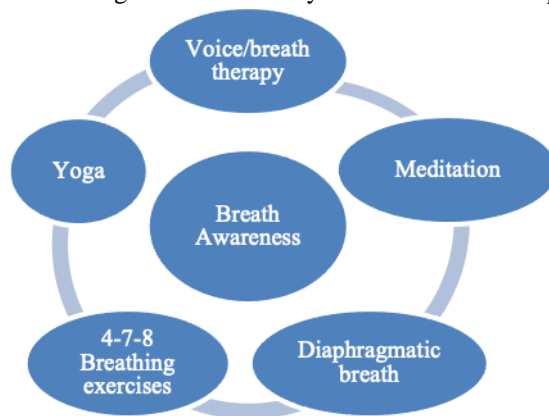
Figure 7: Breath awareness in daily life

I do breathing exercises and even started sound therapy. These breathing exercises had an effect on my hoarseness. My voice is no longer hoarse. I am more conscious. I do not have such a problem now, as I am suddenly loaded when there are no warm-up movements. I was holding my breath from time to time while working. But I think that the breathing exercises in sound therapy automatically affect this situation as well (P5, Male, 26, Piano).

Sometimes I meditate. I breathe deeply in my daily life but not while working (P7, Female, 25, Cello).

Playing Instrument

The breathing exercises they practiced for instruments such as singing, flute and clarinet were voice/breath training, diaphragm breathing, long blowing, intermittent exercises with the "s" vocal, and long voice exercises. It was understood that for those whose main instrument was the piano, the course included exercises such as yoga breathing before concert as a result of the suggestion and guidance of the instructor, but they did not practice these exercises regularly and consciously before each practice.

The majority of the participants stated that they did not do breathing exercises and did not have awareness of breathing. They lost their breath control involuntarily, forgot to breathe or held their breath in difficult passages, missed their breath (for wind instruments and singing) while playing the instrument or performing a performance.

The problems in breathing were also due to performance anxiety. However, they seem to have the opinion that doing regular breathing exercises will help reduce the level of anxiety. In summary, the participants did not practice the preparatory body exercises, such as finger opening, chromatic scale work, etc. Apart from the practices, it can be said that they did not regularly include stretching/strengthening exercises for large muscle groups without an instrument, and they also showed an approach consisting of exercises such as breathing, voice and diaphragm training with instruments, in breath awareness. It was also seen that a participant thought it was normal to hold their breath.
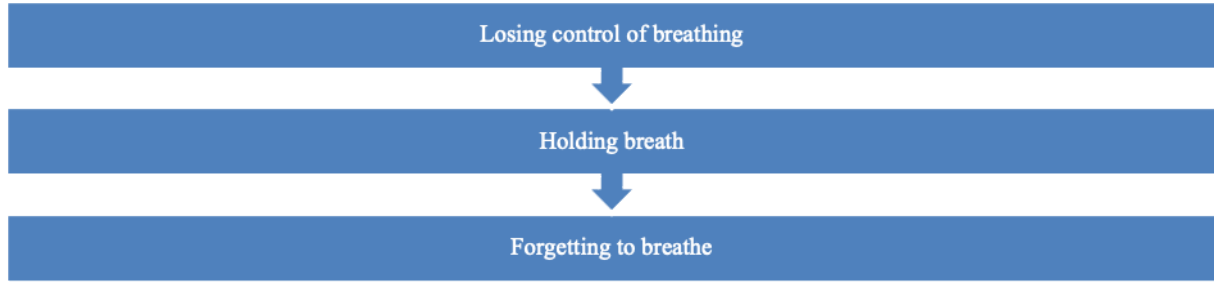
Figure 8: Breath awareness in instrument playing

It varies according to the piece. I find myself holding my breath without realizing it. I think this is normal given the course of the piece. I am also holding my breath when playing long sounds and soft playing. I don't do any breathing exercises for this. I don't recall or I'm not used to (P7, Female, 25, Cello).

When playing the flute, sometimes there are certain passages and I involuntarily lose my breath control there while playing. I hold my breath too much (P3, Female, 22, Flute).

I am not doing breathing exercises. I never noticed that I was holding my breath. I don't think I have breath awareness when playing an instrument (P19, Male, 22, Guitar).

Conclusion and Discussion

There are 13 female and 11 male participants in this study. All participants reported pain, regardless of gender. Half of the men stated that they experienced pain due to a secondary instrument other than the main instrument. It was observed that female participants reported numerically more pain than male participants. Allsop & Ackland (2010); Zaza & Farewell (1997); Paarup et al. (2011); Fry & Rowley, (1989); Heinan (2008); Lockwood (1989); Fishbein et al. (1988) found that women reported more and more discomfort than men. Despite that De Smet et al. (1998) stated that there was no difference between men and women in this regard, but those with high hand range among women reported fewer injuries than those who did not.

As a result of the study, it was revealed that the majority of the participants did not regularly exercise in their daily life. A small number of participants who included exercise in their daily life exercised due to some ailments such as paralysis and bone diseases in their past, and some of them exercise in order to be fit and healthy. It is among the results of the research that regularly doing exercise in daily life also has an effect on playing instrument. Although more than half of the participants had previously exercised in their daily life, it was seen that they did not do it regularly. They could not find time to exercise due to the preparation process for KPSS and the intense classes at school. In addition, their inability to adapt to the new process due to the change of their order after the Covid-19 pandemic process was among these reasons.

The majority of the participants, on the other hand, did not exercise in their daily life, and they explained the reasons for this as having no habits in this regard, not thinking of doing exercise, and not knowing what to do about exercise and how to do it. This situation shows that instrument students do not have awareness about musician diseases and their causes. In addition, it can be said that the level of body awareness of some of the students is not high. These results are in agreement with Yalazer (1994), Duranoğlu (2015), Seçkin (2020), Bağcı & Topdemir (2019), Ergin (2016).

It was understood that some of the participants in the study had chronic diseases related to the spine such as humpback and scoliosis, which they said were genetic. Many diseases such as scoliosis, kyphosis, lordosis, low back pain and hernia, neck pain and hernia, spondylolisthesis, ankylosing spondylitis, facet syndrome are called spinal diseases (Arslan, 2021). It has been determined that musicians have scapula disorder and lumbopelvic stabilization system disorder (Steinmetz et al., 2010). Postural disorders are common in string instrument players due to asymmetrical posture (Kendal & Çıtaker, 2021). In addition, one participant in this study, who had a history of stroke, had gait difficulties and fibromyalgia in addition to posture disorder. One participant suffered from chronic pain due to Osteogenesis Imperfecta disease. The pains caused by these disorders were generally associated with the back, neck, shoulder (left shoulder) and arm (left arm). These pains did not caused by the instrument, but increased as the instrument working time got longer.

Some participants stated that they did not have the habit of exercising while playing the instrument as in daily life, while a few participants said that they did not need exercise. Another important result is that none of the

participants, except for two participants, do regular physical exercises before the playing instrument. These results are in agreement with Atasoy-Karaduman (2015), Arslan (2017), Bağcı & Topdemir (2019), Yalazer (1994).

The reason why some of the participants did not exercise for playing the instrument was that they did not know what to do, although they thought that they should exercise before starting the instrument, as in daily life. For this reason, there are participants who stated that preparatory physical exercises should be included before the lessons or studies, but that they should be given at the beginning by extending the course hours, by the competent people, as included in the official curriculum of the course. Demirci et al. (2017) revealed that although instrument teachers thought that exercise was important, they did not adequately direct students to exercise.

Many participants practiced sound warming, methods such as Marcel Moyse, scale/chromatic sequence work, finger opening, etc. It was concluded that they had done the pre-warm-up studies required by the instrument class. Yalazer (1993) and Ergin (2016) showed similar results in their studies. It was observed that the participants did not do regular exercises to warm up/stretch/strengthen their big muscles such as head, neck, shoulders and back without an instrument. A few participants only reflexively stretched their lower back, waist, and arms for one minute or just before they started playing. Atasoy-Karaduman (2015) similarly, concluded that the students did exercises such as moving/shaking/relaxing the neck, arms and shoulders with the studies in scale/arpeggios, Reichert, Taffanel and Moyce methods.

All of the participants in the study reported experiencing physical pain. It can be said that among the causes of these pains (except for those with chronic diseases) is not to include warm-up exercises. According to Önder (2013) and Atasoy-Karaduman (2015), among the causes of pain are not doing enough warm-up exercises.

Although the areas where the pain is localized may vary according to the instruments, they are usually located on the left side of the body. It was understood that it was located in the back, arm, shoulder, elbow, hand, wrist and waist region. Various studies reveal that musicians who play instruments experience pain in similar areas (Akı, 1995; Yağışan & Başkurt, 2016; Seçkin, 2020; Arık, 2012; Heinan, 2008; Zaza, 1998; Zaza et al., 1998; Steinmetz et al., 2010; Kendal & Çıtaker, 2021; Karabay, 2020; Urganioğlu, 2019; Akarcalı, 2018; Önder, 2013; Fishbein et al., 1988; Paarup et al., 2011; Genç et al., 2002). Elbeyi & Sakar (2020) reported that the students' posture and holding position problems related to the student's tightening of the left arm muscles.

Participants whose main instrument was singing reported pain in the lower back, left side of the back. It was revealed that guitarists left shoulder, fingers (left), lower back, left arm; flutists on the left arm, back, elbow, wrist, neck; pianists neck, waist, hand, wrist, arm, back; clarinet players low back pain; double bass players shoulder (left), back (left) and feet; left shoulder in accordion; violinists lower neck, spine, back, shoulder, arm, wrist pain and left side of neck, left arm, right hand thumb, back and foot pain in cellists.

When the literature was examined, it was seen that the pianists experienced pain in body parts similar to this study (Hochberg et al., 1983, Lederman, 2003; De Smet et al., 1998; Rietveld, 2013; Ostwald et al., 1994; Tahilram et al., 2018). Similarly, violinists have pain in the upper extremity (Rietveld, 2013; Ostwald et al., 1994) and left arm (Lederman, 2003) upper extremity ailments may occur in guitarists (Rietveld, 2013; Ostwald et al., 1994), and in wind instruments players, discomforts related to the left hand and left wrist (Paarup et al., 2011) may occur. Those who play string instruments experience more pain than other instruments (Zaza & Farewell, 1997; Steinmetz et al., 2010; Kaufman-Cohen & Ratzon, 2011; Paarup et al., 2011; Lockwood, 1989). Fry & Rowley (1989) was revealed that pain was mostly associated with cello, clarinet and flute. According to Açıkalın (2019), stringed instruments were found to be very risky in terms of ergonomics.

It was observed that the severity of pain increased as the duration of the study increased. These results are compatible with Seçkin (2020); Yağışan & Başkurt (2016); Arslan (2017); Schaefer & Speier (2012); Allsop & Ackland (2010); Lockwood (1989); Fry (1987). Kenny & Ackermann (2015) found a significant relationship between the severity of performance-related pain and its frequency. Fry & Rowley (1989) emphasized that the duration of the study had an effect on the level of pain, but the intensity of the study had a greater effect than the duration. Unlike the results of the study, Atasoy-Karaduman (2015) revealed that the working time has no direct relationship on pain. It was understood that the participants who experienced pain wanted to quit the study as soon as possible. Some participants continued to work despite the pain. Bağcı & Topdemir (2019) similarly reported that students who experienced physical pain due to playing continued to work despite this. It is an effective method for the prevention and treatment of diseases caused by excessive use, taking breaks from work and shortening the working time (Fry, 1986; Fry, 1988; Allsop & Ackland, 2010; Zaza & Farewell, 1997; Fishbein et al., 1988; Akbey, 2019; Kava et al., 2010). Duranoğlu (2015) stated that forcing students to work

would have negative effects on playing performance, physical and mental health, as it would push students to take a break for too long.

It was reported that the participants who exercised regularly had reduced or disappeared their previous pain. Regular exercise has physical effects such as feeling comfortable, preventing pain and injury, improving endurance and posture. Arık (2012); Zaza & Farewell (1997); Fishbein et al. (1988); Akbey (2019); Yağışan (2002) found similar results. On the other hand, De Smet et al. (1998) concluded that warm-up exercises had no significant effect on overuse syndromes in pianists.

Regular exercise has psychological effects such as playing more confidently, increased concentration, increased motivation, and reduced stage anxiety. Kenny & Ackermann (2015); Fry (1987); Jabusch et al. (2004); Kendal & Çıtaker (2021); Karabay (2020); Fishbein et al. (1988) demonstrated that pain was associated with depression, anxiety, and stage anxiety in musicians. Pain negatively affects concentration (Yağışan & Başkurt, 2016). In addition, stage fright and stress can cause physical discomfort in musicians, as well as cause these disorders to become chronic (Schuppert & Altenmüller, 1999; Rietveld, 2013). Stress, especially performance anxiety, negatively affects performance (Lockwood, 1989).

It has been understood that regular exercise has effects such as better musical tone, intonation, holistic playing, nuance, finger agility, more efficient working, and prolongation of playing time for instrument playing performance. Duranoğlu (2015), concluded that pain negatively affects musicality by affecting playing time. Exercise positively affects playing performance by increasing body endurance (Kava et al., 2010). Babaç et al. (2021) revealed that yoga has a positive effect on vocal training in terms of performance, technique and music. Akarcalı (2018) reported that warm-up exercises have positive effects on piano performance in terms of technique, nuance and tempo.

There were a small number of participants who regularly performed breathing exercises during various activities in their daily lives, such as during meditation and yoga, and during sound/breath therapy. It was seen that the breathing exercises of the participants for instrument study were mostly vocal/breath warming up, diaphragm breathing, long blowing, staccato exercises with the "s" vocal and long voice exercises for instruments such as singing, flute and clarinet. It was understood that those whose main instrument was the piano did yoga breathing before the concert with the advice of the lecturer, but they did not practice these exercises regularly and consciously before each practice. A large majority of the participants stated that they did not do breathing exercises and did not have breath awareness. Ergin (2016) revealed that the students were not paying attention to his breathing. Also, disorders in posture have an effect on proper breathing (Urganioğlu, 2019).

It was observed that some participants involuntarily lost control of breathing while studying instrument or during a performance, forgotten to breathe or hold their breath in difficult passages, missed their breathing space (for wind instruments and singing). Many participants' approach to breath awareness was exercises such as breathing, warming up the voice, working out the diaphragm, which were performed accompanied by an instrument. It appeared that the breathing problems were due to performance anxiety. It was seen that the participants had the opinion that doing regular breathing exercises would help reduce their anxiety level. Kava et al. (2010) stated that breath control positively affects performance by contributing to endurance. In this study, it was noted that one participant thought that it was normal for him to hold his breath.

Based on the results of the research, it can be said that preparatory physical exercises should be performed before instrument study and individual instrument lessons. In this context, a section on warm-up exercises should be added to the instrument course curriculum. It should be connected to music teaching undergraduate programs as an independent course under the name of "body awareness". Similar studies should be continued by addressing different instruments and teaching levels. It is recommended that instrument teachers be encouraged to have knowledge about preparatory physical exercises.

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A Simulated Situational Assessment System for Evaluating Pre-Service Teachers' Information Teaching Ability

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ABSTRACT

With the deepening of educational reform, classroom teaching constantly emphasizes the importance of context, and the simulated situational teaching method is gradually applied in the instructional design of activities. As an important part of the education and teaching process, evaluation which is the process of determining the changes in students' behavior in teaching through various measurements and systematic data collection should be made changes. At the 2nd International Conference on Technical and Vocational Education, UNESCO proposed that the quality requirements of people in the new era are changing, and learners should not only improve their knowledge and skills but also can adapt and develop. Therefore, it is crucial to assess whether students can achieve problem-solving in real-world situations. Further, the reform of evaluation can provide a clearer direction for teachers' classroom teaching and guide students to change their previous rote learning methods to train higher-order thinking skills. According to the situational cognition and learning theory, the element attributes and preparation steps of situational items, combined with the course content, this study creatively designed and compiled a set of simulated situational items for the "Modern Educational Technology" course for mathematics normal students, and applied Qt which uses a cross-platform C++ application development framework, and MySQL to develop an electronic assessment system. This system can examine learners' ability in terms of using technology to support teaching in information-based teaching, including providing digital teaching resources, information-based instructional design, and teaching practice ability. Meanwhile, it will automatically collect students' answer data and upload them to the database system. It is convenient for teachers to make teaching decisions based on data to improve teaching. This research further promotes the simulation situation evaluation method, which has great application value, and more in-depth research and exploration are urgently needed in the future in this field.

Keywords: situated learning; assessment system; information teaching ability

ÖZET: Eğitim reformunun derinleşmesiyle birlikte, sınıf öğretimi sürekli olarak bağlamın önemini vurgulamakta ve etkinliklerin öğretim tasarımında simüle edilmiş durumsal öğretim yöntemi kademeli olarak uygulanmaktadır. Eğitim ve öğretim sürecinin önemli bir parçası olarak, öğretimde öğrenci davranışlarındaki değişikliklerin çeşitli ölçümler ve sistematik veri toplama yoluyla belirlenmesi süreci olan değerlendirmede değişiklikler yapılmalıdır. 2. Uluslararası Teknik ve Mesleki Eğitim Konferansı'nda UNESCO, yeni çağda insanların kalite gereksinimlerinin değiştiğini ve öğrencilerin sadece bilgi ve becerilerini geliştirmekle kalmayıp aynı zamanda uyum sağlayıp gelişebilmeleri gerektiğini öne sürmüştür. Bu nedenle, öğrencilerin gerçek dünya koşullarında problem çözmeyi başarıp başaramadıklarını değerlendirmek çok önemlidir. Ayrıca, değerlendirme reformu öğretmenlerin sınıf içi öğretimi için daha net bir yön sağlayabilir ve öğrencileri üst düzey düşünme becerilerini geliştirmek için önceki ezberci öğrenme yöntemlerini değiştirmeye yönlendirebilir. Durumsal biliş ve öğrenme teorisine, durumsal öğelerin öğe niteliklerine ve hazırlık adımlarına göre, ders içeriğiyle birlikte, bu çalışma normal matematik öğrencileri için "Modern Eğitim Teknolojisi" dersi için yaratıcı bir şekilde bir dizi simüle edilmiş durumsal öğe tasarladı ve derledi ve elektronik bir değerlendirme sistemi geliştirmek için platformlar arası C ++ uygulama geliştirme çerçevesi kullanan Qt ve MySQL uyguladı. Bu sistem, dijital öğretim kaynakları sağlama, bilgi tabanlı öğretim tasarımı ve öğretim uygulama becerisi de dahil olmak üzere bilgi tabanlı öğretimde öğretimi desteklemek için teknolojiyi kullanma açısından öğrencilerin yeteneklerini inceleyebilir. Bu arada, öğrencilerin cevap verilerini otomatik olarak toplayacak ve bunları veritabanı sistemine yükleyecektir. Öğretmenlerin öğretimi iyileştirmek için verilere dayalı öğretim kararları alması uygundur. Bu araştırma, büyük bir uygulama değerine sahip olan simülasyon durumu değerlendirme yöntemini daha da teşvik etmektedir ve gelecekte bu alanda acilen daha derinlemesine araştırma ve keşiflere ihtiyaç duyulmaktadır.

Anahtar Kelimeler: yerleşik öğrenme; değerlendirme sistemi; bilgi öğretme becerisi

INTRODUCTION

With the continuous development and improvement of school education, it has gradually moved away from social life and has become the so-called "ivory tower". There seems to be a consensus that learning is something that happens in the classroom, and that what used to be where learning primarily happens - social life is neglected

instead. The latest round of curriculum reform is happening all over the world. The situational simulation teaching method is accepted by more and more teachers and students and is considered to be able to improve the teaching effect (Perin, 2011). The practice questions and tests after class should also be consistent with this practice. Students can solve problems in real situations, instead of blindly memorizing them. Therefore, the process of determining changes in student behavior in instruction through various measurements and systematic collection of data (Fry et al., 2008) should also be changed.

In today's drastic changes in the international situation, it's urgent to cultivate students' skills in the 21st century (González-Salamanca et al., 2020). The change of school education goals calls for the improvement of teachers' ability, especially the ability of informatization teaching, that is, the use of ICT to promote students' learning (Fernández-Batanero et al., 2020). This is the reason why major countries and international organizations in the world update the standards related to teachers' information technology capabilities all year round. However, if the level of informatization teaching ability of normal students cannot be effectively evaluated, it is difficult to get rid of blindness in the training work, and its effect cannot be guaranteed.

At this stage, the evaluation of normal students' informatization teaching ability is usually in the form of quantitative self-report and qualitative observation (Yusrizal et al., 2019). The two evaluation methods have their inherent defects. The former makes it difficult to assess students' ability to solve problems in real situations, and cannot avoid problems with participants' dishonesty or unclear self-perception. The latter is difficult to measure for a long time with large samples and cannot be applied to actual teaching evaluation. At the same time, the paper-and-pencil test method is not convenient for analyzing students' test data. As a low-fidelity simulation, the simulated situational test requires respondents to make hypothetical responses to a series of situational difficulties (Herde et al., 2019), which can effectively solve the existing problems.

Given this current problem, this research focuses on the technical support teaching part in the field of measuring normal students' informatization teaching ability, which is less researched on simulated situational tests. Based on the theory of situational cognition and learning, the elements attributes and preparation steps of situational test questions, programming technology, database technology, a set of simulated situational tests was designed and developed, and the application program is presented to the students as its carrier, to it is more convenient and effective to measure the technical support teaching ability of students' informatization teaching ability, and it is convenient for subsequent data analysis and processing to better improve teaching.

LITERATURE REVIEW
Situated cognition and learning theory
From behaviorism, modeled by the study of animal behavior in the early twentieth century, to Gestalt psychology, which emphasized the holistic nature of experience and behavior; to information processing theory, which emphasized memory and thought processes in the mid-twentieth century; learning theories have continued to be developed (Gao, 2001). But in the teaching model guided by these theories, students are separated from the real environment, knowledge, and behavior are separated, and schools focus on de-contextualized knowledge and well-structured problems. It is difficult for students to transfer what they have learned to reality in the world. Therefore, students with high scores own low abilities (Brown et al., 1989). Situational cognition and learning theory emphasize the powerful interaction process between knowledge and situation and gradually become the focus of learning theory.

The origins of the study of contextual cognition and learning theory date back to the late nineteenth century and have continued to develop to the present. As early as 1899, in School and Society, Dewey pointed out that life is the true educator and that hobbies learn from life itself, yet schools are disconnected from life and they are very isolated (Dewey, 1990). Subsequently, Whitehead referred to the knowledge that learners learn in school for exams only and not for solving practical problems as "inert knowledge"(Whitehead, 1967). Further, Riznick details the differences between daily life and school situations and shows that school education is individualized and abstract, while out-of-school learning is cooperative, situational, and concrete. Since then, she has published several books and played an important role in the development of situational cognition and learning theory. In 1989, Brown et al. published the paper " Situated cognition and the culture of learning", which was a relatively systematic and clear exposition of the theory of situational cognition and learning (Brown et al., 1989).

In the following decades, more and more scholars participated in the research and application of situational cognition and learning theory. The theory was continuously developed and improved, and its theoretical system was gradually formed. At the same time, the theoretical and practical research on situational cognition and learning has spread to other fields of education, including distance education, basic education, adult education, online teaching, higher education, and so on (Wang, 2002). After more than 100 years of theoretical development,

situational cognition theory has gradually moved from infancy to perfection. Now, situational cognition and learning theory has become important learning theory, which can provide effective learning and facilitate the transfer of knowledge to real life.

Simulated situational items
A mock situation test is a series of test questions that expose applicants to situations similar to what they might encounter in work or life to elicit how they would respond to these stimuli. Compared with non-situational questions, contextual questions tend to increase the difficulty of the questions while examining knowledge points or abilities and can make abstract questions concrete.

The simulated situation test is widely used in human recruitment. The candidates are placed in a specific pre-designed situation, and the recruiter observes, records, and analyzes the applicant's behavior and related information to assess the applicant's business ability (Schmitt & Ostroff, 1986). The researchers summarized the development process of the situational judgment test, which needed to go through three stages, including the development of stimulus materials, the development of response materials, and the development of scoring keys (Goldstein et al., 2017). In the selection of talents in nursing medicine, government departments, as well as in the field of psychological testing, the proportion of situational test questions is constantly increasing (Whetzel & McDaniel, 2009). For the field of education, simulated situational tests are more successful in the application of PISA. PISA items usually contain one or more questions in a situation, and the solution of the problem is contained in the situation, and it measures the ability of students to use intelligence to solve problems in a specific situation (Turner & Adams, 2007). PISA emphasizes that a situation is considered real when participants have experienced and practiced it in the real world.

Several studies have shown that simulated situational tests have high reliability and validity, and can effectively measure the ability level of participants. A study using simulated scenarios to create an assessment test tool, recruited 33 residents to perform a five-task simulation, suggesting that simulated scenarios can be used as a powerful tool for assessing surgical skill tool (Mannella et al., 2019). In addition, given the shortcomings of self-report evaluation methods in personality tests, some researchers have proposed the use of situational judgment tests to predict personality characteristics. Olaru used situational tests to measure personality, and the results showed that the use of situational tests to measure personality was psychologically reliable, further supporting that situational tests could effectively measure personality-related behaviors (Olaru et al., 2019).

However, there is currently a lack of research on applying simulated situations to measure pre-service teachers' information teaching ability. This study will design and develop an electronic evaluation system to test students' information teaching ability for a university's "Modern Educational Technology" course.

METHODS
Assessment framework
The evaluation question frame of this research comes from the technical support teaching module in the "Standards for Informatization Teaching Ability of Normal Students", which was promulgated by the research group "Empirical Research on Informatization Teaching Ability Standards and Training Models of Normal Students" on June 29, 2018. The technical support teaching module includes three aspects, namely, the provision of digital education teaching resources, the teaching design based on information technology, and the ability in the teaching practice process. Providing digital education and teaching resources refers to the ability to plan, produce, evaluate, optimize, manage digital education and teaching resources, and provide learners with personalized learning experiences and opportunities according to predetermined teaching situations. Informatization-based instructional design refers to mastering informatization instructional design models, principles, methods, strategies, evaluation methods, and related tools. The ability to master the teaching practice process refers to the applied skills that need to be mastered in the actual teaching process, including the use of information technology to track, analyze, evaluate and intervene in the teaching process

Situation selection
The context of the question should be the carrier of the idea and information of the question, not the context for the sake of the context. When designing a situation, first of all, the authenticity and scientific nature of the situation should be ensured, and no random fabrication is allowed. Secondly, the setting situation should be closely related to the content currently being examined. The ultimate purpose of setting the situation is to examine the ability of the subjects and to achieve the purpose of the test. While ensuring the above, try to be as novel as possible, which should be in line with the current social environment, but avoid blindly pursuing novelty that exceeds the cognitive level and experience of the subjects.
Based on the above considerations, the simulation situation of this research is: "If you are a junior high school

mathematics teacher in a certain school, your class is about to start learning the unit "Parallelogram" in the second volume of the eighth grade, please combine your work in "Modern Educational Technology". The knowledge learned in this course is designed, developed, and organized to improve students' knowledge and skills, mathematical thinking, problem-solving skills, and emotions and attitudes.

Scripting
The content of the script is considered from the following perspectives: instructional goals, instructional contents, choice of instructional methods, instructional environment, instructional theory, instructional evaluation, development of teaching resources, search for teaching resources, and implementation of distance education.
The first thing you need to do is to write the objectives for the lesson, which are the results that the teacher expects to achieve through the lesson. Therefore, the teaching objectives are not written casually but follow certain writing rules. Nowadays, there are many methods of writing objectives, among which the ABCD method is most commonly used because of its easy-to-operate process.

You recall that parallelogram is not the first time that parallelogram appears in the textbook, and it is not the first time that students learn about parallelogram, in terms of the textbook that students have learned, the second semester of the first grade is the first acquaintance with parallelogram, the first semester of the fourth grade learns the concept of a parallelogram, the first semester of the fifth grade explains the area of a parallelogram in the second semester of the eighth grade, students will learn the properties of parallelograms, so what principle does this arrangement of teaching contents follow?

After analyzing the content of this lesson, you begin to design the teaching process. Recently, you have noticed that the students in your class are generally not interested in learning and have a lazy attitude in class, no longer listen to the teacher carefully, and are eager to be independent. Because the school has already popularized the electronic schoolbag, you intend to use a combination of online and offline ways to provide resources and activities related to the learning environment, students first use the resources in the electronic schoolbag, independent learning parallelogram knowledge in class time, for the pre-class questions left in class with the teacher and classmates to solve, give full play to the students' conscious initiative to learn, then you need to learn in this case Which teaching style's specific implementation plan?

In the process of learning how to implement the above teaching methods, you gradually find that the current classroom is not good enough to carry out this teaching method, and you recall the meeting before the principal said that nowadays the school strongly supports information technology teaching, providing a variety of teaching environments, in addition to the traditional chalk and blackboard classroom, there are classrooms equipped with projectors, teachers and students with a computer room classroom, and Where do you plan to implement the teaching of this lesson?

Many learning theories underlie your chosen teaching style: mastery learning theory, deep learning theory, primary learning theory, and active learning theory. Which theory emphasizes the need for students to understand how to use knowledge to solve real-world situations, and the teaching process focuses on the integrated application of knowledge and higher-order thinking activities, such as creative problem-solving? In the course of lesson planning, you feel more and more that you still have a lot to learn, especially in the area of technology support for teaching, but you don't know which areas to make up for, so a colleague suggests that you can refer to TPACK theory to help your professional development. What three areas of knowledge should you focus on learning and reserving according to TPACK theory?

Evaluation is an integral part of the teaching process, and there is a growing emphasis on not using scores alone to determine students' abilities, you have come to accept this view as you continue to learn and teach. There are many different types of evaluation, and you intend to use this type of evaluation, which is a comprehensive assessment of students' learning in the process of education and teaching, including the effectiveness of learning, the process, and the non-intellectual factors closely related to learning. It not only makes judgments and identifies problems in the quality of learners' learning, but also encourages students to reflect on the learning process to better understand the ways and means of mastering learning. Which type of assessment does it belong to?

After the initial design of this lesson, you start to create the teaching resources used in this lesson. The process of proving the median line theorem is abstract and not well understood by students with poor foundations. At this time, the mathematics teacher of another class has created his lesson materials for this lesson and then asked you to give him some suggestions. Why?

After your careful study and careful arrangement, the lesson went very successfully and was liked by the students.

Some students even became very interested in the mathematical history behind geometric figures such as parallelograms and asked you about it, but if you did not know the relevant historical background, what are you going to do about it?

This concludes the lesson successfully. Although this lesson is the most energy-consuming since you have been working, it is also the most rewarding. But your good mood is spoiled by a sudden announcement that the local CDC has informed you that there is a confirmed local case in your school district, so the school intends to suspend offline classes and switch to online classes, but without limiting the specific teaching method.

Design items
First of all, a qualified test question should be logically rigorous, and the expression is clear and reasonable. Second, a situational test question should not only focus on the details, fragmentary knowledge points, and memorized knowledge in the textbook, but should pay more attention to the core concepts and knowledge content of greater value, and can also appropriately add some complex questions. Third, if a test question is still valid after being removed from the situation, it is not a qualified situational test question. The test question and the situation should be closely integrated, and formalism should be rejected. Fourth, for an excellent situational test question, students may not be able to easily solve the problem through memory but need a real understanding and mastery of knowledge to answer correctly. As for the sets of questions in the same situation, the questions should be coherent and intrinsically linked, and students should be guided step by step to explore the students' abilities and experience the process of integrated problem-solving. Therefore, based on the above principles of test question formulation, combined with the scenarios and scripts set up, as well as the important theoretical knowledge and skills of the "Modern Educational Technology" course, this research has designed 11 simulated situational questions, including 3 multiple-choice questions and 8 multiple choice questions, see Appendix A.

FINDINGS
Demand analysis
The purpose of this test platform development is that students can answer questions on the computer, teachers or school administrators can upload test question information and basic information about students from the background, download students' answers and final scores to enter the scoring system, or conduct subsequent data analysis. This design adopts the design mode of client and server, which is divided into front and back. The front is for the students being tested, and the back is for teachers or school administrators.

Database
The MySQL database is selected for this development, which has the advantages of free and low maintenance costs. Alibaba Cloud's relational database RDS (Relational Database Service) provides a stable, reliable, and elastically scalable online database service based on high-performance SSD storage and Alibaba Cloud distributed file system. RDS supports MySQL, PostgreSQL, PPAS, SQL Server, and MariaDB TX engines and provides a complete recovery solution. It has the following functions and features: a high-security level to ensure data security; simultaneous deployment in many places around the world; flexible product forms to meet the needs of multiple purposes; significantly reducing operation and maintenance costs. Therefore, the Alibaba Cloud Database RDS MySQL version was finally chosen for this development. Then, the conceptual structural design and logical structure design are carried out for students, items, and grades respectively.

Front-end development
The front-end development is carried out on Qt software, which realizes the login interface [Figure 1] and the answering interface [Figure 2]. The reason why Qt is chosen for software development is that Qt is a cross-platform C++ application development framework that can create and develop cross-platform GUI applications. Its biggest feature is "write once, compile everywhere" (Blanchette & Summerfield, 2006). Qt not only has a complete C++ graphics library, but also has gradually added network, database, XML libraries, in recent versions, which significantly improves Qt's ability to develop large-scale, complex, and cross-platform applications.
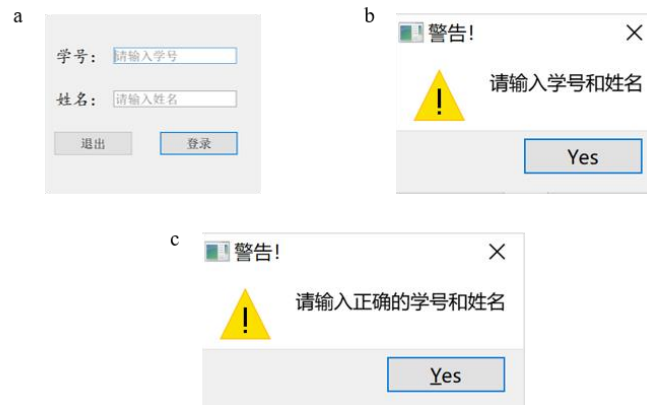
Figure 1. Electronic assessment system login interface and error warnings. a, Login interface. b, Warning if complete information is not entered. c, Warning if there is no student information in the database.
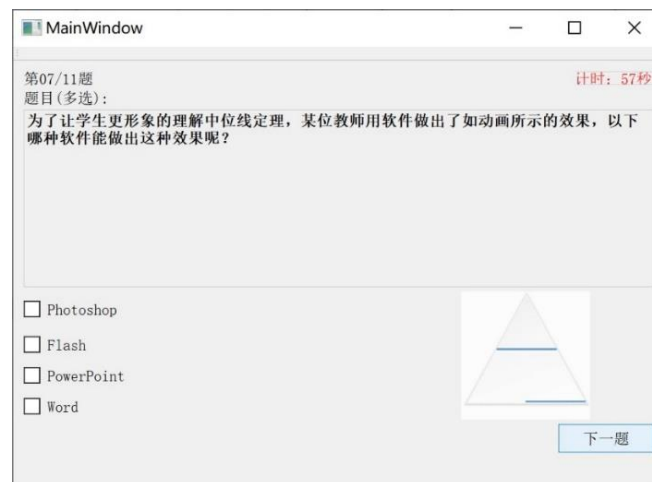
Figure 2. Question answering interface.

CONCLUSIONS AND EVALUATION

The ordering of simulated situational test questions is a lengthy and repetitive task. This time is mainly used to select the appropriate situation, create test questions in combination with the situation, maintain the consistency of the test questions, set the options, and express the language of the test questions. Therefore, in the teaching process, it is difficult for teachers to take the time to design simulated situational test questions when the task is heavy. However, evaluation is an important part of the teaching process. Only the implementation of evaluation reform can provide a clearer direction for teachers' classroom teaching and can guide students to change their previous rote learning methods and train higher-order thinking skills.

In the future, it is necessary to increase the proportion of test questions in simulated situations in the assessment, but schools should have specialized personnel to design related questions or complete the test question design through the cooperation of teachers under the premise of reducing teachers' work pressure. At the same time, question designers should receive relevant training exercises to avoid formal situational questions. At the same time, relevant departments can consider building relevant mock-scenario test question banks to directly provide front-line teachers for use

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Appendix A

If you are a middle school math teacher at a school and your class is about to begin a unit on parallelograms in the second book of Grade 8, please design, develop, and organize this lesson to improve students' knowledge and skills, mathematical thinking, problem-solving skills, and emotions and attitudes, taking into account what you have learned in the course "Modern Educational Technology".

1. ABCD goal formulation is a way of stating instructional objectives. According to ABCD goal formulation, which of the following instructional objectives presents all the elements of the statement? (Single choice)
A. By watching the animation, students can state the triangle median theorem accurately.
B. By exploring and proving, students can master the special properties of parallelograms with opposite sides to angles.
C. Students can write in detail the process of proving parallelograms based on the properties of parallelograms.
D. The teacher will be able to fluently state the characteristics of various properties of three special parallelograms.
2. For example, in the second semester of the first grade, parallelograms are introduced, in the first semester of the fourth grade, the concept of parallelograms is studied, and in the first semester of the fifth grade, the calculation of the area of parallelograms is explained, and in the first semester of the eighth grade, the properties of parallelograms are studied. (Multiple choice)
A. Spiral principle
B. Straight-line principle
C. Thoughtfulness principle
D. Expanding principle
3. For students to better master parallelograms, the teacher intends to use a combination of online and offline approaches to give full play to students' self-motivation in learning and to provide resources and activities related to the learning environment. Which of the following teaching approaches do you think meets the above requirements? (Single choice)
A. Individualized instruction
B. Blended Learning
C. Traditional classroom teaching
D. Task-driven teaching
4. To accommodate the teaching style of this lesson, the course is planned to be conducted in this environment: a learning space built up with the help of advanced computer technology, Internet of Things technology, and cloud technology, which enables human-environment interaction, thus facilitating communication, collaboration, and sharing, and promotes personalized, open, and ubiquitous learning. Which of the following is this type of teaching and learning environment? (Single choice)
A. Traditional chalk and blackboard classroom
B. Traditional classrooms with projectors
C. Computer room classroom with one computer for teachers and students
D. Smart classroom
5. Teaching requires students not only to memorize the properties and decision theorems of parallelograms but also to learn how to use what they have learned to solve real-world problems. The teaching process focuses on the integrated application of knowledge and higher-order thinking activities, such as creative problem-solving. This teaching philosophy is consistent with which of the following learning theories? (Single choice)
A. Mastery learning theory
B. Depth learning theory
C. primacy learning theory
D. Active learning theory
6. Based on TPACK theory, which of the following knowledge is required for teachers to teach the class well? (Single choice)
A. knowledge of educational research methods, knowledge of pedagogy, and knowledge of technology
B. Knowledge of subject content, knowledge of educational research methods, knowledge of pedagogy
C. Knowledge of subject content, knowledge of pedagogy, knowledge of technology
D. Knowledge of subject content, knowledge of educational research methods, and knowledge of technology
7. Evaluation is an integral part of the teaching and learning process, and there are various ways to evaluate, one of which is to make a comprehensive assessment of students' learning as education and teaching proceed, including the effectiveness of learning, the process, and the non-intellectual factors closely related to learning. It not only makes judgments about the quality of learning and identifies problems, but also encourages students to reflect on the learning process to better understand how and how to master learning. Which of the following belongs to this type of evaluation? (Single choice)
A. Diagnostic evaluation

B. Group evaluation

C. Summative evaluation

D. Process evaluation

8. To make students understand the median theorem more visually, a teacher used software to make the effect shown in the animation. Which of the following software can make this effect? (Multiple choice)

A. Photoshop

B. Flash

C. PowerPoint

D. Word

9. A teacher presented such a PowerPoint in a class. According to Meyer's multimedia learning theory, what mistake do you think he made? (Single choice)
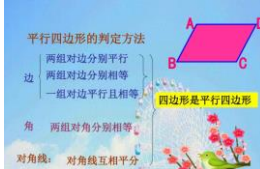
A. No error

B. No focus

C. Appearing unrelated images

D. Contrary to the principle of temporal proximity

10. A student is particularly interested in the mathematical history behind geometric figures such as parallelograms and asks you about it, but you don't know the relevant historical background, what are you going to do about it? (Multiple choice)

A. Search for relevant knowledge through search engines such as Baidu

B. Ask expert teachers, seniors, and colleagues

C. Tell the students to master the knowledge of the textbook

D. Read relevant academic papers

11. Which of the following software can be applied if there is an outbreak at the school site and the school director requests that all courses be switched to online? (Multiple choice)

A. WeChat

B. Tencent Meeting

C. Ding Talk

D. QQ Classroom

A Study on Relations of Academic Achievements and Parental Bonding Patterns of Secondary School Students

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ABSTRACT
Impacts of bonding styles cover an entire period from early childhood to adolescent and adulthood until death. There is no study on the relations between students' parental bonding styles and academic achievements in the literature. Current study aims to examine the relation between bonding styles and academic achievements of secondary school students, and find answers to the question of whether such relation varies based on grade (age) groups and genders. The study sample consists of 1261 students of 5 to 8 grades at four secondary schools. In measuring the bonding styles of student, "Scale for Three-Dimensional Bonding Styles" was used. In measuring of academic achievements, "Year-end Success Scores" were taken as basis. Pearson correlation analysis was implemented in testing the relation between bonding styles and academic achievements. In order to determine whether such relations vary based on grade (age) and gender, the distribution correlation test (z- test) was applied. The research results demonstrated that there is a significant positive relation ($p<0.05$) between dependable bonding styles and academic success scores of students, whereas a significant negative relation ($p<0.05$) between their academic success scores and avoiding bonding styles. Another conclusion of the current study is that such relations do not vary based on the variables of grade (age) and gender.
Keywords: Parental bonding, academic achievement, dependable bonding, student

INTRODUCTION
It is observed that in recent years, there were some studies on importance of dependable parental bonding of children and the relations thereof to relevant certain variables. Impacts of bonding styles covers an entire period starting in early childhood and continuing along adolescent and adulthood up until death. Therefore, there are numerous studies on the relations of bonding styles with many behavioral patterns. However, in consideration of the literature, it was observed that there are not enough number of studies on the relations between parental bonding styles and students' academic achievements. It is envisaged that the current study will fill an important gap in the relevant field.

Academic achievement, which is significant particularly for being qualified for admission to secondary schools and universities in Turkish educational system, may determine students' profession, employment opportunities, economic and social status that they will have in future. For these reasons, determining any variable that might affect academic achievements is important in terms of facilitation of improving such variables.

What is bonding?
The concept of bonding was used for the first time by Bowlby after his researches on misfit children. In later times, it was used as a concept explaining child's relation, communication, and connection with his/her mother (Bowlby, 1980). Bonding is considered as "a strong bond developed between baby and a nanny giving primary care, and nestling feeling of trust in baby" (Soysal, Bodur, İşeri, and Şenol, 2005). Such bonding may also develop between a baby and a nanny or a kin giving taking care of baby, other than a mother providing care and safety.That "the neural foundation effectuating bonding never changes from birth to death, and dominates human behaviors" (Hazan and Shaver, 1994) increases the importance of the sentiment of bonding.

Bonding Styles
Bonding styles are rather important in terms of physicosocial development and may play a determinant role in every stage of life. The concept of bonding defined by Bowlby (1980) is enhanced by Ainsworth and et. Having spoken of different types of bonding, a model with three sub dimensions was built as follows: "dependable", "uneasy-hesitant", and "evading" (Ainsworth, Blehar, Waters, and Wall, 1978).

Dependable Bonding
"Those babies experiencing a dependable bonding style may increase their proficiencies by learning to trust and approach others by empathy" (Mallon, 2008). For enhancement of dependable bonding, child needs to have a

mother or nanny, who is responsive, supportive, and affectionate. It is important that any support provided is to be continuous and consistent.

A group of psychiatrists (Kesebir et al,, 2011), remarks that "an undependable bonding is associated with development of many psychopathology with respect to preventive mental health care, and may be the cause for particularly anxiety and depressive disorders". The findings of being the underlying cause of behavioral disorders, such as violence, drug abuse, negligence, and perpetrator or victim of abuse (Soysal ve Ark,2005) point out to importance of whether or not a dependable parental bonding is developed by children.

Uneasy and Hesitant Bonding
In uneasy and hesitant bonding styles, it is observed that "children develop reactive behaviors when separated from someone they were attached to, and such reactions do not cease even in case of rejoining" Children of those mothers, who are not consistent in their reactions and threaten with abandonment even if just for checking later on, may develop uneasy-hesitant bondings.

Evading Bonding
In the studies, it is observed that the mothers of the babies having evading bonding style were mostly not supportive when their children in need, and not making any bodily physical contract with and left them alone (Belsky and Cassidy, 1994).

In the search of literature, it is seen that unlike above-mentioned three bonding styles, a bonding model of four categories comprising of "dependable, obsessive, indifferent, and fearful bonding styles" covering also romantic relations is proposed Pietromonaco and Barrett, 2000, p. 159).

Bonding during Adolescence Period
Adolescence period is an important stage in individual's life in terms of physical, emotional, and social development. A feeling of parental dependable bonding developed by a baby plays a determinant role in solution of any future problems that a adolescent would encounter. Bonding reactions in the adolescence period appear mostly as sharing emotions, anxieties, and fears. It is asserted that adolescents experiencing dependable bonding have much closer and supportive friendships compared to those with evading and uneasy-hesitant bonding styles (Hamarta, 2004, s, 30). The grades 5, 6, 7, and 8 are the periods of preparation and transition to adolescence period for students. Assertion of that developing a dependable parental bonding is as a strong and protective shield for issues of adolescence period (Sümer, N., and Şendağ, M., 2009, p. 86-101) is an important knowledge in terms of healthy development of adolescents. In their research, Günaydın and Yöndem (2007) concluded that there is significant relation between parental bonding styles and peer bonding styles. Dependably attached individuals can establish, from early childhood, trustworthy relations, firstly, with those taking care of them, and then with those around them.

Impacts of Bonding Styles on Children's Behaviors, and Certain Characteristics
Although there is no study on the relation of students' bonding styles and the academic achievements thereof; in this section, we listed some researches that may indirectly affect student's academic achievements. It is observed that children experiencing dependable bonding styles are more social, calm, self-confident, more empathic, and able to establish intimate relations compared to those with undependable bonding (Fonagy, 1999), and successful in solving conflicts and initiating games (Wartner, Grossmann, Fremmer-Bombik, and Suess, 1994). More importantly, while undependable bondings in babyhood is considered as the determinant of behavioral disorders in later stages of life, dependable bonding styles are associated with healthy processes (Nakash-Eisikovits, Dutra, and Westen, 2000). In the researches examining the effects of bonding styles on regressing internet addiction, it is found out that bonding styles have significant and regressive effects on internet addictions (Hawi and Samaha, 2017).

Dependable bonding styles also materially explains solitude states (Karakuş, 2012). Those adolescents experiencing dependable parental bonding take lesser risk and display much more adaptive behaviors (Cooper, Colins, and Shaver, 1998). Furthermore, the study results (Baysal ve Özgenel, 2019) indicating that the relations between the level of dependable bonding and self-regulation skills of adolescents are high are important as to demonstrate the role of bonding styles in determining adolescent behaviors.

In addition to the findings of the research (Kaya, 2015) on the relations between bonding styles and exam anxiety of secondary school eight-grade students, the studies demonstrating high level of school satisfaction of children with dependable bonding styles may suggest that students' bonding styles indirectly affect academic achievements thereof (Karababa, Oral, and Özgüngör, 2019).

Academic Achievement

Academic achievement is defined as "the level of utilization by individuals from any certain course or academic program at school", and is considered as the primary goal of schools. That despite being happy, safe, and self-satisfied, any successful people are troubled, disappointed, and depressed when not successful (Weiner,1984) increases the importance of academic achievements.

In consideration of the studies conducted for determining any variables affecting academic achievements, learning and teaching environments at schools (Hallinger, 2003), teachers' professional progresses, job satisfaction, challenges encountered during learning and teaching as well as attitudes of students towards courses and teachers are all important. There are also researches demonstrating that students' intelligence, affective properties, personality traits, parents' educational backgrounds and professions, family's income level, and number of siblings are effective (Duygu, 2009; Sarı, Arıkan, and Yıldızlı, 2017). Besides feeling responsible, cooperative, persistent, and self-confidence in terms of academic achievements of students (Mcmillian, 2015), a positively significant relation is observed between sense of belonging to school and academic achievement (Duru and Balkıs, 2015).

The purpose of the current study is to examine the relation between parental bonding styles and academic achievements of secondary school students. Answers to the following questions are sought for this purpose;

1- Is there any relation between bonding styles and academic achievements of secondary school students?
2- 2- Does such relation (if any) vary according to the variables of grade (age) and gender?

METHODOLOGY

Study Sample

In the study, the Correlative Survey Model is used for the purpose of the study. The study sample is comprised of 1261 students in the branches of A and B of grades 5, 6, 7, and 8 at four state secondary schools in Izmir Province, Karabağlar District in the academic year of 2020-2021. It is a set of students comprised of 55.11% (695) female and 44.89% (566) male. In the study group, 338 students (26.80%) attend to 5th grade, 287 students (22.76%) to 6th grade, 309 students (24.50%) to 7th grade, and 327 students (25.93%) to the 8th grade. The sample group is chosen from the schools where the "Project of Healthy, Happy, and Successful Schools from Teachers to Students" conducted in collaboration of Karabağlar Office of Governor and Istanbul Kültür University. In order for obtaining a research permission, the preliminary application was filed at the addres http://ayse.meb.gov.tr in accordance with the statement, dated 20.01.2020, of Ministry of Education, Directorate General for Innovation and Educational Technologies, and the research permit was obtained under the statement, dated 02.12.2020, of Izmir Office of Governor. The Ethics Committee Approval was granted by the decision no. 2020/60 of Istanbul Kültür University, Scientific Researches and Publication Ethics Committee on 09.12.2020.

Data Acquisition Tools

In measuring the bonding styles of student, **"Scale for Three-Dimensional Bonding Styles"** developed by Erzen in 2016 (Erzen, 2016) was used upon obtaining his permission. The scale comprises 18 questions, and includes no reverse entry. Questions 4, 7, 10, 13, and 16 are associated with evaluation of "Dependable Bonding Style", questions 1, 3, 5, 9, 12, 15, and 18 with "Evading Bonding Style", and questions 2, 6, 8, 11, 14, and 17 with "Uneasy-Hesitant Bonding Style". Content validity of the scale is 72, and linguistic validity is 87. Reliability values determined for "Evading", "Dependable", and "Uneasy-Hesitant" Bonding Styles are 80, 69, and 71, respectively. Academic achievements of student were evaluated based on the "Year-end Success Scores" of the students in the study group. "Year-end Success Score" is calculated by dividing cumulative weighted score for respective course to cumulative weekly course hours. Due the circumstances of the Pandemic, data collection tools were implemented online to volunteer students with the collaboration of Karabağlar District Directorate of Education and the work-group school administrators.

Data Analysis

The Pearson correlation analysis was implemented in testing the relation between bonding styles and academic achievements of students. In order to determine whether such relations vary on the basis of grade (age) and gender, the distribution correlation test (z- test) was applied. With the correlative differentiation tests, whether correlation differences between categorical variable groups have any statistical significance is examined. At every stage of such tests, Pearson correlation coefficients were calculated for each variable group, and in case of any statistical significance in relations, differences among correlation coefficients were evaluated.

Test statistics, correlation coefficients, and significance levels (p) thereof are included in the findings. Statistical data analyses of the current study were carried out with the R-Project software (R Core Team, 2011). The psych

package that is included in the R-Project was also utilized. For the findings, significance level was taken as p<0.05.

FINDINGS
Under this section, first of all, the correlative relations between academic achievements of the 5, 6, 7, and 8th grade students and the parental bonding styles thereof, and then, whether such relations vary according to students' gender and grade (age) groups was tested by utilizing the z-test for correlation differences.

Table 1: Results of frequency analysis on demographic factors

Factor	n	%
Gender		
Female	695	55.11
Male	566	44.89
School		
Cemil Meriç Secondary School	329	26.09
Şehit Gazeteci Hasan Tahsin Secondary School	311	24.66
Şehit Halit Taş Secondary School	180	14.27
Şerif Remzi Secondary School	441	34.97
Grade		
5	338	26.80
6	287	22.76
7	309	24.50
8	327	25.93

Table 1 demonstrates the frequency analysis results for demographic factors of the students participated in the study. The study comprised a total 1261 students. As to genders of students, 55.11% is female and 44.89% is male. Their distribution based on the school type thereof, 26.09% of the students attend to Cemil Meriç Secondary School, 24.66% to Şehit Gazeteci Hasan Tahsin Secondary School, 14.27% to Şehit Halit Taş Secondary School, and 34.97% to Şerif Remzi Secondary School. As for the grades thereof, 26.80% of the students are at 5th grade, 22.76% at 6th grade, 24.50% at the 7th grade, and 25.93% at the 8th grade.

Table 2: Overall results of correlation analysis between success scores and bonding styles

	n	$\bar{X}$	SS	r
Success score (1)	1261	4,560	0,680	-
GBS (2)	1261	18,870	5,430	0,201*
KÇBS (3)	1261	12,680	4,850	-0,125*
KKBS (4)	1261	13,740	5,650	-0,020

At p<0.05, Significant, : X (Average), SS: (Standard Deviation), GBS: (Dependable Bonding Style), KÇBS: (Evading Bonding Style), KKBS: (Uneasy-Hesitant Bonding Style), GENB: (General Bonding)

Table 2 demonstrates Pearson Correlation Analysis results indicating general relations between bonding styles and success scores. According to the correlation analysis results, there is a positive significant relation, although weak, between success scores and dependable bonding (p<0.05). As to the relation between success scores and evading bonding style, a negative significant relation, although weak, is observed (p<0.05). No statistically significant relation is found between success scores and uneasy-hesitant bonding style (p>0.05).

Table 3: Results of correlation analysis between success scores and bonding styles according to grade groups

Grade	Scale	n	$\bar{X}$	SS	r	p
5		338	19,100	5,560	0,184	0,001
6	GBS	287	19,200	5,620	0,231	0,000
7		309	19,000	5,240	0,164	0,004
8		327	18,300	5,280	0,222	0,000

5		338	12,000	4,530	-0,117	0,032
6	KÇBS	287	12,300	4,490	-0,099	0,094
7		309	12,600	4,820	-0,082	0,150
8		327	13,800	5,310	-0,126	0,023
5		338	12,200	4,560	-0,028	0,610
6	KKBS	287	12,900	4,800	-0,011	0,856
7		309	13,700	5,440	-0,018	0,759
8		327	16,100	6,710	0,112	0,042

Table 3 demonstrates the results of correlation analysis between success scores and bonding styles according to grade (age) groups According to above-mentioned results, there is a positive low significant relation between success scores and dependable bonding styles of 5th, 6th, and 7th grade students, whereas a negative low significant relation between success scores and evading bonding styles thereof ($p < 0.05$). However, a positive low significant relation between success scores and dependable and uneasy-hesitant bonding styles of 8th grade students is observed, whereas a negative low significant relation between success scores and evading bonding styles thereof ($p < 0.05$).

Table 4: Results of correlation analysis for success scores and bonding styles between grade groups

Grade Groups	Scale	z	p
5-6		0,605	0,545
5-7		0,260	0,795
5-8	GBS	0,501	0,616
6-7		0,842	0,400
6-8		0,120	0,905
7-8		0,748	0,454
5-6		0,219	0,827
5-7		0,440	0,660
5-8	KÇBS	0,119	0,905
6-7		0,208	0,835
6-8		0,331	0,740
7-8		0,553	0,580
5-6		0,212	0,832
5-7		0,130	0,896
5-8	KKBS	1,806	0,071
6-7		0,082	0,935
6-8		1,521	0,128
7-8		1,636	0,102

Table 4 demonstrates the results of correlation differentiation test between success scores and bonding styles according to grade (age) groups According to the test results, the relation between success scores and bonding styles do not vary significantly for grade (age) groups ($p > 0.05$).

Table 5: Results of correlation analysis between success scores and bonding styles according to gender groups

Gender	Scale	n	$\bar{X}$	SS	r	p
Female	GBS	695	19,200	5,240	0,200	**0,000**
Male		566	18,400	5,630	0,191	**0,000**
Female	KÇBS	329	12,800	4,980	-0,101	**0,008**
Male		311	12,600	4,680	-0,159	**0,000**

| Female | KKBS | 329 | 14,700 | 6,130 | -0,003 | 0,930 |
| Male | | 311 | 12,600 | 4,730 | -0,095 | **0,024** |

Table 5 demonstrates the results of correlation analysis between success scores and bonding styles according to gender groups According to above-mentioned results, there is a positive low significant relation between success scores and dependable bonding styles of female participants, whereas a negative low significant relation between success scores and evading bonding styles thereof (p<0.05). There is a positive low significant relation between success scores and dependable bonding styles of male participants, whereas a negative low significant relation between success scores and evading bonding styles thereof (p<0.05).

Table 6: Results of correlation analysis for success scores and bonding styles between gender groups

Gender Groups	*Scale*	**z**	**p**
Female-Male	GBS	0,153	0,878
Female-Male	KÇBS	1.05	0,294
Female-Male	KKBS	1,613	0,107
Female-Male	GENB	1,092	0,275

Table 6 demonstrates the results of correlation differentiation test between success scores and bonding styles according to gender groups According to the test results, the relation between success scores and bonding styles do not vary significantly for gender variable (p>0.05).

DISCUSSIONS, CONCLUSIONS, AND SUGGESTIONS
The current study aims to examine the relation between parental bonding styles and academic achievements of secondary school students and determine whether such relation varies according to the variables of grade (age) groups and genders. Findings for the problem and secondary problems are examined under separate headings.

1. Is there any relation between parental bonding styles and academic achievements of secondary school students?
As given under Table 2; according to the Pearson correlation analysis results, a positive weak significant relation was observed between dependable parental bonding styles and academic success scores of students (p<0.05). As to the relation between success scores and evading bonding style, there is a negative weak significant relation (p<0.05). According to the correlations results, no statistically significant relation is found between success scores and uneasy-hesitant bonding style (p>0.05).

Having a positive, but weak, significant relation between academic achievements and dependable parental bonding styles of the students verifies our hypothesis. Because it is the first study conducted in this field, it is not possible to refer to any other research directly supporting or not supporting our research results. However, there are certain studies on the relations of bonding styles and students' academic achievements with many variables that may indirectly affect the former; for instance, exam anxieties of secondary school students experiencing dependable parental bonding are found to be lower in comparison to those with "uneasy" and "evading" bonding styles (Kaya,2015). That exam anxiety significantly regresses academic achievement (Yıldırım, 2000) may give rise to the thought that bonding styles indirectly affect academic achievements. Similarly, there are studies demonstrating the regressive effects of bonding styles on internet addiction (Hawi and Samaha, 2017). In consideration together with the results of research demonstrating a negative significant relation between internet addiction and students' academic achievements (Mertoğlu, 2020), it is possible to think that bonding styles have an indirect impact on academic achievements.

The results of the research demonstrating that adolescents experiencing dependable parental bonding styles are much more successful in solving encountered issues as well as being social **are** self-confident, more empathic, and able to establish intimate relations (Fonagy, 1999), more successful in solving conflicts and setting up games (Wartner, Grossmann, Fremmer-Bombik, and Suess,1994) increase the importance of having dependable parental bondings of students.

Another research finding demonstrates that "parental bonding directly affects satisfaction at schools as well as indirectly, in terms of learning purposes" (Karababa and Ark, 2019). More importantly, undependable bonding during babyhood is assessed as "determinant for psychopathology" in various stage of future life, while dependable bonding is associated with healthy processes (Nakash-Eisikovits and Ark, 2000).

In research conducted by a group of pediatric psychiatrists in 2005, emotion of bonding is expressed as "to be related to psychopathology, such as violence, self-harm, drug abuse, indifference, and being perpetrator or victim of abuse" (Soysal ve Ark, 2005). Such conclusions are startling, and therefore, may have indirect impact on academic achievements of students.

In summary, our hypothesis is confirmed by the current study, which was planned based on the relations between dependable bonding styles and many variables that may affect academic successes of students. However, it is possible to make healthier comparisons, discussions, and assessments by having new studies to demonstrate direct relations between bonding styles and academic achievements.

2. Does the relation between students' academic achievements and "dependable", "evading", and "uneasy–hesitant" bonding styles vary according to the variable of grade (age) groups?
In order to answer this question, first of all, the relation between students' academic successes and "dependable", "evading", and "uneasy-hesitant" bonding styles was determined by means of the correlation analysis (Table 3). A positive low significant relation is observed between success scores and dependable bonding styles of 5th, 6th, and 7th grade students, whereas a negative low significant relation between success scores and evading bonding styles thereof ($p < 0.05$). However, a positive low significant relation between success scores and dependable and uneasy-hesitant bondings of 8th grade students is observed, whereas a negative low significant relation between success scores and evading bonding styles thereof ($p < 0.05$). At the first glance, one might think that such awareness of 8th grade students is related to a workload in preparation to a higher level of education as well as exam anxiety. However, in consideration of the results of correlation differentiation test (z test) (Table 4) on whether or not any relation between bonding styles and academic achievement varies according to the grades, it is observed that the difference between the correlations of grade (age) groups is not significant.

3. Does the relation between students' academic achievements and "Dependable", "Evading", and "Uneasy-Hesitant" bonding styles vary according to gender?
Because the significance of the variations between the relations is examined, the z-test testing the correlation differences is applied in this study, unlike traditional tests for comparison of means. The test results for the correlation differences between academic achievements and bonding styles for gender groups (Table 6) indicates that the relations between parental bonding styles and academic achievements of students do not differ for gender groups ($p > 0.05$). This result coincides with the results of some research on the relations between bonding styles and various variables, and demonstrating that such relations does not vary according to genders. For instance, in a study examining the relations between bonding styles of secondary school students and self-regulation skills thereof, it was found that such relation does not vary according to gender (Baysal and Özgenel, 2019).

In conclusion, a positive significant relation, even though weak, was found between dependable parental bonding and academic success scores of students ($p < 0.05$). As to the relation between success scores and evading bonding style, there is a negative weak significant relation ($p < 0.05$). According to the correlations results, no statistically significant relation is found between success scores and uneasy-hesitant bonding style ($p > 0.05$). Moreover, it is important that such relations do not vary according to students' grades (age) and genders. In other words, while the scores of dependable attachment styles of students to their parents increases, their academic achievements thereof also increase correspondingly; on the contrary, while the scores of evading bonding styles of students decreases, the scores of academic achievements thereof also decrease.

Recommendations
Due to the lack of any research in the literature studying on the relations between parental bonding styles and academic achievements of students, it is recommendable to repeat similar studies conducted with different sample groups.
The sense of bonding does not affect only academic achievements, but in consideration of the thinking that "it may be associated with psychopathology, such as tendency to violence, self-harm, drug abuse, indifference, and being perpetrator or victim of abuse" (Soysal and Ark, 2005, 88-89), the importance of the issue increases. It may be recommended to conduct some studies on the awareness of new or expecting parents on such an important issue. Training and education those wishing to have children on the sense of bonding may contribute greatly to enhancement of academic successes of students and iin terms of preventive mental health.

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Collaborative Learning Attitude Scale for Gifted Students: Reliability and Validity Study

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ABSTRACT
With this research, it was aimed to develop a scale to reveal the attitudes of gifted students towards cooperative learning. The study group of the research consists of 312 gifted 4th and 5th grade students attending Science and Art Centers (BİLSEMs) in Turkey in the 2021-2022 academic year. The scale, which was prepared in the format of a 5-point Likert-type rating scale, initially consisted of 36 items. As a result of the Exploratory Factor Analysis, when the common variance values were examined, the items that were below .50 and overlapping were removed from the scale, and the factor analysis that started with 36 items was reduced to 23 items by removing 13 items. It is seen that the total variance of these 23 items is % 43.153. Confirmatory factor analysis (CFA) was used to verify the factor structure of the scale, which appeared to consist of two factors as a result of EFA. When the resulting values are compared with the critical values, it is seen that most of the values found are within acceptable limits. As a result of this study, it can be said that the 23-item, two-factor structure of the Attitudes towards Cooperative Learning Scale was confirmed as a scale. The internal consistency of the scale was checked with the item analysis of the item-total correlation. As a result of the analysis, it was seen that the item-total correlation analysis of 23 items was not below 0.30.The Cronbach Alpha coefficient of the scale was found to be .89. As a result of the research, it is thought that the scale is a valid and reliable measurement tool that can measure the attitudes of students between the ages of 10 and 14 towards cooperative learning.
Keywords : Cooperative Learning, Gifted Students, Attitude, Scale Development

INTRODUCTION

Collaboration is undoubtedly the focal point of the development and change of societies. In primitive ages, people acted in cooperation even to meet their basic needs. It is not easy to keep up with the changes in the developing technology and globalizing world. Working together in order to produce solutions to problems, to put forward creative ideas and to develop nationally is the main solution for development. Receiving help and working together on the issues in which the individuals who make up the societies stand out according to their talents, "Strength comes from unity." Adopting the understanding is the most important way out on the way to success. Collaborative groups act towards a common goal. Trying to reach the same goal with different ideas and abilities will increase the quality of the work, enable individuals to exchange ideas with each other, and contribute to the socialization of group members by laying the groundwork for positive communication with each other.

Cooperative learning; It is a teaching method that is applied to ensure that learning occurs at the highest level by making small group studies under the guidance of teachers in order to achieve the targeted gains of the students (Açıkgöz, 1992 and Johnson and Johnson, 1989). During cooperative learning, students exchange ideas with each other and act together to solve a common goal or problem. Distribution of tasks during cooperative learning, acting together for a common purpose, taking responsibility in the group and trying to maximize the learning level of students by communicating with each other are the most important contributions of cooperative learning (Senemoğlu, 2009).

In collaborative work groups, while individuals work together for a common goal, some individuals can come to the fore in the group with their differences, creativity, being solution-oriented and high-level work. Although their prominence may seem like an advantage by the other members of the group, it can also cause them to encounter an adverse reaction from time to time. If these features, which we can also describe as leadership qualities, are present in more than one member of the group, the cooperative working environment may not continue in accordance with its purpose. These features, which are also found in gifted students, may affect their willingness to be in collaborative work environments.

Talented individuals are individuals who learn faster than their peers, are more creative, have high leadership qualities, are at the forefront of artistic capacity, are at a higher academic level, are curious about their field of interest, research, question, like to act independently, and have high performance (MEB,2017). Throughout our lives, when we look at our environment, the individuals around us, and our students in the classroom, individuals who learn quickly, think differently, are creative, have high artistic direction, have leadership qualities, and have high problem-solving skills have always attracted attention. Because these individuals are always at the forefront with their intelligence and abilities (Yıldırım,2020).These individuals, whom we call gifted, are curious, inquiring, creative, have strong sense of humor, emotional depth and high awareness (Dalgıç, 2017). However, the parents and teachers of these children, who are very perfectionist, have high expectations, which requires them to deal with different problems (Akarsu and Mutlu, 2010). The possibility of not being able to meet expectations can make them an introverted individual. In addition, these children who learn quickly and easily may be ostracized by their classmates.

Studies have revealed that gifted students have problems in interpersonal communication skills (Clark, 1997; Diezmann & Watters ,1995). They experience communication problems more often in peer relationships. Their perfectionist and ambitious nature prevents them from exchanging ideas with their peers. It has been stated that they need the support of their teachers in this regard (Sonntag ,1973). In this context , it has been observed that they have difficulties in participating in the cooperative learning environments created in the classrooms.

Cooperative learning method on the student, it is observed what the attitudes of the gifted students towards the cooperative learning method are observed by observing the perfectionist structures of the gifted students, their refraining from taking risks in order not to be passive in the areas they think they are not good at, and their reluctance to exchange ideas with their peers if they actively participate in the study. is one of the aims of the research. People act according to their attitudes. Attitudes have a great impact on the transformation of behavior. Attitude; It is the tendency of an individual's feelings, thoughts and behaviors towards an event, situation or living thing (Çetin, 2012). It is accepted that the answers given by the individuals regarding the exemplary situation will show the same behavior when they encounter this exemplary situation (Genç and Şahin, 2015). In this respect, attitude scales provide convenience to the researcher in measuring affective behavior.

When the literature is examined, the perfectionist structures of gifted students and their development in the field of talent make it difficult to adapt with their peers. This causes students to keep a certain distance from their peers and have communication problems (Lewis, 1999). With this study, it is one of the aims of our research to determine the attitudes of gifted students towards cooperative learning. As a result of our research, determining the willingness of gifted students to be in cooperative learning environments will contribute to the education of gifted students, to organize the education-teaching environments accordingly, to research studies for the solution of existing communication problems and to find solutions. In addition , considering the effect of cooperative learning on the permanence of learning and the benefit of social interaction in the student, it will prepare the ground for studies on what can be done to make the gifted students benefit from this teaching method at the highest level and be useful and happy individuals in the society.

METHOD
A scale development study to reveal the attitudes of gifted children towards cooperative learning. Survey model, one of the quantitative research methods, was used in the research. Likert -type attitude scaling approach , which is the most common among attitude scales, was used in the study . The processes involved in the scale development phase and the characteristics of the participant group are given below.

Research Group
The study group of this research consists of 357 gifted 4th and 5th grade students, 107 private school and 250 state school students, attending Science and Art Centers (BİLSEMs) in Turkey in the 2021-2022 academic year. constitute students. The data of 312 students were included in the study, as 45 students stated that they were not in a cooperative working environment. 47.3% (n=169) of the students participating in the study were female and 52.7% (n=188) were male. However, 61.6% (n=220) are 4th grade students and 38.4% (n=137) are 5th grade students.

Scale Development Process
Attitudes towards Cooperative Learning Scale (İÖ, a literature review was conducted to create an item pool consisting of 47 attitude statements towards cognitive, affective and behavioral domains, which are the basic components of attitude. The created item pool was evaluated by taking the opinions and suggestions of 2 academicians and 11 graduate students who are experts in their fields. In addition, by taking the opinion of 1 Turkish language expert, it was evaluated whether the scale items were clear, understandable and in accordance

with the grammar rules. In line with expert evaluations, 11 items were removed from the scale due to reasons such as not measuring the attitude towards the relevant issue and including double judgment, and the number of items was reduced to 36. Some items were revised and corrected and the first draft of the scale was created. The prepared draft scale was presented to the opinions of the measurement-evaluation specialist. After the expert opinion, the scale was made ready for implementation. The scale was pre-tested in terms of intelligibility and it was applied to 15 gifted 4th grade students. With this study, it was concluded that the scale is understandable. Response categories of the draft scale, which consists of 36 items in total, are "I strongly disagree", "I do not agree", "I am undecided", "I agree" and "I totally agree".

Data Collection
The data of the study were collected on a voluntary basis. The draft scale form has been transferred to digital media. The application took about 15 minutes.

Data Analysis
Attitude Scale of Special Talented Students towards Cooperative Learning and Confirmatory Factor Analysis (CFA) was applied to determine whether the scale had a valid structure. SPSS 25.0 package program was used for Exploratory Factor Analysis (EFA). Horn 's parallel analysis was used to provide further evidence of construct validity. LISREL 8.80 package program was used for CFA during the verification process after the determination of the structure. EFA, the missing data analysis and extreme value analysis assumptions were checked and the data set was made ready for analysis. Univariate outlier analysis was performed, " mahalanobis distance" was calculated over the total score, and outlier and missing data were excluded from the study, and the analyzes were carried out on the data of 260 students.

Olkin Test (KMO) was used to determine whether the data had sufficient sample size to perform the factor analysis, and the "Barlett Test of Sphericity" was used to check whether the data provided multivariate normality . It is expected that the KMO value will be greater than 0.70 and the Barlett Test will be significant at the level of .01 (Tabachnick & Fidel, 2007). The criteria for the anti - image correlation matrix to be at least 0.50 were taken into account. Since the item-scale correlation and alpha reliability coefficient were high ($\alpha=0.90$) in the analysis process, it was thought that there might be a relationship between the factors and promax rotation, one of the oblique rotation methods, was used to better reveal the factor load values (Erkuş, 2003 and Tatlıdil, 1992). Items with a factor load below 0.32 were not taken into account and it was examined whether the items loaded on more than one factor, in other words, the overlapping items were removed from the scale one by one and the analysis was repeated. While deciding on the factor structure of the scale, firstly the scree graph obtained was used. Horn 's parallel analysis was used to gather new evidence for the factor structure predicted by the scree plot. Horn 's parallel analysis is based on comparing the eigenvalues obtained from the simulative data, which includes the number of participants and items in the real data set.

Confirmatory Factor Analysis was applied to the data obtained from a group of 210 gifted students in order to determine to what extent the structure that emerged as a result of EFA was compatible in a different sample. Chisquare ($\chi2$) , Adjusted Goodness of Fit Index (AGFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Incremental Fit Index (IFI), Comparative Fit Index (CFI) and Root-Mean- square Error of Approximation (RMSEA) values were checked.To determine the reliability of the scale, Cronbach alpha The internal consistency coefficient and the split-half technique were used.

FINDINGS AND COMMENTS
Findings Regarding Validity
Olkin (KMO)" and "Barlett Sphericity" values were checked to determine the suitability of the data obtained from the pre-trial application of the prepared 36-item draft scale for factor analysis . "As the KMO coefficient approaches 1, it is concluded that the sample size is sufficient for factor analysis, and the KMO value obtained as a result of this study was calculated as 0.96 . Since the KMO value is above 0.90, it can be said that the sample size is "perfect" (Tabachnick and Fidell , 2015). The Barlett Test of Sphericity is a technique used to investigate the multivariate normal distribution of data (Eroğlu and Kalaycı, 2008). The fact that the Chi-Square test statistic, which emerged as a result of the research, is significant, indicates that the data show a multivariate normal distribution. In this study, as a result of Barlett test, chi-square statistical test was found to be significant ($\chi2=8210.910$ p<0.05). In other words, it can be said that multivariate normality is achieved. It has been found that each of the diagonal values in the anti image correlation matrix is above .50.

As a result of the Exploratory Factor Analysis, when the common variance values were examined, the overlapping items were removed from the scale, and the factor analysis, which started with 36 items, was reduced to 23 items by removing 13 items (Büyüköztürk, 2011; Tabachnick and Fidell , 2013). Factor analysis was continued with the

remaining 23 items. A scree plot with an eigenvalue greater than 1 (scree plot), it was concluded that the scale consisted of a two-factor structure. Figure 1 shows the scree plot of the eigenvalues of the factors:
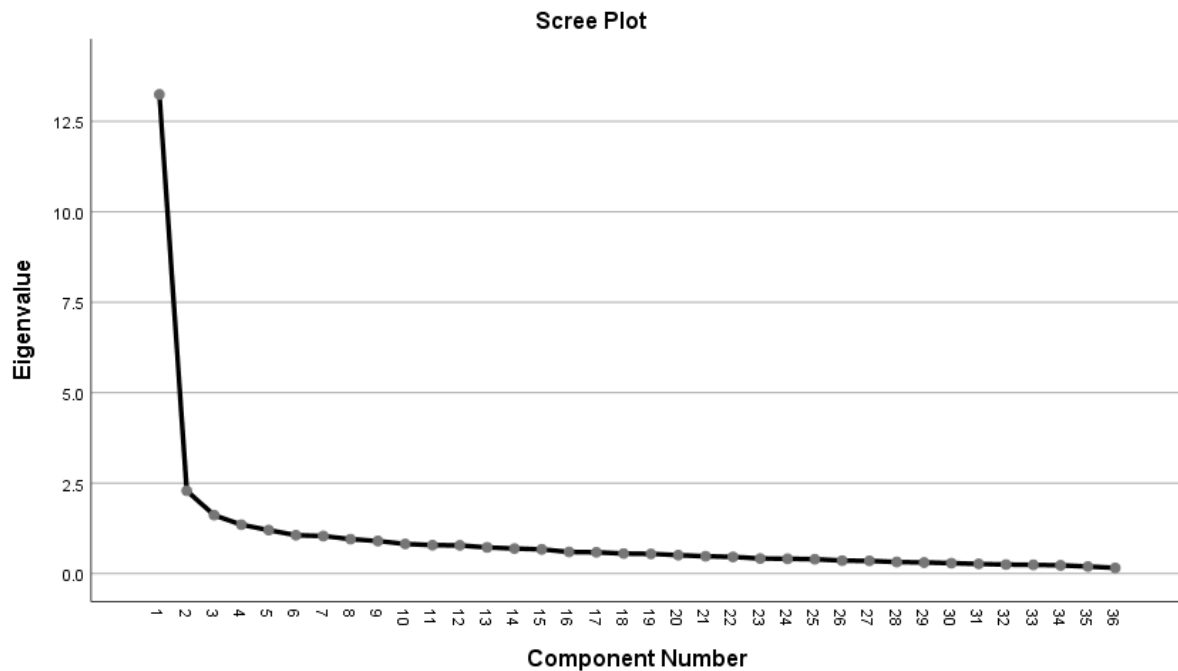
Figure.1 Slope Graph for the Scale

When Figure 1 is examined, it is seen that the eigenvalues decline sharply with the second factor and take a horizontal position. Another criterion, Horn's parallel analysis, was used to decide on the number of factors , and in Table 1 , Horn's parallel analysis and the eigenvalues obtained from the EFA result were compared:

Table 1: *Eigenvalues for Horn 's Parallel Analysis*

Factor	true eigenvalue	Eigenvalue obtained from Horn's Parallel Analysis
1	17.578	1.890
2	1.984	1.755
3	1.232	1.679
4	1.124	1.600

Table 1, the eigenvalues obtained from the real data and the eigenvalues of the data obtained from the simulative data are compared. According to Horn's parallel analysis, the condition for determining the number of factors is to consider the point where the eigenvalues obtained from the produced data are greater than the eigenvalues obtained from the real data (Ladesma and Valero -Mora, 2007). It is seen that the eigenvalues obtained from the real data are less than the eigenvalues produced from the simulative data after the 2nd factor. When the scree plot and parallel analysis results were evaluated together, it was concluded that the structure had two factors.

Table 2: *Factor Analysis Results for 23 Items*

Items	Factor 1 loads	Factor 2 loads	Common variance (Communalities)	Item-scale correlations
28) Cooperative learning is unnecessary.	0.874		0.597	.580
15) The fact that the product that emerges in cooperative learning belongs to the group makes me unhappy.	0.821		0.439	.409
19) Cooperative learning is boring.	0.794		0.659	.696

20) I get overwhelmed in cooperative learning activities.	0.678	0.600	.717
13) I avoid cooperative learning.	0.669	0.458	.562
34) Cooperative learning groups make me nervous.	0.660	0.420	.513
25) I get distracted during cooperative learning.	0.652	0.462	.585
31) I do not participate in cooperative learning groups unless it is compulsory.	0.620	0.437	.570
30) I don't think I need cooperative learning.	0.597	0.284	.400
23) The cooperative learning environment is tiring for me.	0.581	0.358	.540
29) Cooperative learning environment reduces my learning speed.	0.579	0.422	.572
32) The cooperative learning environment affects my lessons positively.	0.576	0.513	.643
8) Cooperative learning is a waste of time for me.	0.568	0.494	.564
26) I cannot create creative products in cooperative learning.	0.564	0.476	.410
7) I learn quickly with cooperative learning.		0.876	0.652	.651
4) It is easy to work in a cooperative learning environment.		0.825	0.546	.449
10) Cooperative learning increases my self-confidence.		0.805	0.549	.573
2) I enjoy working in a cooperative learning environment.		0.777	0.521	.588
1) I would like to learn in a cooperative learning environment.		0.774	0.608	.568
12) I can work comfortably in a cooperative learning environment		0.757	0.541	.612
9) Cooperative learning is an effective form of learning.		0.714	0.604	.682
6) I think cooperative learning is important.		0.652	0.568	.582
21) I do not understand how time passes during cooperative learning.		0.590	0.469	.495
Factor Explained Variance (%)	36.79	6.36		
Factor Explained Total Variance (%)		43.15		

The total variance explanation rate of the 2-factor structure determined as a result of the exploratory factor analysis was 43.15%. The high rate of explained variance is accepted as an indicator of a strong factor structure. If this rate is between 40% and 60% in social sciences, it is considered sufficient (Şencan, 2005).
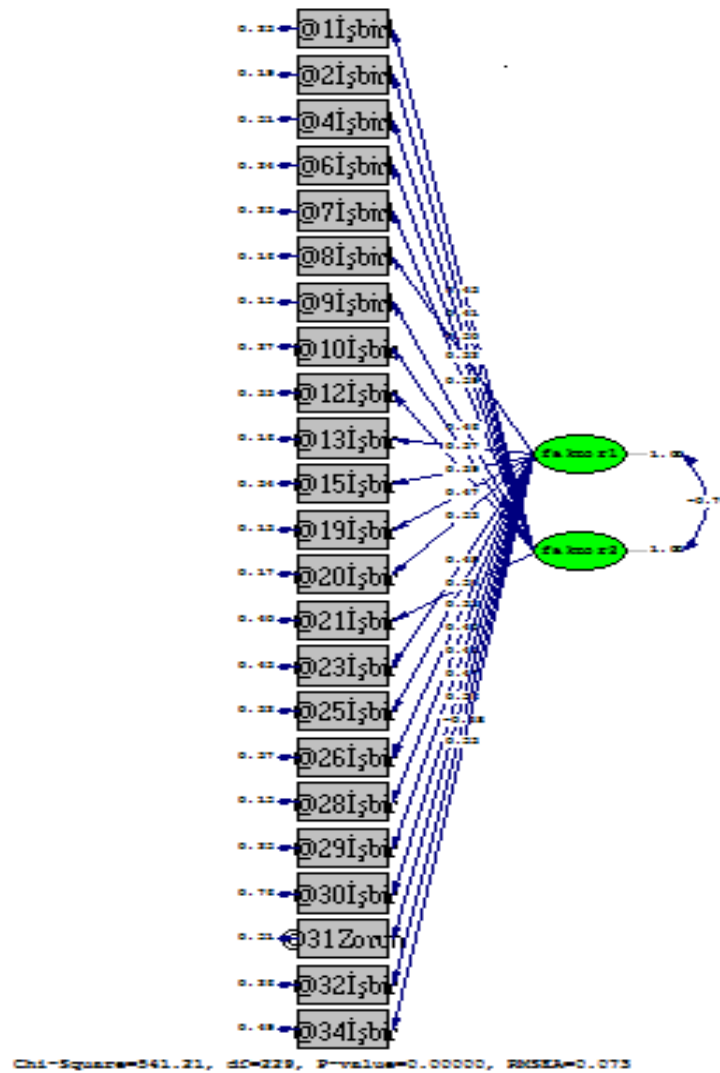
Fıgure 2. Result of CFA

Confirmatory factor analysis was performed to confirm the structure that emerged as a result of exploratory factor analysis in a different sample. As a result of the analysis, the fit indices of the model were RMSEA= .073, respectively; $\chi2$ /df=2.36; NFI=0.94; CFI=0.97; NNFI=0.96; RFI = 0.94 was determined. When the obtained fit indices were examined, it was observed that some were excellent and some were within the acceptable reference range.

Findings Regarding Reliability

The internal consistency coefficient was determined to determine the reliability of the scale, and the calculated Cronbach's Alpha internal consistency coefficient was 0.89 for the total scale, 0.87 for the 1st Factor and 0.84 for the 2nd Factor. In order to gather further evidence of reliability, the final form of the scale was divided into two parts, and the Spearman Brown reliability coefficient was calculated based on the correlation between the quasi-test scores obtained by considering single items as one form and double items as one form, and it was found to be 0.87. If the reliability is 0.70 and above, the scale is accepted as reliable. The significance of the item-total scale correlation values in Table 2 is accepted as an indicator of internal consistency.

CONCLUSION

This study is a scale development study conducted to reveal students' attitudes towards Cooperative Learning. Considering the contributions of collaborative work to the educational environment and to the student, it is important to have a valid and reliable test in terms of determining the attitude towards Cooperative Learning. The scale was applied to gifted students in order to measure their attitudes towards collaborative work. It has features that can be applied to children with normal development.

It was observed that the 23-item scale had a structure consisting of 2 sub-factors. It explains 43.15 % of the total variance of the attitude variable of the sub-factors . Load values of the factors 36.79 with 6.36. It varies between The construct validity of the scale was checked with exploratory and confirmatory factor analysis. As a result of the findings obtained, it was seen that the developed scale was sufficient to measure the feature it wanted to measure and it was able to distinguish individuals who had the desired feature to be measured. As a result of the reliability analysis studies, it was concluded that the scale and its sub-factors were highly reliable. It was concluded that the Cronbach Alpha internal consistency coefficient of the whole scale was .89. 1. The internal consistency coefficient of the sub – factor .87 , the internal consistency coefficient of the 2nd sub-factor is.84 As found. The attitude scale for Cooperative Learning , consisting of 23 items, can be applied to primary and secondary school (4,5,6,7 and 8th grade) students. The scale was prepared in a 5- point Likert type. Negative items in the scale should be scored in reverse. The fact that the scale has sufficient results as a result of validity and reliability analyzes shows that it can be used to measure students' attitudes towards Cooperative Learning. It is seen that this scale, which was developed by applying it to gifted students, can also be applied to children with normal development due to its clear and understandable items.

Suggestions:
- attitude scale developed for cooperative learning can be used to measure students ' attitudes towards cooperative learning.
- This study, which was carried out on gifted students, also showed that students with normal development (going to 4.5.6.7. and 8th grades)
- It can be used to measure their attitudes towards cooperative learning.
- students ' attitudes towards cooperative learning environments, educational environments can be prepared accordingly.
- If it is determined that there is a negative attitude towards the feature that is the subject of the measurement, additional studies can be carried out to turn the attitude into a positive one, taking into account the positive effect of cooperative learning environments on the student.

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Consumer Behavior After the Corona Pandemic: An Analytical Study of the Opinions of a Sample of Consumers in Iraq

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Abstract
This study aims to shed light on consumer behavior during the Corona pandemic in the Republic of Iraq, 210 electronic questionnaire forms were distributed in four governorates / Mosul, Erbil, Dohuk, Baghdad, in order to achieve the objectives of the study, the data was processed and analyzed using SPSS version 20, On the other hand, the most important results were reached, most notably: the emergence of the Corona pandemic affected the behavior of consumers to a moderate degree. The reason is due to the strategic food stock due to the declaration of an emergency situation, and the results indicated that there were no statistically significant differences between the variable (gender, income, place of residence).
Keywords: Consumer's Behavior, Corona pandemic, Republic of Iraq

1. Introduction

At this time last year, expressions such as "general closures", "mandatory wearing a mask" and social distancing were not known to most of us, today it is part of the language of our daily lives, as the Corona Virus (Covid-19) pandemic continues to affect all aspects of our lives, these restrictions, which were imposed to curb the spread of the virus and thus relieve strains on overworked and weak healthcare systems, have had an enormous impact on economic growth. Put simply, "the pandemic has created an unprecedented global crisis - a global health crisis, with massive human casualties - resulting in the most severe recession the world has seen since World War II." The report predicted a contraction in the global economy and average per capita income this year, pushing millions of people into extreme poverty.

2. Methodology

2.1 Study Problem

In fact, consumer behavior is a very complex matter that cannot be controlled, and this development in changing consumer behavior can be stopped because it is constantly changing with the factors affecting it, and with the emergence of the new Corona virus, many countries were forced to isolate themselves from the rest of the world. This is by preventing the entry and exit of people except for necessity after they have been exposed to many preventive measures, which leads to the cessation of all commercial and productive activities of business organizations and the closure of external borders to the trade movement of countries, which in turn had a significant impact on consumer behavior, and from that, the main problem of the research was raised.

Does the COVID-19 pandemic affect consumer behavior in terms of purchasing power?
Through the main problem, the following questions can be raised:
1. Is the emergence of the emerging Covid 19 an impact on changing consumer behavior?
2. Is there a statistically significant difference about the purchasing power of consumers and the impact of the Corona pandemic due to demographic variables such as (Gender, income, place of residence.

2.2 The hypothesis of study

Based on what was raised in the main problem, the main problem was supported by a number of sub-questions:
- H[1]: The emergence of the Corona pandemic has a strong impact on changing consumer behavior.
- H[2]: There are no significant differences in the answers of consumers (individuals of the researched sample) about their behaviors and purchasing power for the demographic variables (Gender, income, place of residence).

2.3 The important of study

Highlight on one of the pervasive phenomena in consumer behavior with regard to demographic variables that affect purchasing power, especially the impact of the Corona pandemic on consumer behavior.

2.4 The Objective of Study

- Presenting some important concepts about the study variables represented in purchasing behavior, purchasing power, and the Corona pandemic.
- Finding out whether the demographic variables in the consumer have an effect (level of education, place of residence, income) on the behavior of customers before and after the Corona pandemic.
- Learn about the most important consumer products during the quarantine period.

2.5 The model of study
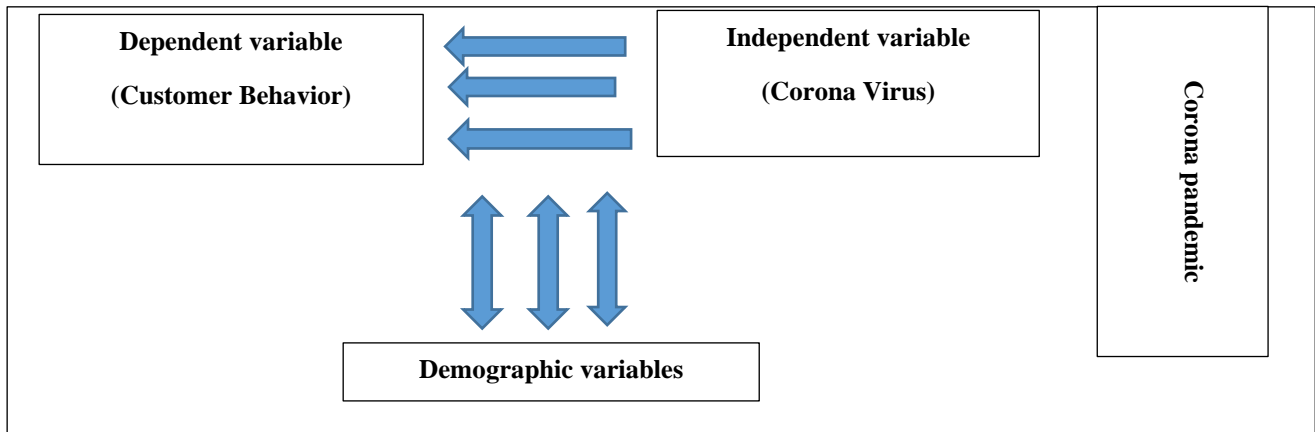
Through Figure 1, we note that the study contains a dependent variable represented in the consumer behavior of the research sample and the extent to which it is affected by the independent variable induced by the Corona virus.

2.6 The Methodology of Study:

The study followed a descriptive approach to analyze the phenomenon under study and related to the theoretical aspect, which is concerned with determining the nature of the topic and understanding the theories related to consumer behavior and consumer purchasing power, in addition to the impact of the Corona pandemic and the economic effects on business organizations and companies, on the other hand, the researcher prepared an electronic questionnaire and was distributed to a random sample to explain.

2.7 Theoretical framework for the study
2.8 Consumer Behavior

The study of consumer behavior relates to all the processes associated with individuals and groups buying and using products, services, ideas and experiences in order to satisfy the needs and desires of consumers (Solomon,2020,10).

Consumer satisfaction is the main goal of business organizations that are looking for survival and continuity. In fact, consumer behavior is an aspect of human aspects. In other words, that behavior that the consumer highlights in the search, purchase, and use of goods, services and ideas that he expects will satisfy his desires or needs according to the purchasing decision of the consumer (J Paul Pater, 2010,35).

Consumer behavior includes a set of factors that are relied upon in this study (Abu Haniyeh,2021,28):

- Cognitive response: It relates to the mental opinions and beliefs that the consumer thinks. These factors may be ideological, which consumers can think logically about and obtain through information about the product or brand.
- Emotional response: the feelings and emotions felt by the consumer that sometimes appear before the purchase process such as preference for a brand over other brands, liking or disliking, satisfaction or dissatisfaction with products.

On the other hand, there are a number of factors that contributed significantly to the development of the field of consumer behavior (Lamia,2006,13):

- The product life cycle is relatively short: many organizations offer products and services that are often new or modified, which are presented for the first time in the market that meet with success only products that have been well studied to the renewed needs and desires of consumers.
- Increasing number of services provided: services are usually intangible, so semi-certified information must be available about the sensory perceptions of the target consumers.
- The development of statistical methods: The progress of statistical methods and the continuous development in data collection has made it easier to analyze data on consumer behavior.

1. purchasing behavior

Purchasing behavior is defined as the buying behavior of individuals and families, and this behavior is greatly influenced by several factors, including the culture that includes values and customs, and consumers' perceptions, as well as other cultures that consist of a group of individuals who share values and belong to the same social class, but it can be Differences in purchasing behavior among members of the same class (Kotler,2014,54).

On the other hand, consumer behavior is the consumer's tendency to purchase goods and services in a specific place and time to meet his needs and desires by purchasing according to the purchasing power of the consumer (Baabdullah& Ansari:2020,155).

Through the foregoing, it can be said that the purchasing behavior represents a set of activities that the consumer performs during his search for the goods and services he needs in order to satisfy his needs and desires in order to make the purchase decision. The purchasing decision is affected by a group of external and internal factors in addition to demographic factors (Hakim & Abdeldjalil ,2021,148).

2. Virus Corona

A new virus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been identified as the cause of an outbreak of a disease that began in China in 2019. The resulting disease is called coronavirus disease 2019 (COVID-19), The data showed that COVID-19 spreads mainly through close personal contact The virus spreads through respiratory droplets released when an infected person coughs, sneezes, breathes, sings or talks. This spray can be inhaled or put into the mouth, nose, or eyes of someone nearby, Sometimes, the COVID-19 virus can spread through droplets or small droplets that remain in the air for several minutes or hours, and this is called aerobic transmission, this virus can also spread if a person touches a surface contaminated with the virus and then touches their mouth, nose or eyes. But the risk of this happening is considered low (World Health Organization). Covid-19 can be spread by an infected person who is not showing symptoms. This is called asymptomatic transmission. COVID-19 can also be spread by an infected person who has not yet developed symptoms. This is called presymptomatic transmission (UNICEF).

3. Corona virus and consumer purchasing behavior in light of the house hold

The new Corona virus at the level of countries has resulted in the application of some health measures to confront this pandemic, through many countries closing borders to travelers and trade movement and with the imposition of a state of emergency, especially the countries that recorded a noticeable increase in the registration of deaths, which led to the Stay of Citizens are at home and do not leave it except for the utmost necessity Many consumers resort to going to the stores to do the shopping process during the opening of the house hold, as they buy large quantities of food, detergents and sterilization materials (Oana,2020,92).

Through what was mentioned, many consumers may resort to online shopping, especially in recent times and the emergence of the Corona virus, which is a new way for customers to reach their goals through online shopping by turning the virtual market into a tangible reality (Agarwal,2021,5) (Taha,20201,5).

On the other hand, many researchers and specialists in the field of marketing confirm that consumer behavior is very complex due to the continuous change in consumer needs and desires in light of the Corona pandemic, which leads to a radical change in consumer behavior, including:

- Pre- supply (before food runs out) Consumers seek to purchase for basic foodstuffs.
- Buying large quantities of food because of reducing going to stores. Sometimes consumers resort to restaurants and stores that provide free delivery.
- Consumers are worried about running out of stock in stores, so customers resort to buying food products from unknown companies for the first time.
- Increased interest in buying sterilization and cleaning tools, maintaining the house and opening windows.
- Lack of interest in buying clothes, fashion and accessories many consumers consider these secondary things and the time is not right to buy them. (Ehsan,et al,435) (Roe,2020,403).

4. The Economic Effects of the Corona Pandemic

The Corona pandemic has disrupted normal economic activity and daily life throughout the world, and in this direction the governments of countries have taken strict measures to prevent the outbreak of the disease and to ensure the proper functioning of the health care system, which leads to the closure of businesses and the closing of borders, the short-term economic effects are imminent in terms of decline Production, investments and profits in a way that leads to high unemployment rates (SESRIC,2020,3).

On the other hand, the Corona pandemic is a humanitarian catastrophe that leads to changes and transformations in societies and their economies, and current data suggests that the poor and disadvantaged groups are the ones who bear the greatest burden of the economic and health effects of the Corona virus, Severe recessions have lasting effects on potential output through reduced investment and innovation, erosion of the human capital of the unemployed, withdrawal from global trade, and disruption to supply chains. The long-term damages of the Corona pandemic will be very severe in economies experiencing financial crises, and in energy-exporting countries due to the collapse in oil prices. On average in the emerging market economies and developing countries category, over a period of five years, a recession accompanied by a financial crisis may lead to a decrease in potential output by about 8%. The potential output is 11%. (UNDESA,2020,13)

5. Advantage and Disadvantage of the Coronavirus for companies

The effects of the Corona pandemic will draw many comparisons - some with the global financial crisis of 2007-2008, others with the Second World War, and also with crises we know only from history books. Although the repercussions of these crises may seem enormous, the Corona pandemic has left wide-ranging effects on almost every area of development, as no other crises did before it, it is only in the coming years that the full scope of the pandemic's impacts will become clear, as we collect and analyze data, adapt and develop our financing tools to meet countries' needs and continue our work to end extreme poverty and boost shared prosperity. To continue to effectively pursue this end, we will remain a long-term partner of our client countries, providing them with the data, technical assistance and financing tools that will be required to help the international community emerge from this truly global crisis (Ipsen,2021,2).

6. Food Behavior consumer

The COVID-19 pandemic has had a lasting impact on consumer food behaviors, Food reflects many aspects and economic, social and cultural factors of the individual and society. Food is not just a biological need for humans, or a source of energy and food, but the impact of the different surrounding conditions appears on the types of food, methods of preparation and habits associated with it. Today, the world is going through an unprecedented crisis that has left its effects on almost all aspects of our lives, and eating habits have been clearly affected. It may not yet be possible to predict the extent of these effects after the end of the crisis, especially with it being an extended crisis without a clear horizon for a solution, but there are clear signs for some Changes in eating habits, both at the level of individuals and societies (Ben Hassen,2020,5).

Excessive storage of goods, Perhaps this is one of the first clear effects that appeared in relation to food shopping patterns, as since the crisis began to announce itself, images and videos have continued to appear in which empty store shelves appear, after people rushed to buy and store goods for fear of a crisis, which is A behavior that naturally appears in a crisis situation, as storing basic necessities such as food helps individuals feel that there is some level of ability to control their lives, and the rampant imbalance in all its aspects in light of this stormy crisis. Such preparations, in their logical and reasonable form, cannot be considered panic shopping or a reflection of irrational fear. Rather, they are a natural expression of the survival mechanisms inherent in us and inherited through our ancestors. Historically, humans used to store food and crops to face long harsh winters (Rajeswari& Vijai,2020,688).

This leads to what is known as "panic buying", or what can be translated as panic shopping, which may lead to dire consequences such as high prices of some goods, or shortages, and depriving people with limited purchasing power of basic goods as a result of their shortage. And not only basic food commodities, sales of cleaning and sterilization products, as well as protective equipment such as masks and medical gloves, increased(Carroll,2020,3).

7. Consumer Behavior After the Corona Pandemic

The Corona epidemic led to massive changes in all walks of life, and led to an accelerating digital transformation that left its effects in various economic sectors, and the pandemic created new social habits due to the radical transformation in lifestyles and work until it was no longer possible to return to the lifestyle that prevailed before the pandemic, the concept of life itself has become different. This natural life, but it is digital in everything (Yahiaoui,2021,40).

From another hand, the most important changes that consumers and business organizations in general will be exposed to... is the impact of economic conditions on purchasing behavior. Meaning that the international economy will face a pandemic of economic stagnation, and if the economy is exposed to recession, consumer behavior will be affected and affect all economic variables, and we will notice this in the markets, where recession exposes many companies to losses, and therefore these companies are forced to leave the market, and many of them are also forced to Factories are shutting down, leading to an alarmingly high unemployment rate (Rahmanov,et.al,2021,245).

8. Corona virus and consumer behavior in the Republic of Iraq

Iraqi government faces several challenges with regard to the drop in the oil price in addition to the depreciation of the Iraqi dinar exchange rate, as the data of the World Food Program for analyzing the vulnerability (vulnerability) of societal groups and locating them showed that nearly 2.6 million people in Iraq suffer from a shortage of Food consumption, an increase of approximately 143,000 people, with Babylon Governorate being the first in terms of population with inadequate food consumption (UN,2021,15).

On the other hand, the economic crisis that afflicted the country during the past year and the accompanying delay in disbursing the salaries of state employees and retirees caused a change in the behavior of Iraqi consumers, especially since employees constitute the largest segment of them, whose purchasing orientations are linked to the stability of salaries (WFP,2020,24)

FINDINGS

After completing the theoretical side with regard to consumer behavior and the Corona virus, a questionnaire was distributed to a sample of members of the Iraqi community, the study sample was chosen randomly, according to what is known as the probabilistic method, noting that the distribution method was electronically using the Google Form tool in order to speed up the completion of the practical side, as the sample size was 210, For the purpose of facilitating the process of analyzing and processing data and discussing the results, used the statistical package SPSS version 20 .

Table 1: Cronbach's alpha test results

Questionnaire	
12	The number of questions in the questionnaire
0.802	Cronbach's alpha Value
0.891	Stability coefficient value

Through Table 1, we note that the value of Cronbach's alpha coefficient is 0.802, which is a very acceptable ratio, which is considered to be the stability ratio of the research sample, in addition to the validity coefficient amounting to 0.891, and this shows that the answers of the sample members are characterized by honesty and reliability.

Table (2) shows repeated distribution of sample individuals by gender

Gender	Male	Female	Total
Frequency	59	151	210
Percentage (%)	29%	71%	100%

It is clear from Table 2 that the proportion of females is higher than that of males. The reason is that females have a greater incentive than men to purchase continuously.

Table (3) shows repeated distribution of sample individuals by income

Income	1500$	1400-1200	1100$ -900$	Less than 800$	Total
Frequency	22	21	81	86	210
Percentage (%)	11%	10%	39%	40%	100%

 From Table 3, Through the table, the purchasing behavior of consumers who earn less than $800 is higher than the rest of the other consumers. The reason is due to economic variables, including: resource shortages, low oil prices, and the depletion of goods in retail.

Table (4) shows repeated distribution of sample individuals by place of residence

place of residence	Dohuk	Mosul	Erbil	Baghdad	Total
Frequency	22	25	72	91	210
Percentage (%)	10%	11%	34%	43%	100%

From Table 4 the above table shows the residence of consumers in the Republic of Iraq, which includes four provinces. We note that the capital, Baghdad, is the highest percentage of the rest. The reason is due to the economic status and population density of the capital.

Table 5 The results of the analysis of the questionnaire items, the standard deviation, and the arithmetic mean of the answers of the sample members.

No	Statement	Disagree	Neutral	Agree	S D	Mean	Direction
1	The emergence of the Corona pandemic greatly affected the purchase process.	%27.8	%08.5	%65	0.88891	2.369	Strong
2	Consumers are concerned about food scarcity in light of the Corona pandemic.	%42.7	%12.2	%44.5	0.93586	2.0190	Medium
3	The news on social media about the Corona pandemic is the reason for making the purchase of consumer goods	%50.2	%19.3	%29.8	0.87352	1.7962	Medium
4	Doing frequent purchases of cleaning and sanitizing materials during the Corona pandemic.	%14.2	%25.6	%62.2	0.81161	1.6540	Medium
5	Purchases increased dramatically during the Corona pandemic	%50.6	%9.2	%40.5	0.98641	1.9005	Medium
6	Many consumers tend to the traditional buying behavior towards buying online	%40.8	%20.4	%38.9	0.880422	1.9810	Medium
7	Websites and social media provide all information about products to consumers.	%56.5	%14.7	%28.4	0.88085	1.7165	Medium
8	Many consumers believe that companies are raising prices during the Corona pandemic.	%37.8	%14.7	%47.4	0.92929	2.0948	Medium
9	Buying and consumer behavior has changed by consumers during the Corona pandemic	%18.2	%17.7	%64	0.78789	2,4550	Strong
10	Home quarantine is the main reason for changing buying behaviors	%33.1	%16.7	%50.2	0.90982	2.1659	Medium
11	Online shopping is a safe process during the Corona pandemic.	%56	%9.4	%34.6	0.92643	1.7962	Medium
	Total purchasing behavior during the Corona pandemic				0.89191	2.23359	Medium

It is evident from Table 5 that the value of the total arithmetic mean related to the purchasing behavior of the individuals of the research sample, estimated by the number of paragraphs 11, was 2.23359, with a standard deviation of 0.89191, and with a medium estimate, The appear of the medium value evaluation due to consumers' preoccupation with issues other than shopping, including: health security during the Corona pandemic, fear of the virus spreading on a larger scale, and concern about the collapse of health injustice. Especially after the second wave of the pandemic.

Table 6 The results of the T-test (one-sample test) for the answers of the sample members about purchasing behavior in light of the Corona pandemic.

The Value of Test = 2			Evaluation	S D	Mean	Scope
Sig	ddl	T				
0.079	210	1.767	Medium	0.72008	2.0877	Questionnaire

Table 7 The results of the T-test of the gender variable and the purchasing behavior of the study sample under the Corona pandemic

Sig	F value	T	Mean	Group	Scope
0.315	1.0510	0.647	2.1214	Male	
			2.0709	Female	Questionnaire

Table 8: Results of the ANOVA test for differences in purchasing behavior during the Corona pandemic for the income variable

Sig	F	MS	df	Σ (x i - x̄) 2	source of variance	Variables
0.471	0.839	0.435	3	1.301	**SS_B**	Income
		0.521	207	107.896	**SS_w**	
			210	109.129	Total	

Table 9: The results of the T-test of the Place of residence variable and the purchasing behavior of the study sample under the Corona pandemic

Sig	F value	T	Mean	City	
0.987	1.923	0.633	2.1214	Dohuk	Place of residence
			2.0709	Mosul	
			2.0828	Erbil	
			2.9897	Baghdad	

- **Hypotheses test**

First hypothesis test: Is the emergence of the emerging Covid 19 an impact on changing consumer behavior?
Through Table 5, we note that the arithmetic average of consumer behavior during the Corona pandemic is 2.23359 and towards an average effect, which negates the validity of this hypothesis.
By looking at the T Test (one-sample test) shown in the table, we notice the F value is 1.767, while the probability value for the level of moral significance is estimated at 0.079, which is greater than 0.05, which means confirming the negation of the first hypothesis, On the other hand, and by looking at Table 9, which clarifies the variable where consumers reside with consumer behavior, we find that the value of F-test equals 1.923, while the probabilistic value of the level of statistical significance is 0.987, which is a value greater than 0.05, which indicates the rejection of the first hypothesis.

Second hypothesis test: there Is no a statistically significant difference about the purchasing power of consumers and the impact of the Corona pandemic due to demographic variables such as (Gender, income, place of residence).
Through Table 7, there are no statistically significant differences at the level of 0.05 between the averages of the sample members about purchasing behavior during the Corona pandemic, where the value of T is 0.647, which is greater than the significance level of 0.05, and this indicates that there are no statistically significant differences for the gender variable, Therefore, the hypothesis that states that there are no statistically significant differences for the sex variable is an acceptable hypothesis.

Through Table 8, we notice that there are no statistically significant differences at the level of 0.05 between the average answers of the sample members about consumers' behavior for the income variable, as the F-value is estimated at 0.839, which is greater than the significance level of 0.05, which indicates that there are no statistically significant differences for the variable income.

Through Table 9, we notice that there are no statistically significant differences at the level of 0.05 between the average answers of the sample members about consumer behavior for the variable of residence, where the value of F is estimated at 1.923, which is greater than the significance level of 0.05, which indicates that there are no statistically significant differences for income in the place of residence.

Conclusion
- Through the first hypothesis, it was concluded that the emergence of the Corona pandemic affected the behavior of the consumer to a medium degree. The reason is due to the abundance of consumer and food materials during the Corona pandemic.
- Through the second hypothesis, it was concluded that the factors: gender, income, place of residence do not affect the nature of consumer behavior.
- Providing safe electronic platforms for selling online to help consumers change their shopping behaviors.
- Providing safe electronic platforms for selling online to help consumers change their shopping behaviors.

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Convergences between Ausubel and Vygotsky in Serious Game Development: A Systematic Review

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ABSTRACT
Nowadays, many studies have been carried out in order to demonstrate the use of serious games and their potential in the teaching-learning process. In this sense, this article aims to present a systematic review on the use of Ausubel's theories of meaningful learning and Vygotsky's sociohistorical-cultural theories as a basis for the development and application of serious games for Education. The results show that theories have the potential to assist in this process of creating and using games in education, making them auxiliary tools for learning.

INTRODUCTION
Society lives at a time when contact with digital technologies is inevitable, as they are popularized in different areas of activity. In this technological context, digital games are an example of digital technology that is not only intended for entertainment, being increasingly assigned to different areas of knowledge such as: education, health, marketing, among others.

Digital games that are developed to fulfill some objective other than leisure are called, in the literature, as Serious Games. In the context of education, they differ from traditional educational practices by providing the player with challenges with problems to be solved. This quest to complete a challenge motivates the player to engage in the learning process (DI SALVO, 2018). Therefore, motivation and engagement, both of the teacher and the students, can be an important aspect to promote the learning of what is being taught.

Participation and interaction between students and teachers in the classroom can be activated through Serious Games. However, it may not be achieved if serious games do not have pedagogical objectives inserted in a methodology that leads the teaching-learning process in order to achieve effectiveness and efficiency. Thus, this teaching-learning process must be very well planned by teachers, so that the learning objective is achieved.

Learning theories seek to interpret the area of knowledge, building reflections on the meaning of learning and how it works in such a way (MOREIRA, 2017). In this sense, it is important that serious games developed for education are based on adequate learning theories and, thus, theoretically-methodologically aligned with the ongoing learning process.

In this perspective, the objective of this research is to carry out a systematic review of scientific works, nationwide, that use Ausubel's theory of meaningful learning and Vygotsky's socio-historical theory, as a basis for the development and application of serious games in education. The aim is to point out differences and bring

advantages from the use of these theories, as well as to show the results in order to highlight the parallels between Ausubel and Vygotsky.

THE STUDY

Learning theories are intended to support pedagogical models that guide procedures and techniques to promote learning (MEIRELLES et al., 2013). Teachers need to base their pedagogical practices on theoretical references that help them in the planning and application of these practices. In view of the various scientifically based theories, in this work the learning theories of Vygotsky and Ausubel will be presented, with the objective of describing their main constructs and concepts and reflecting on their application in the development of Serious Games for Education.

1.1 Vygotsky

Lev Vygotsky's sociohistorical theory (1896-1934), has as its central concept the construction of knowledge that takes place through the interaction of the individual with the environment, that is, for the theoretical, the social environment is decisive in human development (NEVES; DAMIANI, 2006). It is through mediation that the conversion of social relationships into higher mental functions takes place, which are traditionally human processes such as: memory, attention, imagination, ability to plan, use of language, symbolic representation of purposeful actions, among others (JOENK, 2002). Vygotsky highlights two types of mediating elements: instruments and signs (GOMES, 2017). An instrument is an element that can be used to do something, which enables man to act on nature. A sign is an element that means something (GOMES, 2017).

Language is considered by Vygotsky as one of the most important sign systems because, throughout the evolution of the human species and the development of the individual, fundamental changes such as internalization occur, in which signs appear as external marks providing a concrete support for action. of man in the world. These external marks are then transformed into internal processes of mediation. Subsequently, symbolic systems are developed, which organize the signs in complementary structures (JOENK, 2002). In this way, language begins to be shared between people, and then it starts to be used by the individual, too, as an instrument of thought (Vygotsky, 2000).

The mediations resulting from human activity favor the appropriation of concepts. The concept is always related to a certain task or a need of thought, for this reason two categories of concepts are discussed: the everyday and the scientific ones. The everyday or spontaneous concepts arise in daily coexistence, materializing in sociocultural relationships and interactions. It is a concept unique to each individual, acquired through observation and direct experience (DAMAZIO, 2000).

Scientific concepts, in turn, are systems of determined relationships between the subject and object of knowledge. They are acquired through cultural systems that are transmitted through formal schooling. Vygotsky argues that the relationship with a given object is always mediated by some other concept (DAMAZIO, 2000). Scientific concepts occur through the exchange between systems of concepts, that is, it is a matter of teaching and development, since spontaneous concepts make possible the emergence of scientific concepts from human and culturally mediated learning, which is the source of its development. For this reason, Vygotsky does not underestimate students' personal experiences, since education takes place through the student's experience, which is largely determined by the environment, and thus, the teacher's role is to organize and regulate the environment (SCHROEDER, 2007).

The development of the cultural being happens through constant interactions with the environment in which they live. This interaction between teaching and learning processes can be better understood with the concept of Zone of Proximal Development (ZPD). The zone of Proximal Development is the distance between the actual developmental level, at which the individual is able to solve problems alone, and the potential developmental level, at which the individual is able to solve problems with the help of someone more experienced (MOREIRA, 2009). Learning takes place precisely in the Zone of Proximal Development. In this way, the teacher favors this learning, mediating between the child and the world. With these interactions and relationships with the other, the child will be able to build their psychological structures (RABELO, 2010).

1.2 Ausubel

The theory of meaningful learning, by David Ausubel (1918-2008), has as its basic premise for the teaching-learning process what the learner has of knowledge that already exists in his cognitive structure. Learning occurs through the interaction between new information and some specific knowledge already existing in the learner's cognitive structure, with a certain degree of stability and differentiation. In this interaction, new knowledge acquires meaning, as well as previous knowledge becomes more elaborate, acquiring new meanings (MOREIRA, 2009). These previous knowledge existing in the individual's cognitive structure are called by Ausubel as subsumer

concepts. The concept of subsumer serves as an anchor for new information, so that it acquires a qualitative and substantive meaning, thus, meaningful learning occurs, that is, "meaningful learning occurs when new information is "anchored" in concepts relevant preexisting cognitive structure" (OSTERMANN, 2010).

Differing from meaningful learning, Ausubel also defines mechanical learning, which is that type of learning in which new information is not incorporated into the preexisting cognitive structure, that is, new information is only stored mechanically, without the learner giving meaning to what he learns (OSTERMANN, 2010; MOREIRA, 2009). Meaningful learning is opposed to mechanical learning, but they do not cancel each other out, as a given mechanical knowledge can be later associated with previous knowledge, without being identified by the learner, thus converting mechanical learning into meaningful learning (MENDONÇA, 2015).

According to Ausubel, learning can happen through discovery or reception. In the first case, learning occurs when the learner must discover the content to be learned. In the second case, the learner receives the material, he only has to relate the new information to relevant aspects available in his cognitive structure. It is important to emphasize that both discovery and reception learning can be significant or mechanical, as it is the way in which knowledge is related to the cognitive structure of the learner that determines the significance of learning (PRASS, 2012; MOREIRA, 2017).

There are two types of meaningful learning, one about what you learn and the other about how you learn. The first type is characterized by representational learning, conceptual learning and propositional learning. It is a type in which they are represented by symbols (usually words), concepts (characteristics) and meanings respectively. The second type can be said that meaningful learning is subordinate, superordinate and combinatorial. Subordinate learning is one in which new knowledge is subordinated to some specific knowledge that already exists (subsumer) in the learner's cognitive structure. Superordinate learning occurs when the new knowledge is more comprehensive than the previous subsumer, making it subordinate. And finally, there is combinatorial learning, in which new information can be absorbed by previous subsumers due to its scope, but it can also not be absorbed because it is not broad enough (MOREIRA, 2017; MENDONÇA, 2015).

For Ausubel, learning becomes meaningful when the materials offered in the classroom are potentially meaningful and students need to be predisposed to learn. For the theorist, it is up to the teacher to take into account the student's prior knowledge, using facilitating principles to make the relationship between the new material and the existing concepts in the student's cognitive structure (AUSUBEL, 2003).

METHODOLOGY

According to Kitchenham (2007), a systematic review is a way of identifying, evaluating and interpreting a specific research question relevant to an area or topic of interest. In this sense, the objective of this work is to gather works that use, as a basis for the development of serious games for education, the theories of Ausubel and Vygotsky. The method aims to point out evidence on this use at the national level, and also to answer the guiding question:

Q1 - What are the most used concepts of these theories?
In this perspective, the objective of the research is to carry out a systematic review of scientific works at national level that use Ausubel's meaningful learning theory and Vygotsky's socio-historical theory as a basis for the development and application of serious games in education. The aim is to point out differences and bring advantages from the use of these theories, as well as to show results that can highlight the parallels between Ausubel and Vygotsky's theories.

For the literature review, the search was carried out between the years 2015 to 2020, using tools such as Google academic, Scielo, Brazilian Digital Library of Theses and Dissertations (BDTD) and also annals of events such as the Brazilian Symposium on Informatics in Education (SBIE).), Workshop on Informatics at School (WIE) and the Brazilian Symposium on Computing, Games and Digital Entertainment (SBGAMES) and the Revista Novas Tecnologias na Educação (RENOTE).

Initially, articles were selected whose titles contained the terms "serious games", "digital games" and "educational games", and in the body of the text presented the terms "Vygotsky" or "Ausubel". Subsequently, in the pre-selection phase, works with the following inclusion criteria were considered: a) Complete articles; b) Works on games for teaching and learning; d) Works in Portuguese. The exclusion criteria were: a) Duplicate articles; b) Works on non-digital games; c) Works on games that are not aimed at Education; d) Articles on systematic reviews.

The search for works that are related to digital games in education resulted in 15 works, taking into account the inclusion and exclusion criteria. The works were analyzed in a more relevant way in order to obtain the answers to the research questions of the work.

The results show that, despite returning a significant amount of work on games, not all of them are inserted in the context of development and application of serious games for education using as a theoretical basis meaningful learning and socio-historical theory.

ANALYSIS AND DISCUSSION OF RESULTS

According to the results found, the years 2015 and 2018 concentrate the largest number of works that use one of the two theories referenced in this work, for the development and application of serious games for education. Another interesting factor refers to the target audience in which the games are being evaluated. Graph 01 details these results.
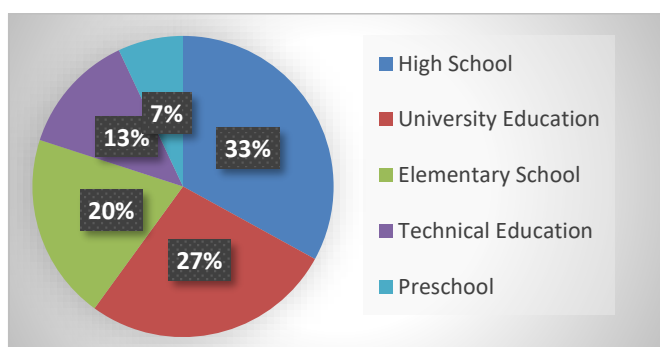
Graph 01: Target Audience

As shown in Graph 1, regarding the target audience, researchers who use the learning theories of Ausubel or Vygotsky to apply it to digital games, have a greater preference for secondary education (33%) and higher education (27%), followed by education elementary (20%), technical education (13%) and preschool (7%). It is possible to perceive that the development of serious games for education is extremely relevant to the teaching-learning process, regardless of the target audience or didactic content, but it is interesting to maintain the relationship between the cognitive, affective and motor areas.

Graph 02 shows the works found that use learning theories as a basis for the development and application of serious games.
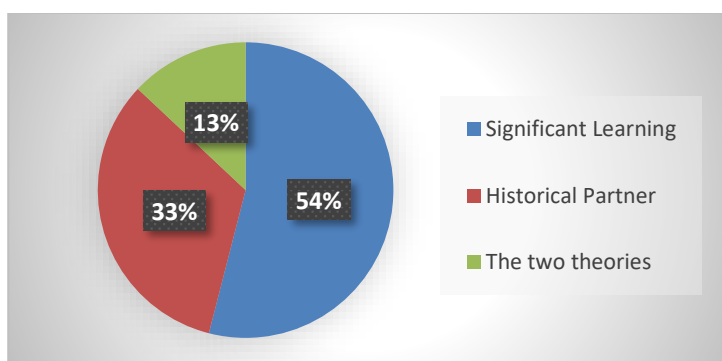
Graph 02: Learning Theories

It can be seen that most of the works are theoretically based on the theory of meaningful learning. It is important to emphasize that these works actually make use of Ausubel's theory, because when searching for works, using the term "meaningful learning", works that had nothing to do with the theory itself were returned. In agreement with Moreira (2010), there is a superficial use of the concept of meaningful learning, since any teaching strategy started to be named as having the objective of meaningful learning, but, in general, learning has been much more mechanical than how significant. Another factor observed during the search for works is that many works that cite Vygotsky, only talk about his constructs regarding the use of games, but do not take into account his concepts for the development and application of games in Education.

Regarding the first research question (Q1 - What are the most used concepts of these theories?) it is possible to answer that the works that use one of the theories as a basis, had satisfactory results. In the case of meaningful learning, most works use the concept of subsumers. In relation to sociohistorical theory, the most used concepts are zone of proximal development and mediation. According to the studies found, the results were also satisfactory for this theory. Games can act as mediators, but it is important that the challenges are balanced (neither easy nor difficult) so as not to run away from potential development.

CONCLUSIONS

In the quest to investigate the use of Ausubel and Vygotsky's learning theories, it could be seen that researchers have carried out studies on the development or application of serious games for a varied target audience, but as the research shows, with a greater focus on teaching medium. Encouraged to know why serious games are not developed for the initial years of schooling, a research was carried out without stipulating which learning theories were used. Twenty-five works were found, taking into account the same inclusion and exclusion criteria presented in this article, in these works, in addition to Ausubel and Vygotsky, the theorists Piaget and Bloom were found. In this way, it could be seen that the results were different, the target audience with the greatest interest of the researchers in this new research was elementary school, followed by high school and higher education. Dedication to the initial years of schooling is of paramount importance to ensure students' success in their educational life.

It can be concluded that regardless of the target audience or didactic content, serious games need to contribute to the development and collaboration for autonomy, creativity, responsibility and cooperation, thus contributing in fact in the teaching-learning process.

The works found in this research report that the development and application of games were carried out in the light of some of the learning theories (Significant and Sociohistorical Learning). To better understand the importance of learning theories in the development and application of games, it is very important that researchers say when theories are used, if at the time of game planning, or if in the application or evaluation of the game. This fact, unfortunately, does not happen in most of the works mentioned here.

The concepts of the theory of meaningful learning that are used in the works are varied, but the one that appeared most frequently is the concept of subsumer. In sociohistorical theory, the concepts that appear most frequently are ZPD and mediation. It is possible to point out a parallel between the two theories, in which learning occurs, when the student appropriates previous knowledge and contributes to the development of new instruments and signs.

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Development of the Rhythm Teaching Attitude Scale for Music Teachers

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ABSTRACT
This study was conducted in order to develop a measurement tool that determines music teachers' attitudes about rhythm education. During the scale's development a pool of statements about attitudes towards rhythm teaching was created, and expert opinions were collected from nine qualified lecturers in the area. The qualitative data acquired from expert opinions were transformed into quantitative data using content validity index and content validity ratio calculations to evaluate the content validity of the items included in the scale. The study data were analysed using the SPSS 21.0 and AMOS 22.0 statistical programmes. Exploratory factor analysis, confirmatory factor analysis, item-total correlation and Cronbach Alpha methods were used for the validity and reliability of the scale. The sample of the study consisted of 247 music teachers working in Ministry of National Education affiliated schools in different provinces selected through purposeful maximum variation sampling. In the measurements made to measure the reliability of the scale, the Cronbach Alpha coefficient of the scale is 0.78. At the end of the study, a measurement tool consisting of 3 dimensions and 14 items was developed, including the dimensions of liking rhythm teaching, the value given to rhythm teaching, and beliefs about rhythm teaching. According to the results of the analysis of the study, it was determined that the scale is valid and reliable.
Keywords: music education, rhythm, scale , attitude scale.

ÖZET
Bu çalışma, müzik öğretmenlerinin ritim eğitimine yönelik tutumlarını belirleyen bir ölçme aracı geliştirmek amacıyla yapılmıştır. Ölçeğin geliştirilmesi sırasında öncelikle ritim öğretimine yönelik tutumlarla ilgili ifadeler içeren madde havuzu oluşturulmuş ve alanda uzman dokuz öğretim elemanından uzman görüşleri alınarak gerekli düzeltme ve eklemeler yapılmıştır. Uzman görüşlerinden elde edilen nitel veriler, ölçekte yer alan maddelerin kapsam geçerliliğini değerlendirmek için kapsam geçerlilik indeksi ve kapsam geçerlilik oranı hesaplamaları kullanılarak nicel verilere dönüştürülmüştür. Çalışma verileri SPSS 21.0 ve AMOS 22.0 istatistik programları kullanılarak analiz edilmiştir. Ölçeğin geçerlik ve güvenirliğinin tespit edilmesinde açımlayıcı faktör analizi, doğrulayıcı faktör analizi, madde-toplam korelasyonu ve Cronbach Alpha yöntemleri kullanılmıştır. Araştırmanın çalışma grubunun seçiminde, amaçlı örnekleme çeşitlerinden biri olan maksimum çeşitlilik örneklemesi tercih edilmiş ve araştırmanın çalışma grubunu farklı illerde Milli Eğitim Bakanlığına bağlı okullarda görev yapan 247 müzik öğretmeni oluşturmuştur. Ölçeğin güvenirliğini ölçmek için yapılan ölçümlerde ölçeğin Cronbach Alpha katsayısı 0,78 olarak tespit edilmiştir. Çalışma sonunda ritim öğretimini sevme, ritim öğretimine verilen değer ve ritim öğretimine ilişkin inanç boyutlarını içeren 3 boyut ve 14 maddeden oluşan bir ölçme aracı geliştirilmiştir. Araştırmanın analiz sonuçlarına göre ölçeğin geçerli ve güvenilir olduğu belirlenmiştir.
Anahtar Sözcükler: müzik eğitimi, ritim, ölçek, tutum ölçeği.

INTRODUCTION

Music, which can be defined as a way of expressing emotions and thoughts using sounds, is one of the most basic branches of art that a person perceives and reacts to while still in the womb (Sak Brody, 2016). Sounds (tace), rhythms, speed and rumble can be considered the main components of music, which is an art branch as old as human existence. One of these components, rhythm, is defined in the Turkish dictionary of the Turkish Language Institution (2011, p. 557) as "the nature of regular repetition of events." It can also be expressed musically as a repetition of a tempo that is combined at specific periods and then repeated in a specific order. In this context, "Music is a temporal art" (Large, 2008, p. 189). The term rhythm refers to music's overall sense of movement. There is a rhythm in every aspect of human life, which is surrounded by sounds. Human speech and walking, in fact, follow their own rhythm and order. Humans organise time inside a piece of music, group it perceptively and evoke a sense of measure (Large & Colen, 1994)

Individuals' educational stages include music education, which can be defined as the process of generating and growing musical behaviour in the direction of individuals. In the studies conducted, it has been determined that rhythm education, which is one of the basic elements of music education, has a positive effect on problem-solving skills (Kardaş, 2019; Zembat, at all. 2010; Kuru and Karabulut, 2009;), anxiety levels (Tunçkol, at all. 2020;

Sökezoğlu, 2010) and self-perceptions (Koca and Altuntaş, 2019) as well as musical development in the individual. It is critical to include rhythm exercises in music education in this regard.

Orff education, which is one of the approaches that can be evaluated in rhythm studies, is an educational approach that finds its place in being accompanied by various rhythm instruments and movements and dances. Its founder, Carl Orff, said, "Music begins inside a person, and so should education. Music begins neither on the instrument, on the first finger press, nor on the first position, nor on this or that chord. The starting point is that a person is calm, listens to himself, is ready for music and listens to his heartbeat and breathing" (as cited in Özbay & Can 2020, p. 168). Orff considers listening to one's breathing and heartbeat as the starting point of music and emphasises that, in fact, the basis of music education is that a person discovers rhythm through their own body. Approaches that support rhythm education, such as Dalcroze education, in which bodily movements are added to music and rhythm activities, have been introduced since the late nineteenth century, and educational objectives, such as reading notes, singing and instrument training, which are traditionally used in the music education process, have gradually evolved into a trend towards rhythm education as a way for the total development of the child's physical, social, cultural and expressionist needs (Juntunen, 2020).

According to Sun and Sparrow (1993), children try to dance with their hands and feet in movements that are in line with the rhythm of the music, although they cannot repeat the tunes from an early age. Gehrkens explains the main goal of rhythm training studies carried out with the aim of developing the sense of rhythm that we have brought from birth and that exists within us as "the creation of balance and harmony between the brain, body and emotions" (as cited in Dündar, 2003, p.173).

The concept of attitude is included in our language in the sense of "path held, behaviour" according to the Turkish Language Institution (TDK, 2011, p. 693). According to Tavşancıl (2002), it is therefore a tendency gained through cultural life, which is not temporary and causes the individual to remain in the same opinion for a certain period of his life, which creates regularity in the relationship between the individual and the object, causing bias between man and object after it occurs, which can lead to positive–negative behaviours that can not only be personal but also social in terms of values, groups and objects. Individuals' attitudes are remarkable in terms of reflecting their tendencies, dispositions and behaviours towards facts and events, and they are included in educational study. In this context, the attitudes of music educators regarding rhythm education gain importance in terms of revealing their perceptions of rhythm teaching in their professional lives. There were no attitude scale development studies conducted on rhythm teaching when the related literature was examined. It is thought that this study will contribute to filling the gap in this regard.

The study was carried out with the aim of developing an attitude scale for measuring the attitudes of music teachers towards rhythm teaching.

THE STUDY
Methodology
This is a scale development research study. The methods used to create the Rhythm Teaching Attitude Scale for Music Teachers, as well as the characteristics of the study group, are detailed below.

In this research that is designed as a Likert scale development study, a series of consecutive operational steps were followed including clearly defining the attitude to be measured, determining the mode of measurement and creating the item pool, examining the item pool by experts, evaluating the substances and making the scale optimal (DeVillis, 2021), creating and editing the trial scale, implementing the test scale created (pilot application) and analysing the data obtained from the trial scale (Tezbaşaran, 2008), including the creation and arrangement of the trial scale, the application of the trial scale (pilot application) and the analysis of the data obtained from the trial scale (Tezbaşaran, 2008).

Clear Identification of the Attitude to Be Measured
This scale was developed to demonstrate the attitudes of music teachers regarding rhythm teaching.

Creation of the Item Pool
A pool of 42 statements concerning attitudes towards rhythm education was created during the scale's development. These statements were examined by three experts, and statements assessing the same or similar attitudes were eliminated, resulting in a total of 22 items. The items were then analysed in terms of language and word and prepared for expert opinion under the direction of a Turkish language expert lecturer.

Examination of the Item Pool by Experts

The statements in the item pool were sent to a total of nine experts, including seven experts from the field of music and two experts from the field of measurement and evaluation. Items in the form sent to experts are arranged to be calculated this way:

- Appropriate (3 points)
- Appropriate but should be corrected (2 points)
- Should be eliminated (1 point)

Experts were asked to specify what their own recommendation was if the "appropriate but should be corrected" option was selected, and why it should be eliminated if the option to be eliminated is selected. The expert opinions received were reviewed in this regard, and any necessary modifications were made keeping the recommendations in mind.

Evaluation of Items and Expert Opinion Content Validity

In the calculation of the content validity of the items to be included in the study, qualitative data obtained from expert opinions were converted into quantitative data through content validity ratio (CVR) and content validity index (CVI) calculations. In this context, the CVR and CVI are calculated first. Microsoft Excel 2007 is used in CVR and CVI calculations. CVR is used to mean the minimum/critical values of CVRs (Yeşilyurt and Çapraz, 2018, p. 256).

When calculating the CVR for the items in the study, the $KGO = \frac{Nu - N/2}{N/2}$ formula is used. "Nu" in the formula indicates the total number of experts who marked the item as "appropriate" on the scale.

The CVR values provided by Ayre and Scally (2014) were used to make computations in this study. According to Ayre & Scally (2014, p. 829), the CVR = CVR critical value for nine expert opinions was determined as 0.778. The question pool has a total of 22 questions. $KGO = \frac{Nu - N/2}{N/2}$ Calculations were performed using the method in order to analyse the expert opinions and compute the content validity of the scale items, for each item, based on the opinions of nine experts on the items. Items 1, 11, 13 and 20 that are below 0.778, which is the statistical significance of the Content Validity Criterion value, were removed from the scale. The scale contained a total of 18 components. The average of these 18 items was used to obtain the CVI value. The CVI value was calculated to be 0.858 as a consequence of the calculations. The fact that the calculated CVI value is bigger than the Content Validity Criterion value indicates that the content validity of the remaining items on the scale is statistically significant (Yeşilyurt and Çapraz, 2018, p. 259).

The scale is divided into two sections: demographic information and remarks about assessing attitude. Gender, participation in a rhythm education course, course or training and ability to play a rhythm instrument are all variables in demographic data. The scale statements were organised in a five-point Likert structure. The expressions mean

1   I do not agree at all
2   I do not agree
3   I'm not sure
4   I agree
5   I completely agree

Data Collection Tool

The questionnaire form used in the study is divided into two sections. The first section of the form contains demographic information about the study participants, such as gender, rhythm-related course, education, course participation status and rhythm instrument playing status.

The Rhythm Teaching Attitude Scale for Music Teachers, designed by the researcher and subjected to reliability and validity tests, is included in the second section of the questionnaire. It is in a five-point Likert format (1: I do not agree at all; 5: I completely agree) and consists of 18 items divided into three categories (like teaching rhythm, value given to rhythm teaching and belief in rhythm teaching).

Analysis of Data

The study data were analysed using the SPSS 21.0 and AMOS 22.0 statistical programmes. Exploratory factor analysis (EFA), confirmatory factor analysis (CFA), item-total correlation and Cronbach Alpha methods were used in the validity and reliability of the scale. The Mann–Whitney U test was used to compare the size and total

scores of the scale formed after the validity and reliability analyses of the scale in terms of the prospective teachers and the teachers (as the scores do not show a normal distribution).

EFA can be defined as "an operation to find factors based on the relationships between variables" (Büyüköztürk, 2013, p. 133). A procedure based on the relationships between the variables is used to determine the factors of the data. The Kaiser–Meyer–Olkin (KMO) and Barlett's Test of Sphericity are used to calculate and evaluate the sample size's adequacy in this process. Expected values in the calculations are KMO > 0.70 and p < 0.05 for Barlett's Test of Sphericity. Although there are various factor-generating strategies, the Principal Component Analysis technique is the most widely used. A rotated factor matrix, on the contrary, is obtained by employing one of the rotation procedures. "Vertical and oblique rotation approaches, as well as vertical rotation techniques, varimax and equamax, are appropriate for social sciences" (Cesur & Fer 2007, p. 61).

Following the varimax rotation, the load value of the factor in which the items are positioned, the load value relationships between the other factors and the load differences between the other factors are investigated. Büyüköztürk (2013) provided a list of criteria to consider when performing factor analysis. As a result, it should be highlighted that the factor load value is high in the selection of items that do not measure the same structure. While it is preferable to have a factor load value of 0.45 or higher, this ratio can be reduced to 0.30. Furthermore, it is preferable that the items have a high load value for a single factor. It should be emphasised in this context that the factor load differential between the factors other than the factor with the highest factor loading for each item is at least 0.10.

CFA is a highly developed approach that allows the testing of theories concerning latent variables and is preferred notably in advanced research. In this technique, it is analysed whether a structure whose definition and boundaries are determined is verified in the context of a model. CFA is one of the structural equation models and it is important to ensure model fit in these models. The ratio of Chi-square statistic to degrees of freedom (X^2/sd), statistical significance of individual parameter estimates (t-value), residual fit indices (SRMR, GFI), fit indices based on independent models (NFI, NNFI, CFI) and fit indices classified as the root mean square of approximate errors (RMSEA) are used when evaluating model fit (Çokluk, Şekerciolu, & Büyüköztürk, 2010).

Table 1. Model Fit Indices

Fit Indices	Good Fit	Perfect Fit
X^2/sd	<5	<3
RMSEA	≤0,10	<0,08
SRMR	≤0,08	<0,05
GFI	≥0,90	>0,95
NFI	≥0,90	>0,95
NNFI	≥0,90	>0,95
CFI	≥0,90	>0,95

Source: Çokluk, Şekercioğlu and Büyüköztürk, 2010

The anticipated coefficients for the model fit indices are shown in Table 1. One of the item analysis methods utilised in the analysis for which the reliability research was undertaken was the item-total correlation, which describes the link between the test item scores and the total score of the test. "The fact that the item-total correlation is positive and high indicates that the items exemplify similar behaviours and indicates that the internal consistency of the test is high" (Büyüköztürk, 2013, p. 183). In this analysis, it can also be said that "in general, items with an item-total correlation of 0.30 and higher distinguish individuals well, and items between 0.20–0.30 can be taken to the test if it is deemed necessary" (Büyüköztürk, 2013, p. 183). Cronbach Alpha "is an internal consistency estimation approach ideal for use when items are not rated as true–false (bistate dichotomous) but are scored ordinally such as 1-3, 1-4, 1-5" (Cronbach, 1951, & Dawson, Trap. et al., 2004 as cited in Kılıç 2016, p. 47).

Sample of the Research and Pilot Study
The study's sample was drawn from the volunteers who consented to be studied using purposeful maximum diversity sampling. "It is not right to choose the trial sample randomly; purposeful sampling (non-random) is in question," Erkuş (2007, p.19) says. In this direction, it was attempted to create maximum variety by reaching out to music teachers from various demographic backgrounds.

For the pilot study of the research, a sample group was formed by making an announcement, a form containing the scale items was prepared over the internet and music teachers working in schools affiliated to the Ministry of National Education participated in the scale. In scale development studies, different methodologies are used to determine the number of pilot application participants. Comrey (1988), for example, indicated that a sample size of

200 individuals was sufficient for a factor analysis containing no more than 40 items (as cited in DeVellis, 2021), although Hoe (2008) stated that any number greater than 200 would be suitable for statistical analysis. Kline (1994), on the contrary, believes that it is sufficient to apply a sample size that is 10 times the total number of items on the scale (as cited in Canaslan and Güçlü, 2020). In accordance with these opinions, the data analysis phase began after reaching 247 individuals as the pilot study's sample. Table 2 shows the distribution of participants based on demographic characteristics.

Table 2. Distribution of Participants by Demographic Characteristics

Demographic Characteristics	Groups	n	%
Gender	Female	174	70,4
	Male	73	29,6
attended a rhythm-based course	Yes	214	86,6
	No	33	13,4
attended a rhythm-based training	Yes	171	69,2
	No	76	30,8
play a rhythm instrument	Yes	121	49,0
	No	126	51,0
	No	126	51,0

According to Table 2 data, %70,4 of the teachers participating in the study are female and 20.6% are male. In total, 86,6% of the participants attended a rhythm-based course and 69,2% attended a rhythm-based training. The rate of participants that play a rhythm instrument is 49%.

FINDINGS
Findings on Validity and Reliability
The findings of EFA, CFA, and reliability analysis acquired from the study's findings are presented in this part.

Explanatory Factor Analysis Findings
As a result of the EFA of the scale, the KMO level was calculated as 0.85, and the significance level of Bartlett's sphericity test was determined as $p < 0.01$. In this situation, the study's sample group was deemed to be enough for EFA.

Table 3. Preliminary Results of Explanatory Factor Analysis of Attitude Scale for Rhythm Teaching Towards Music Teachers

Dimension and Item No.	F1	F2	F3
Enjoy Teaching Rhythm			
1. I find doing rhythm exercises enjoyable.	**0,766**	0,053	0,127
3. I do not get bored while doing rhythm studies	**0,667**	0,130	0,090
4. I prefer to do activities based on rhythm studies.	**0,799**	0,035	0,075
8. Rhythm exercises excite me.	**0,749**	0,063	0,176
9. I am willing to take part in any rhythm studies training.	**0,780**	0,011	0,170
11. It makes me happy to be able to study rhythm.	**0,790**	0,037	0,264
The Value Given to Rhythm Teaching			
5. I would recommend rhythm studies to my colleagues.	*0,764*	*0,066*	*0,059*
6. I'm hesitant to share information regarding rhythm studies with my colleagues.	0,011	**0,726**	0,035
7. It is unimportant to me to be successful in rhythm studies. *	0,033	**0,601**	0,004
10. I avoid practicing rhythm exercises.*	0,201	**0,736**	0,154
16. I'm not going to be able to succeed in rhythm studies no matter what I do.	0,152	**0,711**	0,150
18. I don't believe I have the appropriate skills to perform rhythm exercises.*	0,082	**0,635**	0,027
Belief in Rhythm Teaching			
2. I don't believe that studying rhythm is vital for my job*.	*0,036*	*0,461*	*0,075*
12. Rhythm studies, in my opinion, aid in the development of intelligence.	0,297	0,125	**0,779**
13. Rhythm studies, in my opinion, aid in psychomotor development.	0,235	0,143	**0,722**
14. I believe that rhythm studies support language development.	0,153	0,054	**0,751**
15. I don't believe that studying rhythm improves my creativity.*	*0,104*	*0,424*	*0,096*

17. I think it is necessary to have a special ability to do perform studies.	*0,120*	*0,266*	*0,114*
Variance (%)	**23,959**	**15,957**	**10,727**
Total Variance (%)		**50,643**	

* It was reverse coded when computing the scale total score.

The first results of the EFA are shown in Table 3. According to the first findings of the EFA, the total variance explained by the 18 items in the scale was insufficient (50.64%), and since four of the items were not sufficiently explained (m5, m2, m15 and m17), the problematic items were gradually eliminated when the factor load in the factor with which it was utilised was determined to be less than 0.40, and the results obtained as a result of the repeated EFA are shown in Table 4.

Table 4. Second Results of Explanatory Factor Analysis of Attitude Scale for Rhythm Teaching Towards Music Teachers

Dimension and Item No.	**F1**	**F2**	**F3**
Enjoy Teaching Rhythm			
1. I find doing rhythm exercises enjoyable.	0,768	0,064	0,142
3. I do not get bored while doing rhythm studies	0,662	0,152	0,099
4. I prefer to do activities based on rhythm studies.	0,793	0,050	0,091
8. Rhythm exercises excite me.	0,766	0,056	0,174
9. I am willing to take part in any rhythm studies training.	0,794	0,029	0,170
11. It makes me happy to be able to study rhythm.	0,808	0,070	0,260
The Value Given to Rhythm Teaching			
6. I'm hesitant to share information regarding rhythm studies with my colleagues.*	0,038	0,758	0,031
7. It is unimportant to me to be successful in rhythm studies. *	0,038	0,586	0,008
10. I avoid practicing rhythm exercises.*	0,169	0,783	0,166
16. I'm not going to be able to succeed in rhythm studies no matter what I do.	0,117	0,746	0,171
18. I don't believe I have the appropriate skills to perform rhythm exercises.*	0,078	0,632	0,026
Belief in Rhythm Teaching			
12. Rhythm studies, in my opinion, aid in the development of intelligence.	0,281	0,120	0,790
13. Rhythm studies, in my opinion, aid in psychomotor development.	0,204	0,140	0,747
14. I believe that rhythm studies support language development.	0,141	0,063	0,747
Variance (%)	**25,565**	**18,313**	**14,026**
Total Variance (%)		**58,905**	

* Reverse coding was utilised to calculate the scale and dimension score.

When the second stage of EFA was performed on the data in Table 4, it was discovered that the variance explained by the remaining 14 items did not decrease after the unsuitable factor loading items were gradually removed, and the variance increased (from 50,6% to 58,9%) in each factor and the total scale. As a result, with fewer elements remaining in the scale, higher explanatory power was reached. Following these processes, the results of CFA were studied and analysed in order to verify the EFA findings.

Confirmatory Factor Analysis Findings
Table 5 shows the findings of the fit indices derived from the CFA applied to the remaining 14 items and 3 dimensions in the scale.

Table 5. Model Fit Indices Obtained in the Confirmatory Factor Analysis of the Rhythm Teaching Attitude Scale for Music Teachers

Model Fit Indices	14 Item 3 Dimension
X^2/sd	1,523
RMSEA	0,046
SRMR	0,052
GFI	0,937
NNFI	0,960
CFI	0,967
Correlation between	0,24 / 0,56

factors
factor load   0,40 / 0,85

In the analyses of the Table 5 data, factor loads of ≥0,40 and model fit indices were found to be at very good levels. According to the findings, it was not necessary to remove any item from the scale or to correlate it with covariance.

Table 6. Rhythm Teaching Attitude Scale for Music Teachers CFA Factor Load Findings

Dimension and Item No	Std. β	SH	t	r	α
Enjoy Teaching Rhythm					**0,87**
1. I find doing rhythm exercises enjoyable.	0,72			0,51	
3. I do not get bored while doing rhythm studies	0,61	0,12	9,04**	0,47	
4. I prefer to do activities based on rhythm studies.	0,73	0,12	10,81**	0,51	
8. Rhythm exercises excite me.	0,74	0,14	10,95**	0,46	
9. I am willing to take part in any rhythm studies training.	0,77	0,12	11,45**	0,54	
11. It makes me happy to be able to study rhythm.	0,83	0,11	12,34**	0,61	
The Value Given to Rhythm Teaching					**0,69**
6. I'm hesitant to share information regarding rhythm studies with my colleagues. *	0,62			0,28	
*7. It is unimportant to me to be successful in rhythm studies. *	0,40	0,14	5,40**	0,22	
10. I avoid practicing rhythm exercises. *	0,83	0,10	8,86**	0,53	
16. I'm not going to be able to succeed in rhythm studies no matter what I do. *	0,73	0,09	8,56**	0,46	
16. I'm not going to be able to succeed in rhythm studies no matter what I do.	0,47	0,15	6,11**	0,30	
Belief in Rhythm Teaching					**0,61**
12. Rhythm studies, in my opinion, aid in the development of intelligence.	0,85			0,49	
13. Rhythm studies, in my opinion, aid in psychomotor development.	0,66	0,07	8,37**	0,41	
14. I believe that rhythm studies support language development.	0,53	0,16	7,15**	0,26	
Cronbach Alpha (α)			**0,78**		

**p < 0.01 r: Item-total correlation

Table 6 shows the factor loads derived through CFA as well as the t-value statistics used to determine the significance of the factor loads. According to the confirmatory factor analysis findings, as a result of EFA, the factor loads of the remaining 14 items in the scale in 3 dimensions ranged from 0.40 to 0.85 and their t values were significant (p<0.01). The Cronbach Alpha coefficient of the whole scale was 0.78; Cronbach Alpha coefficients of the sub-dimensions were found to be 0.87 / 0.69 / 0.61 and item-total correlations were higher than 0.20 (range 0.22 to 0.53). The scale was found to be a valid scale with 14 items and 3 factors based on the outcomes of all analyses. The Rhythm Teaching Attitude Scale for Music Teachers was shown to be a valid and reliable scale with 14 items and a 3-dimensional structure for music teachers, according to the findings of validity and reliability studies. As a result, the developed scale can be used to assess music teachers' attitudes about learning rhythm, including how they like teaching rhythm, how important rhythm is to them and their opinions about rhythm teaching.

Descriptive Findings
The analysis' findings, which contain descriptive statistical results about the study data, are presented.

Table 7. Descriptive Statistics

Dimension and Item No.	Min.	Maks.	X̄	SS	Ç.	B.
Enjoy Teaching Rhythm	1	5	4,53	0,61	-0,82	-0,58
The Value Given to Rhythm Teaching	1	5	4,49	0,72	-0,73	-0,60
Belief in Rhythm Teaching	1	5	4,65	0,52	-0,69	-090
Attitude Towards Rhythm Teaching	1	5	4,55	0,43	-0,68	-0,13

In table 7, The attitude scale score towards rhythm teaching was calculated as 4.45±0.53. In this context, considering the lowest score of 1 and the highest score of 5, it can be said that the attitudes of the participants towards rhythm teaching are in the range of "strongly agree" and at a very high level. When the attitudes towards rhythm teaching are examined at the dimension level, the belief in rhythm teaching (4.56±0.61) is at the highest level, by followed like teaching rhythm (4.36±0,). 69), and the value given to rhythm teaching (4.42±0.79), all dimension scores were found to be in the "strongly agree" range and at a very high level.

Table 8. Comparison of Attitude Scores towards Rhythm Teaching by Gender

Dimension and Item No.	Gender	n	$\overline{X}$	SS	t	p
Enjoy Teaching Rhythm	Female	174	4,58	0,58	2,16	**0,032**
	Male	73	4,39	0,68		
The Value Given to Rhythm Teaching	Female	174	4,52	0,70	1,32	0,189
	Male	73	4,40	0,77		
Belief in Rhythm Teaching	Female	174	4,71	0,49	2,92	**0,004**
	Male	73	4,52	0,57		
Attitude Towards Rhythm Teaching	Female	174	4,61	0,41	2,92	**0,004**
	Male	73	4,44	0,46		

Enjoyment of teaching rhythm (t=2.16; p<0.05), belief in teaching rhythm (t=2.92; p<0.05) and scale scores of teaching rhythm (t=2.92; p<0.05). 0.05) were found to differ significantly by gender. The female teachers' enjoyment of teaching rhythm, their beliefs about rhythm teaching, and their scores on rhythm teaching were significantly higher than male teachers' attitude scores.

CONCLUSIONS

"Attitudes are positive or negative appraisal statements about objects, people or events" (Üstüner, 2006, p. 111). There is no doubt that the connection between the teacher and his/her attitude towards a subject will also affect teaching and learning. It is stated in the studies that rhythm education provides discipline to children, affects hearing ability, positively affects the development of all muscle groups and helps coordination in their movements with cognitive, affective and psychomotor gains (Kalay, 2013; Öztürk, 2004; Sökezoğlu, 2009, Sarıkaya, Albuz ve diğ. 2019, Sandıkçı, 2017).

The goal of this research is to develop a tool to assess the attitudes of music teachers towards rhythm teaching. The researcher reviewed the relevant literature but did not find an attitude scale for rhythm teaching. In this research that is designed as a Likert scale development study, a series of consecutive operational steps were followed including clearly defining the attitude to be measured, determining the mode of measurement and creating the item pool, examining the item pool by experts, evaluating the substances and making the scale optimal (DeVillis, 2021), creating and editing the trial scale, implementing the test scale created (pilot application) and analysing the data obtained from the trial scale (Tezbaşaran, 2008), including the creation and arrangement of the trial scale, the application of the trial scale (pilot application) and the analysis of the data obtained from the trial scale (Tezbaşaran, 2008). At the end of the study, a measurement tool consisting of 3 dimensions and 14 items was developed, including the dimensions of liking rhythm teaching, the value given to rhythm importance and beliefs about rhythm teaching.

According to the results of the analysis of the study, it was determined that the scale is valid and reliable. The three-factor structure, which was obtained first using EFA analysis, was then investigated by CFA analysis, and the resulting fit statistics were found to meet the method's criterion values. The scale's model–data fit has been determined to be very close to the good fit level in this context. In other words, the developed scale is a tool for determining the attitudes of music teachers towards rhythm teaching and in this context, they like to teach rhythm, the value given to the importance of rhythm and their beliefs about rhythm teaching. The use of the scale in research will contribute to the studies to be conducted in the field.

Cronbach Alpha coefficient values were used in the measurements to determine the scale's reliability. The scale developed in the study was prepared in a five-point Likert type. The coefficient frequently used in reliability analyzes of Likert-type measures is the Cronbach's alpha coefficient (Bademci, 2006). In the calculations made to measure the reliability of the scale, the Cronbach Alpha coefficient of the scale was determined as 0.78. When the sub-dimensions of the scale are examined in terms of reliability coefficient, it was found that liking rhythm teaching (α=0,87), the value given to rhythm importance (α=0,69) and beliefs about rhythm teaching (α=0,61). According to Kılıç (2016), the reliability coefficient (Cronbach Alpha) being 0.81 < α < 1.00 indicates that the scale has high reliability. 0.61<α<0.80, indicating medium reliability. In this context, it can be said that the

sub-dimension of enjoying teaching rhythm in the scale has high reliability, while the other two sub-dimensions have medium reliability.

Research on rhythm practices are more common in the literature, but no attitude or scale studies on rhythm instruction can be found. The usage of this scale, which was created with the goal of measuring the attitudes of music teachers towards rhythm teaching, will help with future research. It is suggested that the scale be used in sample groups of various sizes. In addition, a measurement tool for music teachers was developed as part of this research. This measuring tool is also suitable for preschool and classroom teachers. It is recommended to use the scale in future studies with this sample group. Teachers' and pre-service teachers' self-efficacy beliefs about rhythm teaching were not discussed in this study, which aimed to measure attitudes towards rhythm teaching. The development of a scale in this direction is considered to be beneficial to the field.

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Digital Real Psycho-Semioitic Language Uses of Global and Regional "Feeling of Fear and Some Requested Rol Models in the Future through Virtual Reality Created in the Real Universe

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Abstract
The subject of this article is: First of all, after examining whether "FEAR FEELING" is dominant in managing and guiding people; To reveal what linguistic and visual indicators can be that fuel, emphasize and adjust the dose of this feeling in order to manage, direct and guide large masses of people in the desired direction, and the new world that pierces the global local digital real psycho-semiotic language uses and some of them through these linguistic and visual indicators.

It is to present some of the role models that are contrary to the established order, which I define as the indicators of the order of the future, but that are desired in the future.
Keywords: Fear, Linguistic, Visual, Indicative, Psycho-Semiotic Language Uses, Managing, Motivating, Large Masses of People, Anti-establishment Role Model.

Introduction
Fear is defined in various ways. Dictionary definition, definitions of disease, there are many branches of it: There are religious fears, sexual fears, there are almost as many types of fear as there are people, because fears also have a "uniqueness", as it turns out. It turns out that human material is a creature that can be manipulated and manipulated. It is the easiest to manipulate and motivate people through their fears.

Dominant in managing and motivating people; The aim of this study is to reveal the linguistic and visual indicators that incite, emphasize and adjust the direction of this emotion in order to manage, direct and guide large masses of people in the desired direction, and to examine the effect of psycho-semiotic language use through these linguistic and visual indicators.

The field of human and fear is a moving, slippery field. With fine tuning, every person can be frightened; Fears can also be manufactured and presented in compound containers. Have you ever thought of the idea that the prevailing energy in our age might be fears?
What do you think are/are the most common energies in this digital age we live in and why? If you say fears, does it have anything to do with the digital age, that is, the universe of meanings surrounding ordinary people, surrounded by digital / smart environments more than ever before?

Do you think all this is a coincidence? By articulating the New World order and the War environment...If you say fears, does it have anything to do with the digital age, that is, the universe of meanings surrounding ordinary people, surrounded by digital / smart environments more than ever before? Do you think all this is a coincidence? By articulating the New World order and the War environment...

None of it is accidental. If you are going to create a new world, the easiest way is to awaken all the fears and then manage them. Why do you think it is most possible to build new worlds that we want in this age? Yes, all fears can come true in the Digital Age? Because fears can be number one among the data that can be obtained from the general majority and even from everyone at any time; including sexuality. Sometimes it is the main source of direct threat, while in general, they do not even know about the digital arena; It may turn out to be child's play to motivate and manage the majority through their fears, with the use of digital real psycho-semiotic language produced from the content obtained through the analyzed psychological world of the majority. dominant in managing and motivating people; The aim of this study is to reveal the linguistic and visual indicators that incite, emphasize and adjust the direction of this emotion in order to manage, direct and guide large masses of people in the desired direction, and to examine the effect of psycho-semiotic language use through these linguistic and visual indicators.

Digital Real Psycho-Semiotic Language Uses

"Everything is presentable (!), formal, visual, managed through indicators, in order to consume, first you should be consumed, here is the 21st-century person, you in general." Nevin Algül (Algül, (Algül, 2021:796).

"Beware, the earth has ears.» Turkish Folk Culture

Attention Please! In the digital age, everywhere has eyes, ears and HANDS.

"What is Psycho-Semiotic Language Use? At the outset, Psycho-Semiotic Language Use is already a field used by public relations. This field has been expanded and defined as Psycho-Semiotic Language Use and is used in this article with this noun phrase for the first time. Public Relations provide the existing perception by changing the perspective and creating a new thought. Of course, the ideal method is performing this action always based on truths; however, the process does not always seem like that in reality. One of the objectives of this article is to define the branch of Public Relations involving this use as Psycho-Semiotic Language Use. Large masses were made ready to be managed by means of indicators. The main starting point is to make the individual who has lost touch with reality to think less. Disrupting his critical and questioning view and thus creating a 21st-century human that brings visuality to the fore are aimed. Human profiles expanded over this fabricated prototype became manageable through indicators. Strategies to manage these individuals, who have been transformed into a part of the increasingly digitalized world, from this area that needs to be more and more articulated, can also be obtained and formed from the area it covers in this environment. Talented people who use their computers like a typewriter have no chance of escaping from this administration. Particularly if he is someone who keeps a journal on his computer, if he is well-educated, if his social observations hit the bull's-eye, if he is a genius whose ideas are being patented and whose fictions earn trillions of Turkish Liras and break rating records, and if he proceeds in the advertising and music sector -the article is based on this modeling by the way- his entire life can be managed in a way to go on as a digi-slave. The decoded genetic-cultural codes, putting pressure on the psychological world of the individual on an individual basis; paralyzing and atrophying it in this way, being able to exploit him in line with its own interests like a slave and manipulating his brain are among the major abuses. For example: to be scared by law and force whenever he says that he is stolen and wants to take legal action. If the individual is a spring with multiple abilities, this discovery (!) that begins in the digital environment can initiate a process that will equip also his real-life with psycho-semiotic language. In our age, the people of the 21st-century are already trying to survive within this use. Although it can be also used in a good way, it is an inevitable fact that it is like an atomic bomb. One of the objectives of this article is to raise awareness and make a description of the situation to which the individual who can be exploited or victimized for personal and/or group interest is exposed in the most accurate way possible, to help to eliminate the possibility of surrounding him.

It can be mooted that the widespread of formalism, which facilitates the use of Psycho-Semiotic Language, is associated with the crisis of representation, which was manifested in the appreciation of impressionism in the 1870s, which is partly a reaction to the spread of photography, and continued in the formal inspections of various 'isms' of the twentieth century (Jensen, Klaus, B ., 2005:31). People guided and managed through indicators.

In case we start with psychology and move forward on definitions in order to determine the boundaries better: As If the definition of psycho is accomplished, it means that it is time to define the semiotic now.

Known "Psycho comes from Psychology: The definition of it according to Longman Active Study Dictionary is that: Psychology refers to "1. the study of or science of the minded the way it Works. This is formal usage; informal usage of it: The mind and character of a particular person or group" (Longman, 1983:486) The Psychology refers to the study of human behavior and the human mind, or the mental attitude of a group. Your parents will her definition comes from www.vocabulary.com : "find it hard to understand the psychology of the teenager.

Psychology is more than just an academic subject. The word refers to the complex mental workings and states a person, group or activity. Marketers use the psychology of consumer behavior to sell you things you don't need. Some self-help books teach you how use psychology - mental strategies and tricks - on someone in order to win arguments or get ahead."

What is Psycho-Semiotic Language Use and how does Psycho-Semiotic Language Use take place?
First of all, 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, 2021:797)

Note: Although the above section is taken entirely from this article , the sources in the article are still included. Those who want to see it in all its clarity can learn other resources from this article (Algül, 2021:797).

Widespread Fear in Global and Regional Dimensions Digital Real Psycho-Semiotic Language Uses and Role Models Against the Established Order, which are like the heralds of the new world order.
Should be clear that the global use of «Psycho-Semiotic Language» is made from digital environments. It is a phenomenon that is carried out over the virtual environment. The meaning attributed to the word real is that the universe of meanings surrounding the individual in the real universe he lives in is equipped with these virtual produced contents.
Just a few examples in this presentation: Examples for global fear; war fear!

All of the linguistic and visual signs implying war.An example from Turkey. Aegean waters were heated. The waters in the Aegean Sea have warmed up etc.

All of the implied linguistic and visual indications of the Ukrainian War and all non-implicated; embedded or not; and/or non-implicit linguistic and visual language uses fall under the use of psycho-semiotic language.

Figure 1
https://www.google.com.tr/search?q=%22ukraina+war

Figure 2
https://www.aljazeera.com/news/2022/8/24/russia-ukraine-war-list-of-key-events-day-182

Widespread Fear in Global and Regional Dimensions Digital Real Psycho-Semiotic Language Uses and Role Models Against the Established Order, which are like the heralds of the new world order.

A few examples:

Figure 3
https://www.sondakika.com/dunya/haber-norvec-adalet-bakani-emilie-mehl-italya

Figure 4

https://tr.euronews.com/2022/08/21/parti-goruntuleri-sizdirilan-finlandiya-basbakanina-fin-kadinlardan-dans-dayanismasi

Conclusion and Recommendations

All fears can only be overcome with the mind produced by current science. A full, functioning legal system and science will be able to overcome all fears of humanity.

I have field defined that is Digital Real Psycho-Semiotic Language Uses and Digital Manual Psycho-Semiotic Language Use Parsers'.Activities to be held for the general majority and units related to the subject to be formed in the field of law . Digital law and Digital Real Psycho-Semiotic Language Uses Units in this field and digital tracers, digital inspectors and policemen who will work in conjunction with them can be the solution but for the 20th century and beyond, the   masses shamed all the real digital psycho-semioitic language uses used to guide themselves, and a new one   suitable for the level of consciousness they have reached. The form and form of government inference seems quite utopian when we look at the history of the planet.

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Evaluation of the Suitability of High School Mathematics Textbooks for Technology Aid Education: 10 Class Samples

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ABSTRACT
In this study, it was aimed to determine the suitability of high school 10th grade mathematics textbooks for technology supported education. The pattern of this research is case study. Document analysis method, one of the qualitative data collection methods, was used in the research. In the research, 2 different textbooks, which were approved to be taught in schools and distributed in the 2021-2022 academic year, were used by the Ministry of National Education as a data source. In the evaluation of the technological suitability of the mathematics textbooks examined in the research, all the sections in the books and introduced in the organization chart were taken into account. While conducting the analysis, the type of instructional technology, its distribution in learning areas, frequency of use in these areas, and the categories of suitability for the purpose of use were taken into account in accordance with the sub-problems of the research. When the research findings are examined, it is seen that instructional technologies are not used extensively in the textbooks, different types of instructional technology are not used in the textbooks, only geogebra dynamic mathematics software is used, it is not evenly distributed in learning areas, and when viewed according to the purposes of use, it is only used for the purpose of providing information, validating and accessing information.
Keywords: textbook, math education, technology

INTRODUCTION

In the dictionary of TDK, technology is "machines, tools, devices, methods, etc., created for the purpose of accumulating, controlling, processing and transmitting power and knowledge in an industrial field. It is defined as "application knowledge covering the whole" (TDK, 2022). According to Usta ,Durukan and Hacıoğlu (2016), technology is defined as a systematic information that is essential for providing products and services in different fields, and it is emphasized that technology is an important part of life. The fact that technology shows itself effectively in all areas of life has made it inevitable to use it in the field of education (Aydın, 2005). The use of computers in teaching activities has become widespread due to reasons such as the use of technology facilitates learning in education, provides effective use of learning time, makes learning environments enjoyable and reduces costs economically (Akkoyunlu, 1998; Daşdemir, et al., 2012). Computer-assisted education is defined by Baki (2002) as the use of computers in education and teaching processes so that an individual can define their own learning and increase their performance with the help of graphics, animation, sound and shapes (Baki, 2002). It is also seen that the effectiveness of computer-assisted instruction is connected to the relations between the individual, knowledge and technology (Meagher, 2005 cited in Cute, 2013).

In this context, the integration of technology into educational processes has brought about its use in mathematics teaching processes. In fact, the use of technology is counted among the school mathematics teaching processes and standards on a national basis, and it is said that "technology is an important basis in mathematics learning and teaching, it affects the mathematics taught and enriches the learning of the student" (National Council of Teachers of Mathematics, NCTM, 2000; cited in Öksü, Ak and Uça, 2009). The use of technology in educational processes enables students to appeal to different senses, enrich learning environments and increase the permanence of learning, and present content effectively (Güneş & Buluç, 2017; Kuzgun & Özdinç, 2017). In this context, distance learning portals are created where different electronic content options are offered to students, internet supported classrooms are built, and different options are evaluated so that students can access e-contents online and offline (Babacan & Şaşmaz Ören, 2017). One of these studies is to present the textbooks in interactive ways as a self-titled book or to add technology-supported applications to the textbooks in accordance with the curricula (Ekici & Yılmaz, 2013).

When the mathematics curriculum is examined, the concept of digital competence in the program includes the safe and critical use of information and communication technologies for work, daily life and communication. The competence in question is supported by basic skills such as accessing and evaluating information, using computers to store, producing, presenting and exchanging information, as well as participating in common

networks and communicating via the internet. Studies have also found that the use of computer-assisted instruction in mathematics teaching processes increases students' success in mathematics and their participation in the lesson, and facilitates their conceptual learning (Bayturan, 2011; Küslü, 2015).

Although studies on the use of technology in mathematics teaching processes in our country are limited, they mostly focus on describing the views of teachers on using technology (Çakır & Yıldırım, 2009; Yenilmez & Sarıer, 2007; Arslan 2003; Çağıltay et al., 2001). However, the integration of technology into educational processes can be handled at three levels, namely micro, meso and macro levels, and a true integration is defined as the macro level, that is, the presentation of learning experiences in the entire education program in harmony with technology (Wang and Woo, 2007: 148). In this context, when Turkey is evaluated, it is seen that technology is perceived as integration at the micro level, that is, on a lesson basis, and teachers try to achieve this integration with their individual efforts (Yıldırım, 2007; Kolburan-Geçer & Gökdaş, 2014; Sarı & Altun, 2015). From this point of view, it can be seen more clearly that the main sources that can help teachers are textbooks.

Despite the developing and changing world, textbooks remain an indispensable tool of the learning process and a basic resource for teachers (Aslan, Okumuş and Koçoğlu,2015, Altun, Arslan & Yazgan, 2004; Işık, 2008) Textbooks provide education and training in different regions and schools. (Sevimli, Sevimli & Kul, 2015). It serves as a guide. Technology is also used in mathematics textbooks to fully realize the learning outcomes. However, there are different opinions on what level, for which purpose and from which level technology should be used, starting from the primary school years, and the differences in application are related to the students. It is said that it blunts skills such as making arithmetic operations and making predictions (Lin & Yuan, 2009). While Arslan and Özpınar (2009), one of the educators working in this field, emphasize that instructional technologies are used at a limited level in the teaching processes of mathematics lessons, Nasari (2008) points out that the technologies to be used should encourage individuals to find solutions for different problem situations (Arslan and Özpınar, 2009; Nasari, 2008).

In this study, it was aimed to determine the suitability of high school 10th grade mathematics textbooks for technology supported education. In accordance with this purpose;
1. What is the type of technological tools envisaged to be used in textbooks?
2. What is the frequency of use of instructional technologies in textbooks according to learning areas?
3. What are the purposes of using instructional technologies in textbooks?
seeking answers to questions.

METHOD
Research Design and Method
The design of this research, which aims to evaluate the suitability of 10th grade mathematics textbooks with teaching technologies, is a case study. Document analysis method, one of the qualitative data collection methods, was used in the research. Document analysis is a systematic analysis method used to examine and evaluate printed or electronic materials (Wach, 2013). In this context, the document analysis method is generally used as a data source for curricula and textbooks and allows the examination of written materials or documents according to scientific research purposes (Yıldırım & Şimşek, 2006).

Data Source
In this research, which aims to evaluate the suitability of 10th grade mathematics textbooks with instructional technologies, 2 different textbooks, which were approved to be taught in schools and distributed in the 2021-2022 academic year, were used as data sources. Although these books are prepared by private publishing houses, the books were accessed from the link https://www.matematikciler.com/10-sinif-matematik-ders-kitabi/. One of these books, which were examined within the scope of the study and approved for distribution to schools, was prepared by the Ministry of National Education and the other was prepared by Anka Publications. The reasons for choosing the textbooks examined within the scope of the study at the 10th grade level, the frequent use of dynamic geometry software and different teaching technologies at the 10th grade level, the inadequacy of content analysis studies on the mathematics textbooks taught at this level, and the minimum age required for the use of technology in learning and teaching processes. It can be listed as addressing an age level above the limit (Kulik, 2013). Before the textbooks studied were examined according to their technology competencies, preliminary examinations were made about the books. The number of pages of the 1st course book prepared by the Ministry of National Education is 350, and the number of pages of the course book prepared by ANKA publications is 307. The studies in the books are structured under the sub-learning areas of numbers and algebra, data, counting and probability and geometry, and it is aimed to provide students with a total of 27 learning outcomes in 216 course hours. 1. There are sections in the course book where there are questions about the previous information about the sub-learning area, the accuracy of formulas and clues are shown, the lives and

works of scientists are introduced, there are interesting, useful, thought-provoking information, questions and explanations, and examples and solutions are included. 2. In addition to the ones in the first book, the sections that use information and communication technologies in the course book are shown by opening an area in the organization chart.

Data Analysis

In the evaluation of the technological suitability of the mathematics textbooks examined in the research, all the sections in the books and introduced in the organization chart were taken into account. The type of instructional technology, its distribution to learning areas, frequency of use in these areas, and the categories of suitability for the purpose of use were taken into account in accordance with the sub-problems of the research (Sevimli & Kul, 2015). The process steps followed by the researcher in the document analysis of the mathematics textbooks and the categories obtained through the questions and answers used to complete the study in these process steps are given in Table 1.

Table 1. Process Steps in the Technology Conformity Analysis of Textbooks

Process Steps	Research Question	Category
Type of technology	What types of instructional technologies are used in the textbooks?	*Dynamic computer software *Smart phone *Internet
Frequency of use according to learning area	What is the frequency of use of instructional technologies in textbooks according to learning area?	* Numbers and algebra *Data, counting and probability *Geometry
Purpose of use	What is the purpose of using instructional technologies in textbooks?	*Giving information *Exploring *Generalization *Verification *Accessing information

The explanations regarding the process steps are given below.

Instructional Technology Type

Instructional technologies have a broad meaning that includes the design, development, use and evaluation of instructional materials in accordance with instructional methods and techniques (Seels & Richey, 1994). With the developing and changing technology and technology taking its place in educational environments, technology has become an integral part of the process rather than being a tool used in transferring learning content to students (Fouts, 2000, 9). In this process, many tools such as computers, projectors, overhead projectors, radio and television used in accordance with the course and content, as well as programs used to prepare interactive presentations or videos, programs used for coding, electronic contents and distance learning portals. Many types of instructional technology are used. When the textbooks are examined within the scope of the study, since it is seen that dynamic computer software (GeoGebra), smart phone and internet are used as a type of instructional technology in the books, the numbers are grouped by considering these headings.

Frequency of Use of Technology by Learning Area

10th grade mathematics textbooks are structured in accordance with the secondary education mathematics curriculum determined by the Ministry of National Education and are prepared in accordance with the acquisitions under the learning areas. In this context, there are three learning areas in the 10th grade, unlike other grade levels, and these learning areas are determined as Numbers and algebra, Data, counting and probability and Geometry. In this context, while determining the frequency of use of instructional technologies according to learning areas, the number of technological contents was determined and presented.

The Purpose Of Using Technology

The use of instructional technologies in education and training processes is preferred for reasons such as creating motivation in students, increasing teacher quality and productivity, being one of the requirements of the information age, and supporting teaching methods and techniques (Roblyer & Edwards, 2005). Under this title, it has been tried to determine which of the instructional technologies in the textbooks are used for the purposes of providing information, discovering, generalizing, verifying and accessing information. While determining these titles, the questions that mathematics seeks answers to were taken into account, and it was taken into account that mathematics is a counting, measuring and drawing tool used to solve problems in daily life, it develops logical thinking and inference skills in people, and it is an exploration tool used in understanding and recognizing the world (Baykul, 1997).

Validity And Reliability Of Data

While evaluating the compatibility of the categories created in the content analysis with the processing steps, assistance was obtained from two experts trained in the field of mathematics education. The categories were finalized in line with the feedback from the field experts. The consistency coefficient was calculated for the reliability of the codings, and the coefficient was calculated as 0.84 by dividing the consensus codes by the total number of codes (Miles and Huberman, 1994).

RESULTS

Considering the process steps in the evaluation process of the research findings, the type of technology envisaged to be used, frequency of use, purpose of use and suitability for use are listed under the headings. The distribution of technological tools that are foreseen to be used in textbooks according to their types is given in Table 2.

Table 2. Type of Instructional Technologies Used in Textbooks

Instructional Technologies Type	Textbook 1	Textbook 2
Dynamic Mathematics Software	6	4
Smartphone	-	1
Internet	-	-
Total	6	5

When Table 2 is examined, it is seen that 6 dynamic mathematics softwares are used in Textbook 1. In Textbook 2, it is seen that a total of 5 instructional contents are included, 1 of which is an informative text for smart phones and 4 of which is dynamic mathematics software.

The usage of dynamic mathematics software used in Textbook 1 is given in Figure 1.

Örnek 74

$f(x) = ax + b$ şeklinde verilen bir doğrusal fonksiyonun grafiğini bir matematik yazılımı olan GeoGebra programı ile çizerek a ve b katsayıları ile fonksiyonun grafiği arasındaki ilişkiyi inceleyiniz.
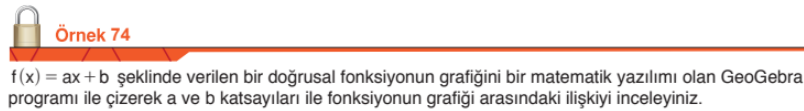
Table 3 shows the frequency of use of instructional technologies used in textbooks according to learning areas.

Table 3. Distribution of Instructional Technologies Used in Textbooks by Learning Areas

Learning Space	Textbook 1	Textbook 2
Numbers and algebra	3	3
Data, counting and probability	-	-
Geometry	3	2
Total	6	5

According to Table 3, when we look at which learning areas the instructional technologies used in the textbooks are structured, it is seen that they are mostly structured under the sub-learning area of numbers and algebra. In this context, it is seen that no instructional technology is used under the data, counting and probability sub-learning domain, followed by the geometry sub-learning domain in the second place. Example studies on the use of instructional technologies in the sub-learning areas of geometry and numbers and algebra, respectively, are given in Figure 2.
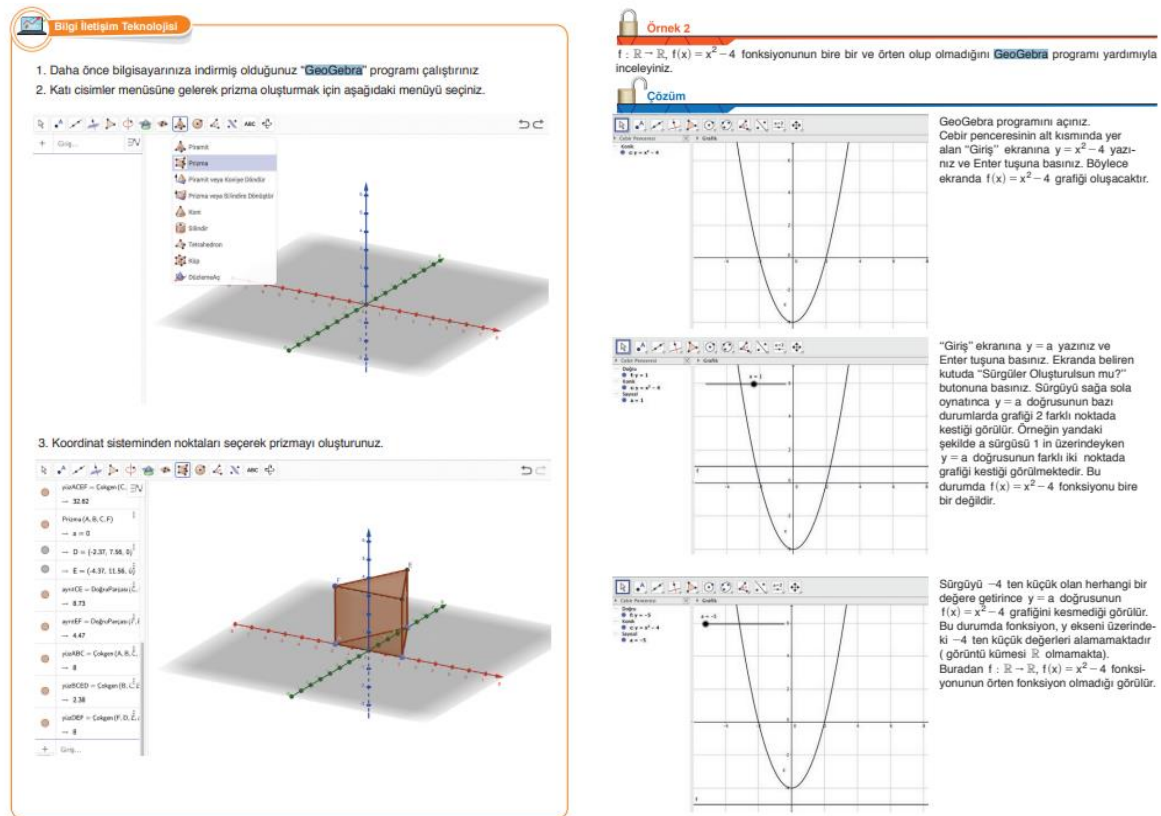
Figure 2. Case Study

The distribution of the instructional technologies used according to their intended use is given in Table 4.

Table 4. Distribution of Instructional Technologies Used in Textbooks by Purposes of Use

Purpose of usage	Textbook 1	Textbook 2
Giving information	2	3
Accessing information	-	2
Verification	4	-
Exploring	-	-
Generalization	-	-
Total	6	5

Looking at Table 4, it is seen that a total of 5 activities were given to provide information, 4 to verify, and 2 to access information.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

When the research findings are examined, it is seen that instructional technologies are not used extensively in the textbooks, different types of instructional technology are not used in the textbooks, only geogebra dynamic mathematics software is used, it is not evenly distributed in learning areas, and when viewed according to the purposes of use, it is only used for the purpose of providing information, validating and accessing information. It is seen that these technologies are only used under the headings in the curriculum and technology is not considered as a part of the process in the teaching processes. However, studies in this field draw attention to the necessity of integrating education processes with technology and emphasize the importance of pre-service teachers and teachers benefiting from different types of instructional technology such as simulation, web page, video and software while presenting educational content (Sadi & Şekerci, 2010; Yaman, 2007; Cabı and Ergün, 2016).

Although the number of studies on the use of technology in mathematics textbooks is not very large, it is seen that the current studies focus on student and teacher views on the use of instructional technology types or attitudes towards technology (Arslan & Bilgin, 2020; Venkatesh, Morris, Davis, & Davis, 2003; Uygun and Kılıçkara, 2019). In these studies, it is seen that students are happy to use technology in lessons and they develop positive attitudes towards technology as the amount of use increases.In the study carried out by Şirin and Kul (2015), attention is drawn to the design of content suitable for the use of technology in textbooks, and it is

emphasized to increase the activities and scenario writing activities that develop high-level thinking skills such as modeling and association for book authors.

Some studies show that the majority of teachers do not take any action regarding the integration of technology into the learning and teaching processes (Demiraslan & Usluel, 2005). In addition, it is seen that instructional technologies strengthen the communication between teachers and students and support them to gain positive learning experiences (Doering & Beach, 2002). Based on these findings, as a result of the research, it is suggested that especially teacher candidates and textbook authors should be given lectures or seminars on teaching materials and digital content development, and teachers' deficiencies should be supported with in-service training. In a study conducted by the Ministry of National Education in 2016 on teacher competencies, it was emphasized that teachers should be technology literate, benefit from information processing technologies, use technology in preparing technology content and material preparation, and benefit from technology in data analysis and evaluation processes. It is seen that the emphasis is placed on (MEB, 2016).

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Examination of Stress Levels and Professional Burnout Relations of Physical Education and Sports Teachers

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ABSTRACT
It is seen that stress and professional burnout are increasing day by day in teaching, which is one of the difficult and important professions today. Teaching is one of the most strenuous jobs due to difficult working conditions. In addition to professional competence, teaching is a sustainable field of duty with tolerance, patience, self-sacrifice and love-respect for the profession. While high sensitivity, patience, willingness to teach and continuity are of great importance in teacher-student dynamics, the mood of the teacher who struggles with the feeling of burnout is also among the factors that primarily affect the classroom environment. Teachers are at a high risk of burnout due to significant pressures in their working conditions and environments. It is possible to say that the dimensions of stress and burnout are higher in physical education and sports teachers than in other branch teachers. It has been stated in many studies that stress is a factor affecting teachers' burnout. However, most of the studies have been content with emphasizing that stress is a source that causes burnout. In this study, stress and burnout were considered as the main factors, and the relationship between stress and burnout and how it affected burnout was examined. When the literature is examined, it is seen that the burnout and stress levels of physical education and sports teachers are examined separately, and whether both concepts are examined within a single subject or not. In this context, this research has an important place in determining the stress and burnout levels of Physical Education and Sports teachers in the TRNC. Accordingly, the aim of this study is to examine the effects of stress levels of physical education and sports teachers working in the Turkish Republic of Northern Cyprus on their professional burnout. The sample of the study consists of a total of 100 teachers selected by random sampling among physical education teachers working in schools affiliated to the Ministry of National Education in the Turkish Republic of Northern Cyprus, Girne, Nicosia and Famagusta regions in the 2021-2022 academic year. It was developed by Cohen, Kamarck and Mermelstein (1983) and Eskin et al. (2013), the "Perceived stress scale" is measured using the "Maslach burnout inventory" created by Maslach and Jackson (1981) and translated into Turkish by İnce and Şahin (2015) to examine occupational burnout. The data obtained from the study showed that there is a positive and significant correlation between teachers' stress levels and burnout levels. In addition, it was determined that the stress perceived by the teachers was a significant predictor of burnout.
Keywords: Physical education and sports teacher, stress, burnout

INTRODUCTION

Stress is a factor that affects teachers' performance in work environments. Most of the time, it can cause individuals to stay away from work or even quit (Mosadeghrad, Ferlie & Rosenberg, 2011). Teachers may experience exhaustion, depressive mood, poor performance and personality disorder due to the stress they experience in their working life. For this reason, many teachers change schools or leave their professions (Chambers, Johnson, Jones-Rincon, Tsatenawa & Howard, 2019; Madigan & Kim, 2021).

Stress is a concept that usually causes sadness in individuals and causes individuals to collapse. It is seen as a force that wears out individuals mentally and physically. In particular, individuals are exposed to stress, both from relations with other people and in line with the demands of the organization, while fulfilling certain responsibilities within the organization (Pehlivan, 1995).

Cosgrove (2000) examined how stress plays a vital role in teacher breakdowns and the reasons that they are so common today's schools. Teachers are the greatest power that develops and trains human resources in a society. However, many problems experienced by teachers (low salary, crowded classes, unplanned assignments) cause teachers to experience stress in their professions (Erkmen & Çetin, 2008).

Burnout is now known as a work-related illness. Problems and problems arising from the work environment of individuals create a negative and stressful situation in individuals in the future and cause burnout (Polat, Ardıç, & Türkan, 2014). It is seen that the teaching profession experiences more burnout compared to other professions. Among the main reasons for this situation, the fact that teachers are in constant communication with individuals can be said to be more self-sacrificing in the teaching profession than in other professional groups. These situations

first create a state of stress and fatigue in teachers and then lead them to burnout (Seferoğlu, Yıldız, & Yücel, 2014).

It is possible to say that the feeling of stress and burnout on physical education and sports teachers is higher than that of other teachers. Because it is known that the duties of physical education and sports teachers continue after the classes are over. Compared to other teachers, physical education and sports teachers can be coaching, refereeing or coaching etc. in sports activities within the school, except for the course load they receive. By taking on roles, they are more physically and psychologically worn out. The fact that these studies have been carried out for many years shows that the level of stress and professional burnout on teachers is more wearisome than other teachers (Odabaş, 2019).

It has been stated in many studies that stress is a factor affecting teachers' burnout. However, most of the studies have been content with emphasizing that stress is a source that causes burnout. In this study, stress and burnout will be discussed as the main factors and the relationship between stress and burnout and how it affects burnout have been examined. In this context, this research has an important place in determining the stress and burnout levels of Physical Education and Sports teachers in the TRNC.

The aim of this study is to determine the relationship between physical education and sports teachers' perceived stress and burnout levels and to reveal how stress predicts professional burnout."Is there a significant relationship between the perceived stress levels of physical education and sports teachers and their professional burnout?" The question has been tried to be answered.

The burnout situation experienced by teachers in educational institutions is seen as a serious problem that should be considered. Teachers are responsible for all educational and instructional functions in the school. In this context, the low performance of teachers due to burnout will be reflected in the quality of education and training. In this context, there will be significant problems in terms of quantity and quality in the structure of the education given (Girgin & Baysal, 2005).

Teachers' low performance due to burnout affects the quality of education and training. The fact that the concepts of "stress" and "burnout" were not examined together on Physical Education and Sports Teachers in the TRNC, and the prediction that this study can raise awareness for the candidates and teachers who want to become a Physical Education and Sports Teacher in the TRNC reflects the importance of this study.

Main concepts of research
Stress: Cüceloğlu (1996) stress is a frequently encountered situation in daily life; It is defined as the effort that an individual spends above his physical and psychological limits due to incompatible situations in his physical and social environment.
Stress is a concept that usually causes sadness in individuals and causes individuals to collapse. Stress is seen as a force that wears out individuals mentally and physically (Pehlivan, 1995).

Perceived Stress: It is the unpleasant feelings and ideas that people have when they believe they cannot cope with environmental demands (Aronson et al., 2012).

General Characteristics of Stress
The general characteristics of stress are listed as follows (Mavili Aktaş, 2001).
• Stress is a multidimensional phenomenon that can have both positive and negative effects on individuals' job performance.
• In addition to the numerous bad aspects that can be experienced in the society, some positive aspects (such as success and graduation) can also create stress. Therefore, stress is inevitable.
• Stress is one of the most important factors that determine the success and performance of an organization.
• Stress has different effects on people, but if it causes too much sadness, it can lead to many medical problems.

Types of Stress
Stress is a phenomenon that can be encountered in every area of human life, in every environment and at any time. In order to explain stress better, stress types and their characteristics will be discussed under this topic. Stressful situations and types of stress are divided into four categories. Stress arising from the physical environment, stress arising from work or profession, daily stresses and stresses arising from a life crisis are these four main groups (Baltaş and Baltaş, 2013).

1. Stress Caused by the Physical Environment

One of the many factors that contribute to stress is the physical environment, but the physical environment is sometimes not seen as one of these factors. Therefore, it may not be understood that it is the primary source of stress-related symptoms (Yurtsever, 2009). Air pollution, noise, crowd, radiation, heat, dust, coldness and other physical factors can all cause stress arising from the physical environment (Baltaş and Baltaş, 2013). War, earthquake, flood, tsunami, pandemic and fire are accepted as universal sources of stress for individuals all over the world (Yöndem, 2015).

2. Stress from Work or Occupation

Heavy work, night work, piece-based production, overload, extreme light work, working under time pressure, jobs that require a lot of responsibility and decision making, jobs that are not allowed to contribute in any way, excessive responsibilities in the company, excessive workload, wages Workplace stress, Work-related issues, working conditions, conditions arising from the physical environment of the workplace, arguments among colleagues and such problems are the factors that can cause workplace-related stress (Yurtsever, 2009; Baltaş and Baltaş, 2013).

3. Daily Stress

These stresses, which are the usual tensions of daily life, arise in response to various situations or events or as a result of the conflicting desires of individuals.Getting stuck in traffic, disrupting chores at home, dealing with bureaucratic hurdles, burning food, dealing with a crying child, etc. is an example of this form of stress (Baltaş & Baltaş, 2013). Many other factors are important daily stressors, such as economic problems, health problems, exposure to noise, interpersonal communication conflicts, problems specific to children's education and development, decision-making and choice situations, and barriers to self-development efforts.

4. Stress of Life Crises

This type of stress consists of stresses that will shape each person's life in a unique way. Examples include serious illness, childbirth, death of a family member or close friend, dismissal, bankruptcy, etc. can be counted (Baltaş and Baltaş, 2013).

Sources of Stress in Teachers

Teachers, nurses and administrators are the professional categories that report high levels of occupational stress, according to the results of a 2002 study by the Health and Safety Director (HES), one of the UK's occupational health and safety agencies.

There is always pressure on teaching. However, there are some useful qualities that should be noted. Stress on the positive side; Teachers can be encouraged to try new teaching methods, use innovative tactics to increase students' motivation, and reflect on their own teaching. The harmful effects of stress emerge only when it is excessive (Nagel & Brown, 2003). Although low-level stress helps teachers stay motivated, the stress they encounter at school can have a negative impact on their physical, emotional, and psychological health. Stress can have a negative effect on the school climate by making it difficult for the teacher to communicate with colleagues, students, parents and school management. The stress that teachers encounter at school affects their families, their relationships with family members, their duties and responsibilities at home, and causes work-family conflict (Engin & İpek, 2020).

Burnout

Although there are many definitions in the literature, the concept of burnout is generally defined as the end of energy, power or resources, failure or fatigue (Otacoğlu, 2008). According to Maslach's definition, it is a state of failure, fatigue, and exhaustion brought on by energy, strength, and potential overstrain. In his later research, he revised his definition and defined it as a sustained response to emotional and interpersonal stressors in the workplace, depending on individual, social, societal, and organizational factors.

Burnout: Burnout is a process that primarily affects individuals emotionally and continues with depersonalization and low personal achievement (Maslach, Schaufeli & Leiter, 2001). It is characterized as the loss of impulses, desires and ideals as a result of an individual's working conditions (Dini Tüm, 2013).

Dimensions of Burnout

A person's level of fatigue can be expressed by his physical and mental breakdown in the face of difficulties. Maslach and Jackson (1981) defined burnout as three dimensions: emotional exhaustion, depersonalization, and personal failure. According to Jackson, Schwab, and Schuler (1986), these three elements come together to form the idea of burnout. According to them, each concept manifests differently in different situations. On this framework, cause-effect relationships are reached.

A person who becomes desensitized manifests as a person who refuses to fulfill his duties by talking to his colleagues and taking frequent and long breaks (Cordes & Dougherty, 1993). At this burnout level, the individual has an attitude that is humiliating, indifferent and does not value human ideals, and does not think that the other person is a human being (Singh et al., 1994). When Leiter and Maslach (1988) investigated the effect of interpersonal interactions on burnout, they found that greater emotional exhaustion and depersonalization negatively affected the experience of success.

People in the personal failure dimension experience a lack of self-confidence and a sense of inadequacy when they fail. The individual devalues his personal skills in his own mind, when he makes self-criticism, he first focuses on his bad habits and enters a vicious circle in which he makes no attempt to become free. The symptoms of this dimension were exemplified by Cordes and Dougherty (1993) as the mood of an individual in a boat that is ready to sink in the sea and while trying to drain the water from the boat.

Occupational Burnout
İnci (2020) associates occupational burnout with technology and states that significant increases in production and productivity quality with the advancement of technology draws attention in today's world, and that these developments make positive contributions to production, stress and workload in many areas, while this stress and workload and pressure of production are on human beings. negative effects; stated that one of the most important problems of our age on employees is occupational burnout and burnout syndrome.

According to Cherniss, burnout is not a temporary exhaustion or strain, but a permanent state that results in an individual's alienation from his or her job. Cherniss defined burnout as a situation that creates motivational, emotional, attitudinal and behavioral changes in response to work stress (Act. Avşaroğlu et al., 2005).

METHODOLOGY
In this study, the relational survey model, which is one of the descriptive research methods, was used to examine the effects of perceived stress levels of physical education and sports teachers on their professional burnout.

The universe of the research includes the teachers working in the schools affiliated to the Ministry of National Education in the Kyrenia, Nicosia and Famagusta regions of the TRNC in the 2021-2022 academic year.The sample of the study consists of a total of 101 teachers selected by random sampling among physical education teachers.

"Socio-Demographic Information Form", "Perceived Stress Scale" and "Maslach Burnout Scale" were used as data collection tools to evaluate personal characteristics.

Perceived Stress Scale (PSS) It was developed by Cohen, Kamarck and Mermelstein (1983) and Eskin et al. (2013) adapted into Turkish. The 5-point Likert-type 14-item scale evaluates how stressful some events in a person's life are for him. Perception of inadequacy and perception of stress/discomfort are the two sub-dimensions of the scale. Positive statements of the scale in seven questions (4, 5, 6, 7, 9, 10, 13) are reverse coded and high scores indicate high levels of perceived stress due to self-efficacy and stress/discomfort.

Maslach Burnout Scale (BBI)
The Burnout Inventory, created by Maslach and Jackson (1981) and published as Maslach in the literature, consists of 22 questions with seven-level Likert-type response alternatives and three sub-dimensions. Burnout is measured by the dimensions of emotional exhaustion, depersonalization and personal failure as variables. Scale items were rated from 1 to 7, with 1 being "never" and 7 "always".

FINDINGS

Table 1. Distribution of teachers according to their socio-demographic characteristics

	n	x̄	s	Min	Max
Emotional Burnout	101	27,16	10,31	9	58
Depersonalization	101	10,60	5,50	5	30
Decreased Personal Achievement	101	29,96	11,59	9	56
Maslach Burnout Inventory	101	67,72	15,94	39	132

When Table 1. is examined, it is seen that 56.44% of the teachers are female and 43.56% are male, 36.63% of them are 30 years old and below, 31.68% are 31-40 years old and 31.68% are of them were in the age group of 41 and over, 26.73% of them had administrative duties, 44.55% of them were 5 years and below, 33.66% of them were 6-15 years and 21.78% of them were 16 years. and more years of service, 48.51% were single and 51.49% were married.

Table 2. Teachers' Maslach Burnout Inventory scores

	n		s	Min	Max
Yetersiz Özyeterlik algısı	101	11,37	6,30	3	28
Stres/rahatsızlık algısı	101	17,31	4,44	8	29
Algılanan Stres Ölçeği	101	28,67	8,63	14	50

It was determined that the teachers who participated in the study got an average of 27.16±10.31 points from the emotional burnout factor, 10.60±5.50 points from depersonalization and 29.96±11.59 points from the decrease in personal achievement. Teachers received an average of 67.72±15.94 points from the "Maslach Burnout Inventory".

Table 3. Teachers' Perceived Stress Scale scores

	N	Percentage (%)
Gender		
Female	57	56,44
Male	44	43,56
Age Group		
30 and below	37	36,63
31-40	32	31,68
41 and above	32	31,68
Administrative duty		
Yes	27	26,73
No	74	73,27
Years of service		
5 years and below	45	44,55
6-15 years	34	33,66
16 years and above	22	21,78
Marital status		
Single	49	48,51
Married	52	51,49

It was determined that teachers got an average of 11.37±6.30 points from the "Perception of Insufficient Self-Efficacy" factor in the "Perceived Stress Scale" and an average of 17.31±4.44 points from the "Perception of Stress/Discomfort" factor. It was observed that the teachers got an average of 28.67±8.63 points from the "Perceived Stress Scale" and the lowest score was 14 and the highest score was 50.

Table 4. Correlations between teachers' Maslach Burnout Inventory and Perceived Stress Scale scores

		Emotional Burnout	Depersonalization	Decreased Personal Achievement	Maslach Burnout Inventory	Insufficient Self-Efficacy Perception	Perception of stress/disco	Perceived Stress Scale
	N		101	101	101	101	101	101
Emotional Burnout	r	1	0,649	-0,288	0,602	0,000	0,304	0,122
	p	.	0,000*	0,004*	0,000*	0,997	0,002*	0,225
Depersonalization	r		1	-0,296	0,488	0,036	0,276	0,117
	p		.	0,003*	0,000*	0,719	0,005*	0,243
Decreased Personal Achievement	r			1	0,509	0,100	-0,041	0,094
	p			.	0,000*	0,320	0,682	0,350
Maslach Burnout Inventory	r				1	0,155	0,278	0,252
	p				.	0,121	0,005*	0,011*
Insufficient Self-Efficacy Perception	r					1	0,360	0,874
	p					.	0,000*	0,000*
Perception of stress/discomfort	r						1	0,726
	p						.	0,000*
Perceived Stress Scale	r							1
	p							.

When Table 4. was examined, it was determined that there were statistically significant and positive correlations between the scores of the teachers on the perception of stress/discomfort factor in the Perceived Stress Scale and the scores they got from the Maslach Burnout Inventory in general and the emotional exhaustion and depersonalization sub-dimension (p<0.05). As the teachers' scores on the perception of stress/discomfort factor in the Perceived Stress Scale increase, the scores they get from the Maslach Burnout Inventory in general and the emotional exhaustion and depersonalization sub-dimension also increase.

CONCLUSIONS
According to the findings obtained from the research, a positive and significant relationship was found between the scores the teachers got from the Perceived Stress Scale in general and the scores they got from the Maslach Burnout Inventory in general.

When the scores obtained by the teachers from the "Perception of Stress/Discomfort" factor in the "Perceived Stress Scale" were compared with the scores obtained from the "Maslach Burnout Inventory" overall and the "Emotional Burnout" and Depersonalization sub-dimension, it was found that there was a statistically significant and positive relationship (p). <0.05.

As the scores of the teachers in the "Perception of Stress/Discomfort" factor in the "Perceived Stress Scale" increase, the scores obtained from the overall "Maslach Burnout Inventory" and the "Emotional Burnout" and "Depersonalization" sub-dimensions also increase.

In many burnout studies in the literature, it is stated that one of the important factors affecting burnout is stress (Kaçmaz, 2005; Kayabaş, 2008; Seferoğlu, Yıldız, & Yücel, 2014). In the results obtained in our research, a significant and positive relationship was determined between stress and burnout.

According to the findings obtained from the research, it was determined that teachers' Perceived Stress Scale stress/discomfort sub-dimension scores predicted Maslach Burnout Inventory scores positively and significantly.

When the literature is examined, it is seen that one of the predictors of burnout is stress. Dincerol (2013) stated that individuals experiencing emotional burnout firstly go through the stress phase. Payton (1986) stated that teacher burnout is caused by stressful situations. In this context, the results of our study are similar to other studies.

Regarding our research;
1. Organizing seminars on strategies to cope with stress by relevant institutions for Physical Education and Sports teachers working in the TRNC,
2. Conducting research to determine the stress sources of Physical Education and Sports teachers by relevant and authorized institutions in the TRNC,
3. The results of this study are shared with the Physical Education and Sports teachers in private and public schools in the TRNC by YODAK and their opinions are taken,
4. Conducting a more in-depth analysis by considering the sources of stress in future studies,
5. In future studies, it is recommended to examine the levels of stress and burnout according to different variables.

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Examining the Changes in the Use of Communication Technologies Before and After the Pandemic

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ABSTRACT

It is an indisputable fact that the pandemic period, which affects the world in every way, also affects working, business and educational lives. During the pandemic period, different digital applications and environments started to be used with changing habits. While some technologies have become more popular during the pandemic period, others have lost their popularity. Others had to reinvent themselves. The aim of this study is to reveal how much and in what direction the changes in the use of technologies with the changing human habits during the pandemic period. The compilation method was used in this study. The aim of the studies conducted with the compilation method is to synthesize the data obtained from different articles, academic studies, interviews or experts to get results. In this study, literature review method was used to collect data. Firstly, the subject was determined, narrowed down, and then researches were carried out on the agreed subject and valid databases. In addition, official sources of the applications used in the field were also included in the literature review. After narrowing the study subject to education and technology, the most used applications in this field were examined and the study area was narrowed. For this purpose, pre-pandemic and post-pandemic usage statistics of the most used distance education technologies, especially in order not to stop education, were examined during the study. Especially video conferencing applications, course management systems and different communication environments were examined during this study.

INTRODUCTION

Soon after the Corona virus (Covid-19) occurred, it spread into many countries and affected great number of people. The World Health Organization has announced it as pandemic on the 11th of March, 2020 and as a result countries have taken various decisions in order to prevent the infestation. In terms of education, the education was decided to be online instead of face-to-face.

As well as the decision of suspending face-to-face education, many problems occurred. The governments began to search for solutions for the continuation of education of students (OECD, 2021). Using the communication technologies has been the most effective way for students to access their education fast and also to protect them healthily (Radina & Balakina, 2021).

Holding synchronic (simultaneous) lesson has been found as more effective for students in terms of online learning (Onyema et. al., 2020). In synchronized education, both teachers and students meet at the determined time (generally online) and have live lessons (Casas-Rojo et. al., 2020). Therefore, the students can ask live questions by using communication technology such as in classroom or they can find discussion environment (Arnavut & Bicen, 2017).

WhatsApp and such applications were used in order to announce lesson hours as well as to have fast communication with students (Chakraborty, 2021). For homework and project submissions, sharing materials or having written exams; lesson management systems were benefited (Chen et. al., 2020). The most benefited applications in synchronized education were video conference technologies (Gören et. al., 2020).

The video conferences were used by specific masses before the pandemic and the number of users were not very much. As a sudden occurrence of the pandemic, these technologies had to serve for greater masses globally (Asgari et. al., 2021). This situation has blindsided many applications. Many applications were found to be insufficient in serving synchronically to a great many people in various ways (Selvaraj et. al., 2021). In this environment, the applications began to be separated in terms of their usability and features. The more the need for video conference technology increases the applications continued to develop more as they are not limited to education (Özdoğan & Berkant, 2020).

The distance learning process started by using the video conference applications due to blind line for face-to-face education in schools. The beginning of this process has made out the reality of the humanity was not ready for the pandemic. As not all the students have the same possibilities, there has been a digital access problem. After this, the educators have been found as different from each other in terms of readiness level. After some time, the problems were solved and the synchronized distance learning began. The educators found the video conference applications used during this education as insufficient for their limitations and insufficient features. Many different applications were tried and ones that are more beneficial were used for not hindering the education. The companies developed and improve the video conferences and they became global (Alper, 2020). This study aims to find out how much change has been in the usage rates of the applications that were used for educational aims during the pandemic. Other aims are to find out the changes in the investments of institutions for this software, the most used applications, which ones were mostly used and how much changes happened before and during pandemic in the usage of different applications.

THE STUDY

It has been a curiosity how will the global education shape within the beginning of the pandemic. The spread of the virus fastened due to students' coming together, having lessons in the same classes and both teachers' and students' having close contact (Basilaia & Kvavadze, 2020). Although the terms such as lifelong learning, distance learning, hybrid education, lifelong education, synchronized and asynchronous terms have been in our lives for a long time; very few people knew their exact meaning. Online education is not a type of education gained from the pandemic (Dubey & Pandey, 2020). However, within the pandemic the use of this system has increased which became everyone heard and knows about that educational system (Akyildiz, 2020). Brightened within the pandemic, in this educational and communications system the only necessity is a device that can connect to the Internet, an Internet connection with the application (Hamdan et. al., 2021). In a different point of view, the online education is the model where the daily communications and sharing methods used in our daily lives for education. Therefore, the companies using the same necessary hardware used to communicate and hold meetings through these methods (OECD, 2021). So, the coronavirus pandemic has caused serious changes in our lives (Apriyanto & Adi, 2021). These changes are still going on in some of our lives. The gaining of pandemic into our social, educational and job lives our habits have changed and we started to spend more time on video conferences and such applications (Arora & Srinivasan, 2020). This study aims to find out how much the use of these applications has changed that we use for education during the pandemic. As well as to find out the changes in the investments of institutions for these software, the most used applications, which ones were mostly used and how much changes happened before and during pandemic in the usage of different applications. The study was held with compilation method, the scientific articles in the literature were reviewed, by using reliable statistics and the Internet texts the data was evaluated, interpreted, and results were gained. The study was conducted during May to August.

FINDINGS

The findings obtained from the research during this study will provide humans to gain idea about how much pandemic has changed humans' lives and habits during pandemic. As mentioned before; during pandemic not only the educational institutions used video conferences and such applications but also all the other institutions used it to continue their workflow. In addition, the people staying at home got help from this software in order to communicate with their families and friends. Although there is no need for personal use of these applications, the great companies or institutions need to pay money for more crowded usage or students. The reason is that; this software might have limitations such as number of people and duration. According to Table 1, the web conference was the most purchased software during the coronavirus pandemic. This data shows that; during the pandemic, the first problem to be solved in institutions is the communication problem. Besides video conferences, another most preferred software type was different collaboration applications. The occurrence of problems was sure due to the changes in the habits and the pandemic. As can be seen on the Table, the most invested software were time chase and security software. Storing large amount of data online on the Internet might cause security problems. Also, distance study and distance learning requires time management skills (Trust Radius, 2020).
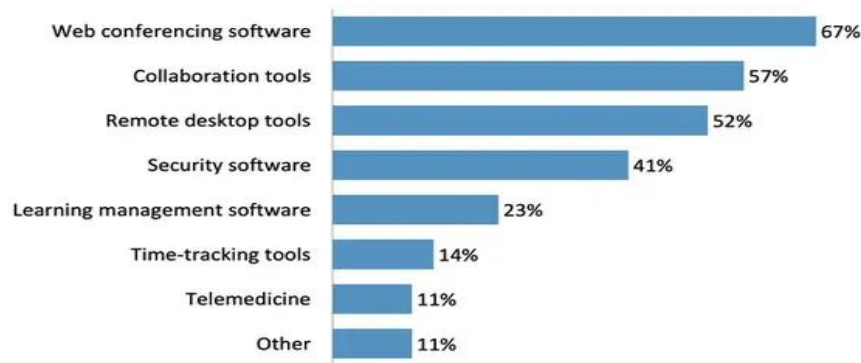
Table 1: Investments made in different software during the pandemic process (Trust Radius, April 2020)

By looking at 2021 global video conferencing market size, the market value was approximately 6.3 trillion dollars. The market value of 2020 was increased by 28% (Grand View Research, 2021). The greatest and leading market share companies were health and educational institutions.
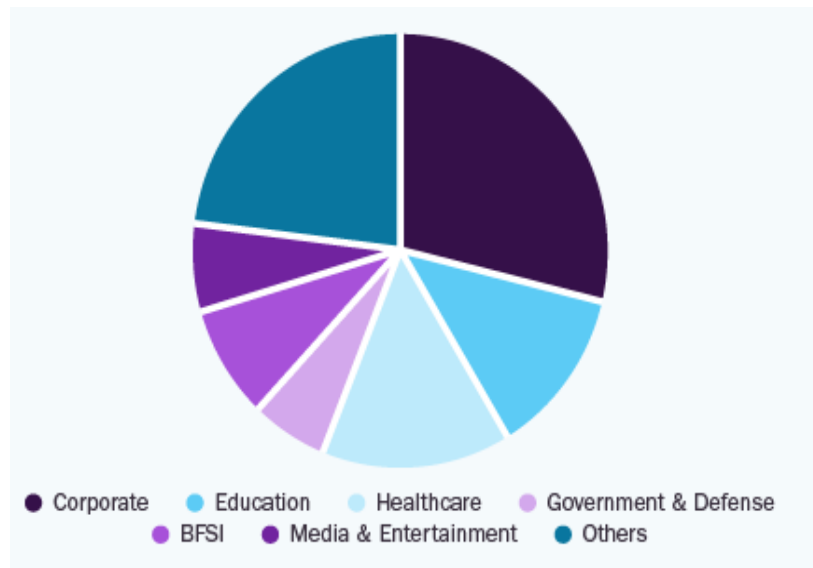
Table 2: Global Video Conferencing Market (Grand View Research, 2021)

The statistics from different resources about the most used video conference applications were reviewed. According to the general data, the applications such as Zoom, Google Meet, Microsoft Teams and Skype were the leaders of the market. While the institutions and individuals are choosing these applications, they pay attention to different criteria. According to the obtained data, the institutions pay attention firstly to the use easiness while choosing the video conference applications. Other criteria are, to provide high quality video calls for the team, to provide an easy to use solution for every user, standardizing corporation's video conferencing software, simplifying the start of meeting set up and the cost of the software. Different video conference applications in different countries might be more popular comparing to others. During research, the results may differ due to the used keywords however; most of the used application was Zoom then Microsoft Teams, Google Meet and Skype respectively. According to Table 3, the distribution the most used video conference applications in many countries are as follows;
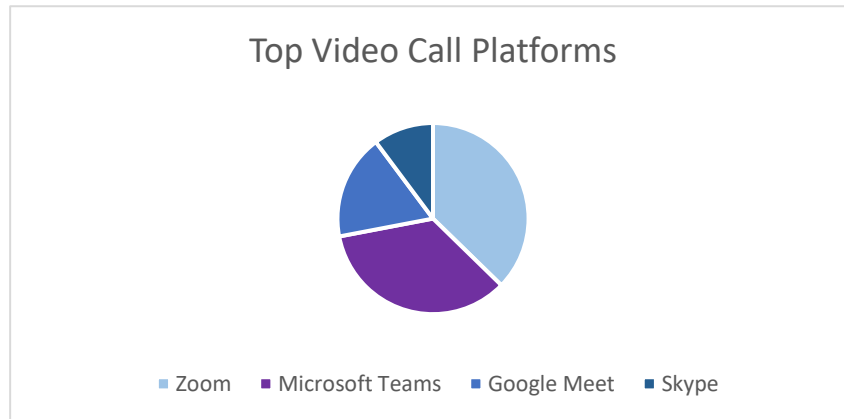
Table 3: Top video conference platforms (Business Insider, 2020)

Another study compared the use rates of online platforms between 2020 and 2021 years. As a result, the use rate of Zoom was increased by 22.3%, Google Meet 20.2% and Microsoft Teams 4.8%. However, the use rate of Skype was decreased by 25.8%, which is still the most common online communication platform (Brandl, 2021). Before and during the pandemic; the video conference manners were not the only on affected as related to the education. Humans realized that they could also improve themselves on online platforms while continuing their educational lives at schools. Like in the past, the asynchronous educational media have been also popular nowadays.

The people accepting the idea of learning via screen also discovered learning without time limits or depending on a teacher. The attendance and registration changes of Coursera website between 2016 and 2021 years was reviewed which is also one of the popular online learning platforms. The registration rates increased four times and attending to the lessons increased nearly nine times (Wood, 2022).
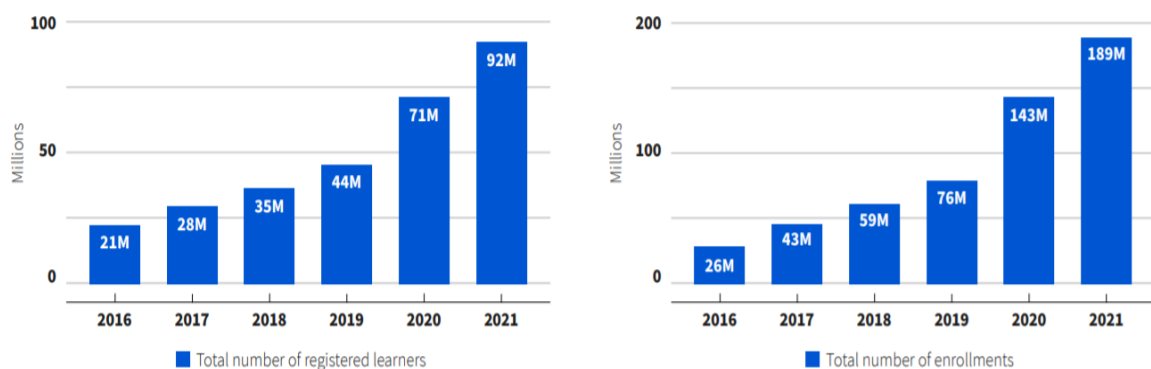
Table 4: Learners registrations and enrollments (Wood, 2022)

The conducted studies show that; there is a positive change in the general use rates of information technology field. Although the important cause of this situation is pandemic, it is a need to consider that more number of users can access to the Internet manners within the development of technology and time. Attention must be paid on that the increased uses show faster increase during pandemic. For instance, the use of communication media before pandemic has increased by 48% between the years 2017-2019 (Spence, 2019). However, as mentioned before, these increases gained pace during the pandemic. The web and video conferencing market increased 500% in the first two months of the COVID-19 pandemic (Trust Radius, 2021) and the video conferencing market is expected to surpass $50 billion by 2026 (Persistence Market Research, 2020). In terms of lesson management systems, there is also a positive change. The 50,000 new institutions have registered to the Moodle since March 2020, which was one of the most popular lesson management systems. While 18.104 users take lessons as admin, 14,174 of them have firstly signed up into the Moodle (Moodle, 2020). In terms of communication via mobile devices, the most popular application was WhatsApp. Between the years 2018 and 2021, the number of WhatsApp users has increased from 1.5 million to 2.3 million (Business of Apps, 2022).

CONCLUSION

This study analysed what kind of changes some of the technologies had in educational manner before and during the Covid-19 global pandemic. Before the pandemic, the users benefited from the communication technologies for only their needs. These uses continued until the beginning of the pandemic on a specific ratio. During the pandemic, the life has begun to be through the digital media around the world. Therefore, the small and larger communication technology companies have faced a rapid adaptation period in order to succeed in this period as well as competing with each other. According to the statistics; the companies that managed this digital transformation the best and adapted the fastest; have developed by growing decisively. During pandemic; humans had to learn how to the behaviours such as, holding distance learning at home, cyber learning on their own and trading through the Internet and they also had to adapt them. The changing user behaviours affected the use of communication technologies and paved the way for the companies develop positively after the pandemic. Today, millions define the number of users of the communication technology applications.

In terms of the effects of pandemic on the digitalization period; many actions such as interviews, meetings, conversations and face-to-face education before the pandemic now became as online activity. In order to realize these activities; the web conference software were preferred and grew rapidly as a communication technology. By looking at market values; these software have increased in the field of companies, health and educational institutions. During the global social isolation period; Zoom video conference software was the most preferred in terms of its interface for easy use, its sound and view quality could be set according to the Internet speed, its feature about recording the meeting in MP3 and MP4 format and reviewing it and its feature about private messaging during the meeting. This software has been leading because of these features such as Google Meet, Microsoft Teams, Skype and resulting in increasing its market share.

The lockdown period during pandemic caused face-to-face education to be impossible. As a result, the education had to be moved into digital manner. The online education providing sites such as Coursera have become popular in learning and self-improving processes. Many users registered to the online educational websites in order to have self-learning and attended to online lessons. There is a great increase in these participations compared to before pandemic.

Within the closure of educational institutions during pandemic, the Lesson Management System software have gained value. These applications provide to follow up the students' educational activities and encourage them to participate and Moodle has become globally popular.

Secluding into houses within the isolation, the individuals used their mobile devices in order to socially communicate. Used for speaking, messaging, group conversation or sharing photos, the WhatsApp software user number has increased greatly especially by being used in daily routines. To keep up with the digital era that is fastened with pandemic is not only peculiar for firms or companies. The individuals (users) have to adapt to this rapid changing, growing and developing era by following the communication technologies. If humans remain as analogous against this transformation, it is inevitable to have difficulty in the balance of work and life.

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Examining the Third Grade Life Studies Book in Light of the 2030 Sustainable Development Goals

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ABSTRACT
The purpose of this research is to evaluate to what extent the third-grade life studies textbook used during the 2021-2022 school year is consistent with the sustainable development goals set out by the United Nations (UN) for the year 2030. In this study, a research design called theoretical analytical research was used. The data obtained by document review of third-grade life studies course book used in 2021-2022 were subjected to content analysis. Findings regarding partnerships for eradicating poverty and hunger, creating a healthy and quality of life, quality education, gender equality, clean water and sanitation, decent employment and economic growth, industry, innovation, and infrastructure, reducing inequalities, sustainable cities and communities, responsible production and consumption, and life in general are revealed when the 3rd grade Life Studies course book is examined in light of the UN 2030 Sustainable Development Goals. Regarding the goals of promoting clean, accessible energy and climate action, no results have been found.
Keywords: Life Studies, Sustainable Development Goals, Coursebook.

INTRODUCTION

Environmental issues are a worldwide concern that endangers the whole planet as a consequence of mindless and excessively quick exploitation of natural resources. Quick and unconscious population increase is a primary contributor to the rapid depletion of resources, the loss of the ozone layer, and a variety of environmental problems including drought, desertification, flood, and catastrophe (Aktaş, 2019). The causes that contribute to the environmental catastrophe are acknowledged as an important concern on a global scale; as a result, a significant number of conferences and publications on sustainable development are conducted in this area. The first National Environmental Policy Act in the world (NationalEnvironmentalPolicyAct-NEPA) entered into force in the United States on January 1, 1970. In Europe, studies on the legislation governing environmental policy first began in 1973. Sustainable developments are the basis for these studies performed on laws (EIA, 2019). It would be appropriate to explain this notion first.

Although "Sustainable Development" was originally articulated by the World Commission on Environment and Development (WCED) in 1984, it was first acknowledged in the 1987 report "Our Common Future." This report includes serious and world-threatening issues such as droughts in Africa, leaks in pesticide factories in India, explosions of tankers in Mexico due to gas compression, a steadily increasing risk of cancer due to the explosion of the Chernobyl nuclear reactor, and chemical contamination of the Rhine River due to a fire in Switzerland. As a solution to these issues, it has been proposed that a sustainable development plan can safeguard the right to life of future generations (OCFR, 1987). Although the agenda on the issue dates back to 1972, the year 2015 is garnering attention as a significant milestone in Turkey.

Figure 1: Historical Development of Sustainable Development

1972	• Stockholm Conference
1974	• Mediterranean Action Plan
1983	• Brundtland Report
1992	• Rio Summit
1997	• Kyoto Protocol
2000	• Millennium Development Goals
2002	• Johannesburg Summit
2006	• Meeting of the Committee of Ministers of the Council of Europe
2015	• 2030 Sustainable Development Goals

Source: Arslan, 2021

The United Nations Sustainable Development Summit was held in New York City in 2015, and it was there that the "Sustainable Development Goals" for the upcoming fifteen years were determined. These "Sustainable Development Goals" consist of 17 main goals and 169 sub-goals, and they are in line with the global goals that concern the entire world. These goals are (UNDP 2015):

Sustainable Development Goals

1. No Poverty: Its goal is to put an end to poverty on a global scale while also making it possible for those who are experiencing financial and social challenges to take advantage of social protection programs.

2. Zero Hunger: People who are malnourished as a result of environmental issues and drought are the target audience for this initiative, along with ensuring that food is safe to eat. It underlines that to eradicate hunger, agricultural areas must be expanded, agricultural workers must be supported, seed banks must be formed, and efforts must be made to maintain biodiversity.

3. Good Health and Well-Being: It seeks to guarantee that all persons have access to health care and to minimize maternal and infant mortality, as well as deaths caused by environmental pollution and chemical diseases.

4. Quality Education: It strives to offer everyone access to a quality, free, lifelong education in which gender and material inequities are removed.

5. Gender Equality: It stresses that women and girls have equal rights with men, that women are not subject to discrimination in the workplace, and that policies are implemented to ensure that women are powerful and influential in society.

6. Clean Water and Sanitation: It aims to build water and sewage infrastructure and treatment facilities so that everyone has access to safe, clean water, and to guarantee that water reaches everyone in a sanitary manner.

7. Affordable and Clean Energy: As the population increases, so too does the energy demand. It signifies the promotion of renewable, dependable, and sustainable energy sources in order to satisfy this energy need.

8. Decent Work and Economic Growth: It strives to promote entrepreneurship within the context of sustainable economic growth, create adequate employment opportunities for everyone, and protect the environment by incorporating environmental considerations into economic development.

9. Industry, Innovation, and Infrastructure: It aims to encourage sustainable industrial operations, promote innovative research, and facilitate information access.

10. Reduced Inequalities: It alludes to a society that is sustainable and in which everyone, regardless of age, language, religion, race, gender, or ethnicity, is entitled to equal rights on the planet. It underlines that economic inequality may be minimized by investing in these areas, taking into consideration nations facing migration, conflict, and economic hardships, while developing social and economic policies to minimize inequities.

11. Sustainable Cities and Communities: While creating sustainable city designs, it aspires to satisfy everyone's housing requirements, develop cities with the needs of the elderly and handicapped in mind, and preserve cultural and natural assets.

12. Responsible Production and Consumption: Using natural resources efficiently, properly collecting garbage, promoting recycling, and raising environmentally aware and responsible customers are all part of it. It underlines the need for each nation to have a framework plan for balancing output and consumption.

13. Climate Action: It entails being aware of global climate change and adopting the appropriate safety precautions.

14. Life Below Water: It seeks to avoid marine pollution, save marine life, manage maritime commerce sustainably, lessen pollution in the sea below, and uphold the employment rights of those engaged in fishing and maritime trade.

15. Life On Land: It seeks to protect and promote afforestation following international conventions by protecting natural terrestrial ecosystems, restoring the productivity of soils eroded by erosion and drought, bolstering biodiversity by taking into account the living conditions required for endangered species, and preventing poaching.
16. Peace, Justice and Strong Institutions: By granting equal rights to all people and taking the rule of law into account, it seeks to eliminate violence, war, murder-related mortality rates, and abuse, and assure justice. It underlines the need for transparency and the denial of privileges while forming institutions to defend human rights.
17. Partnerships for the Goals: To achieve this goal, all nations must band together worldwide and work with non-governmental organizations.

Figure 2: UN 2030 Sustainable Development Goals

Source: (UNDP, 2015)

In the UNESCO 2030 Education Report, the Sustainable Development Goals (SDGs) were underlined, and it was stated that the report was based on these goals. By citing the SDG goal to "Provide comprehensive and equitable quality education and encourage lifelong learning opportunities for everyone," it was emphasized that everybody should benefit from education, that it is a fundamental human right, and that every person has the right to lifelong learning. In addition to the SDG's goal of "Aim to eliminate poverty in every manner and everywhere," it has been argued that education is necessary to preserve tolerance, peace, and harmony in a community and that it can eradicate poverty by guaranteeing that people are employed (UNESCO, 2015).

Studies and efforts to lessen environmental issues are developing quickly both in our nation and throughout the globe. Environmental Impact Assessment Workshops are regularly held in our country with the objectives of lowering environmental pollution, preserving natural resources, boosting biodiversity, and making certain that all living creatures can exist in a sanitized setting free from danger. All of these sessions focused on the value of environmental education (Aktaş, 2019; EIA, 2019; UNESCO, 2015).

Sustainable development encompasses more than just economic growth. Additionally, it emphasizes that educational systems should be set up in this way by making sure that social and environmental aspects are also taken into consideration (Arslan, 2021). The world is threatened by environmental issues and climate change, which are addressed through sustainable development objectives. To achieve these goals strong educational policies are required. Therefore, curricula should focus on developing skills linked to goals for sustainable development (Aktaş, 2019; Arslan, 2021; Bulut and Çakmak, 2018).

The goal of the life studies curriculum is to give students the knowledge and skills they need to understand the world they live in, live a healthy and safe life, utilize resources wisely, preserve cultural values, be environmentally conscious, and use information and communication technologies for their intended purposes (MEB, 2018). The goals included in the "Sustainable Development Goals" also coincide with the objectives of the life studies course. MoNE attaches importance to sustainable development goals. Teachers receive compulsory in-service training on this subject for them to acquire the necessary knowledge (Teaching Information Network [ÖBA], 2022). Together,

the training the teachers get and the activities in the course books will serve both the life studies course and the "Sustainable Development Goals."

In their study titled "Sustainable Development Education and Its Reflection on Curricula," Bulut and Cakmak (2018) concluded that there is no subject or unit in which sustainable development is directly mentioned for either social studies or science classes; however, there are many subjects that fall into this field. Aktaş (2019) came to the conclusion that certain academic accomplishments are consistent with the sustainable development objectives after investigating the knowledge, principles, and accomplishments attained in life studies, science, and social studies courses. Due to the small number of studies that have been conducted in which primary education programs for 2018-2019 have been analyzed in terms of sustainable development goals and the varying results that have been found in studies that are related to this topic, it is clear that Turkey needs to investigate this issue using studies that are both more in-depth and more diverse. In light of this requirement, the purpose of this research is to find the answers to the question of at what level the United Nations 2030 Sustainable Development Goals are contained in the life studies coursebook for third grade.

METHOD
This part includes the research model, data sources, data collecting, data analysis, and data interpretation.

Research Model
This study was conducted in a theoretical analytical research design. Analytical research is defined as a study that examines papers, records, and documents in terms of thoughts, incidents, works, and concepts. (McMillan, 2004 as cited in Ersoy, 2015). The analytical research design is built on data gathering from documents that do not need direct contact and analysis following the identified topics (Burkett, 1990). In this particular instance, the life studies coursebook for the third grade was recognized as a valid source for the research, and content analysis was used to evaluate the information gleaned from the coursebook.

Data Sources and Data Collection
The study made use of document analysis, which is one of the ways of data collection that are available. Analyzing written materials that include information about the phenomenon or phenomena that are intended to be researched is included in the process of document review (Yıldırım and Şimşek, 2013). The research's data source is a third-grade life studies coursebook published by Pasifik Publications, which has been approved as a coursebook for five years beginning with the 2018–2019 school year by the decision of the Board of Education on May 28, 2018 and numbered 78th. Two volumes belonged to MoNE and Pasifik Publications when the coursebooks for the 2021–2022 academic year were evaluated. Examining the publications from these various publishing houses revealed that they all had the same gains. Despite this, the textbook published by Pasifik Publications was scrutinized because of its prominence in and around Istanbul as well as the ease with which one could get the views of subject matter experts on the book more promptly.

The data of the research consist of texts and visuals in third-grade life studies coursebooks belonging to a private publishing house (Pacific Publications). The Sustainable Development Goals Review Form (Annex-1) has been developed to establish the goals, and it has been constructed based on the definitions that have been provided about the United Nations 2030 Sustainable Development Goals. Based on the form that was developed, an examination of the present status of the goals for sustainable development included in the life studies textbook for third grade was conducted.

As the literature was utilized to define the sustainable development goals, relevant field experts' perspectives were used when concluding this material. In order to establish the trustworthiness of the study, the "Consensus/Consensus + Disagreement" formula was used to the opinions of three experts (Miles and Huberman, 1994). Reliability was calculated as 0.96 through this formula.

Analysis and Interpretation of Data
In the study, content analysis was used to analyze the data. "The objective in content analysis is to attain the concepts and relationships that can explain the collected data. With content analysis, an attempt is made to characterize the data and disclose any implicit facts within the data. The primary process of content analysis is to organize comparable material within the context of certain ideas and topics and to explain them via organizing." (Yıldırım & Şimşek, 2013).

The third-grade life studies coursebook for primary schools was converted to the computer environment for analysis. First, the pdf version of the book was retrieved from the Board of Education's official website. The pdf version of the Life Studies coursebook was uploaded to the MAXQDA 12 program. Individual codes were assigned

to each of the 17 to-be-investigated goals in the MAXQDA 12 program, and the data were analyzed per the assigned codes. Each of these codes refers to a goal. For the reliability analysis of the research coding, the texts identified in the books were independently reviewed using a form prepared by three researchers. When coding the texts, Miles and Huberman's (1994) formula (Reliability= Consensus/Consensus + Disagreement) was used to reveal the expert viewpoints. According to this formula, it was concluded that the reliability was 0.97. As per Miles and Huberman (1994), this result is adequate to guarantee dependability. Regarding validity, the analyses were reviewed by a different researcher than the authors, and adjustments were made based on their input.

FINDINGS
A total of 327 findings pertaining to 17 goals were found in the life studies coursebook.

Figure 3. UN Sustainable Goals
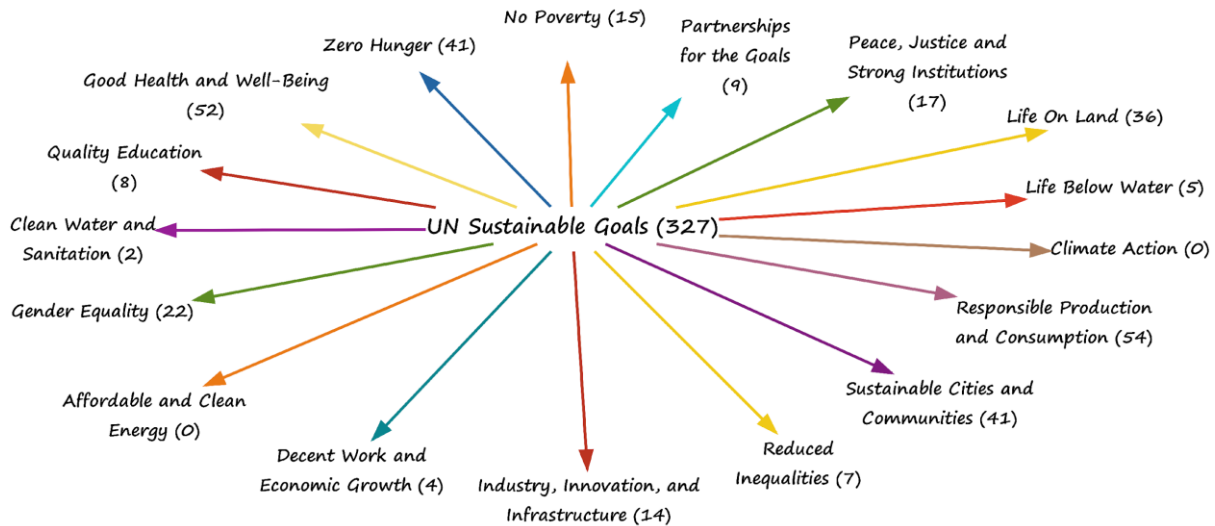
"Individual, nature, and society" were the three categories under which the results are discussed.

Figure 4. Findings Pertaining to Goals in Individual Theme
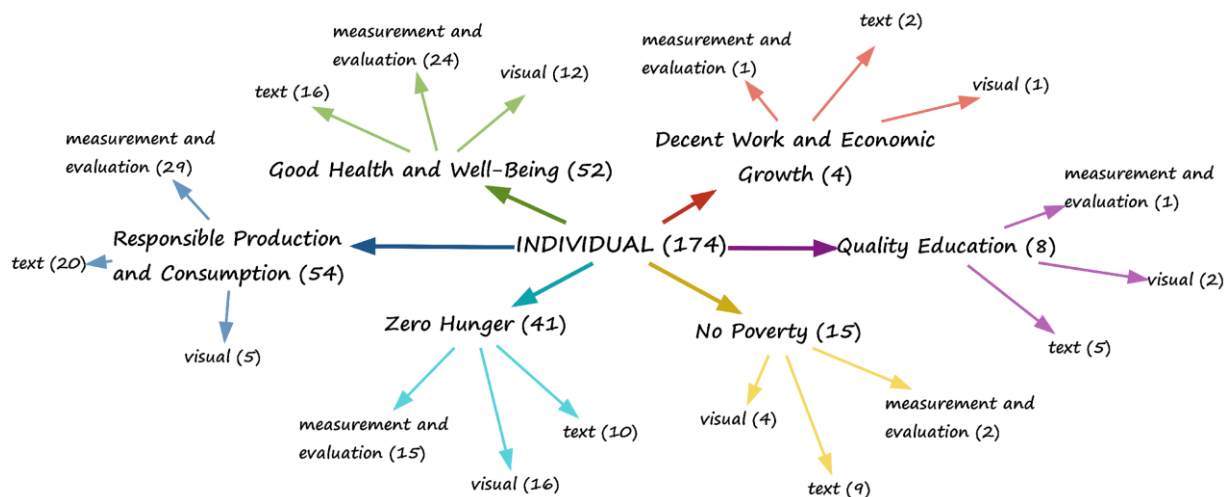
Findings Pertaining to the "Responsible Consumption and Production" Goal
The life studies coursebook contained 54 findings on responsible consumption and production. Among them, 20 of these findings were text, 5 were visual and 29 were measurement and evaluation. Some examples were given below:

"In fact, my mother is more sensitive about saving than any of us. She sometimes uses stale bread as batter for meatballs. In other instances, she sprinkles kashar cheese on top of them before cooking them in the oven. She offers a friend who owns cows and sells milk the extremely stale bread. "(p.62)

Visual 1. A family meeting for monthly budget
Examining Visual 1 reveals that a family saved last month as a result of their spending plan.
1.   *What do you consider while consuming water and electricity in your home?*
2.   *How can you keep your clothing from wearing off quickly?*
3.   *What do you do to ensure that your food and bread are not wasted?*
4.   *How do you spend your pocket money? (p.65)*

Findings Pertaining to the "Good Health and Well-Being" Goal
There were 52 findings in the life studies coursebook regarding the goal of good health and well-being. Of these findings, 16 were text, 12 were visual, and 24 were measurement and evaluation. Here are some examples:
"...The paper also mentioned the need of eating carefully while dealing with conditions including celiac disease, food allergies, excess weight, stress, and hypertension. "(p.87)
The above statement describes what must be done to combat the illnesses stated.

Visual 2. Balanced diet visual (p.85)
Examining Visual 2 will reveal the foods that should be avoided to treat obesity disease.

Findings Belonging to the "Zero Hunger" Goal
Regarding the goal of ending hunger, the life studies coursebook had 41 findings. Of these findings, 10 were text, 16 were visual, and 15 were measurement and evaluation. Some examples were given below:
"...We avoid buying products containing additives. In addition, we do not buy carbonated beverages, chips, candies. "(p.80)
What must be done to combat malnutrition is indicated in the text above.

Visual 3. Healthy diet visual (p.87)
It can be observed that the person in Visual 3 has access to an adequate supply of nutritious food at his or her table.

Findings Pertaining to the "No Poverty" Goal

In the life studies coursebook, there were 15 findings on the goal of ending poverty. Of these findings, 9 were text, 4 were visual, and 2 were measurement and evaluation. Here are some examples:

"...He said that a charity effort for earthquake victims had been initiated at our school. "(p.26)

The preceding sentence explains the action to lessen the vulnerability of those affected by a natural disaster. The following visual shows the Red Crescent truck and packages.

Visual 4. Visual of the Turkish Red Crescent (p.27)

Visual 4 shows the Red Crescent truck carrying the aid boxes for the earthquake disaster described in the text.

Findings Pertaining to the "Quality Education" Goal

There were 8 findings in the life studies coursebook regarding the goal of quality education. Among them, 5 of these findings were text, 2 were visual, and 1 was measurement and evaluation. Some examples were given below:

"My school makes individuals successful with educational, social and cultural activities. These successful people also constitute a successful society. "(p.24)

It is clear from the paragraph above that the school provides a quality, equally distributed education.

Visual 5. Collaboration visual (p.13)

Examining Figure 5, it can be observed that a student with a physical handicap collaborates with a classmate.

8. Findings Pertaining to the Goal of "Decent Work and Economic Growth"

There were 4 findings about Decent Work and Economic Growth in the life studies book. Among them, 2 of these findings were text, 1 was visual, and 1 was measurement and evaluation. Some examples were given below:

"People who care about their country make an effort to use products made there. We contribute to the development of our country by using the goods we produce. "(p.93)

Visual 6. Performing our folk plays (p.24)

The visual shows the performance of our traditional folk plays.

Figure 5. Findings Pertaining to Goals in Community Theme
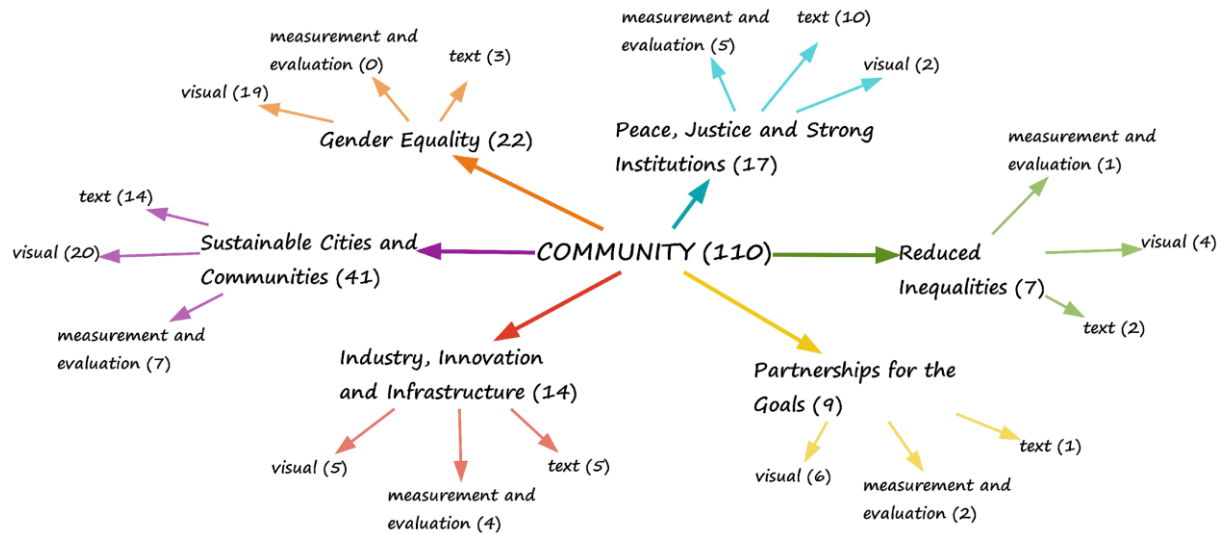
Findings Pertaining to the "Sustainable Cities and Communities" Goal
The Life Studies book contains 41 findings related to Industry, Innovation, and Infrastructure. Among them, 14 of these findings were text, 20 were visual, and 7 were measurement and evaluation. Some examples were given below:

"...We also have the first place in Ankara contest and the regional content in folk dances. "(p.24)
"I feel so happy when I play hide-and-seek, dodgeball, duck duck goose with my friends at school." (p.47)
"People create parks and gardens to enhance the landscape, enjoy some fresh air, and relax." (p.168)
"Compare the traits of your upbringing with those of your parents." (p.49)
"Write down what kind of changes people make in the environment where you live." (p.177)

Visual 7-8. Traditional children's games (p.46), Use of public transport (p.135)

Within the context of protecting cultural and natural heritage, the visual represents children engaging in traditional games. The visual demonstrates the utilization of public transit as a mode of transportation.

Findings Pertaining to the Goal of "Gender Inequality"
In the life studies coursebook, there were 22 findings regarding the goal of gender inequality. Of these findings, 3 were text, and 19 were visual. Some examples were given below:
"*On the day he left school, Musa saw his father had parked in front of the street and hurried to meet him. Musa was racing toward the road when a group of drivers suddenly hit the brakes hard. Musa escaped unharmed.*"(p.101)

The person who misbehaves and disregards the rules is described as a boy in the previous phrase.

The visual below shows the boys' and girls' restrooms of a school.

Visual 9. Student restroom visual (p.33)
When Visual 9 was examined, it was discovered that society had enforced a color differentiation on the walls, using pink for girls and blue for boys.

Findings Pertaining to the "Peace and Justice" Goal
There were 17 findings in the life studies coursebook aimed at the goal of peace and justice. Of these findings, 10 were text, 2 were visual, and 5 were measurement and evaluation. Some examples were given below:
For individuals to be more free, equal, and just in the countries controlled by the Republic, democracy is required. In a democracy, all eligible citizens abiding by the rules have the right to vote and be elected. (p.126)

Visual 10. Individuals exercising democratic voting rights (p.127)
Voting, a democratic right, is shown in the visual as a means of ensuring peace and justice.

Findings Pertaining to "Industry, Innovation and Infrastructure" Goal
There were 14 findings related to Industry, Innovation, and Infrastructure in the Life Studies book. Among them, 5 of these findings were text, 5 were visual, and 4 were measurement and evaluation. Some examples were given below:

"...Thanks to Television, Radio, and the General Network, we are aware of all national and international events. Thanks to our phone, we can talk to our loved ones in the distance. "(p.59)

"Study the personality features of Atatürk via the General Network and encyclopedias. Write down the information you obtained as a result of the research. "(p.146)

Visual 11. Use of technology in the development of Scientific Research (p.18)

The above visual depicts the utilization of a general network and computer to further scientific research.

Findings Pertaining to the "Partnership for the Goals"
In the life studies coursebook, there were 9 related findings for the partnership for the goals. Of these findings, 1 was text, 6 were visual, and 2 were measurement and evaluation. Some examples were given below:

Visual 12-13. Posters in line with the common goal (p.28) (p.142)
When Visual 12 and Visual 13 are examined, it is seen that different non-governmental organizations come together in line with the common goal.

Findings Pertaining to the Goal of "Reduced Inequalities"
There were 7 relevant findings for reducing inequalities in the life studies coursebook. Among them, 2 of these findings were text, 4 were visual, and 1 was measurement and evaluation. Some examples were given below:

Visual 14. Children who are gathered together without considering their race or color (p.93)
Examining Visual 14 reveals children standing together without regard to race, color, or gender.

How can we prevent immigrants who seek refuge in our country from feeling like strangers? (p.140)

Figure 6. Findings Pertaining to Goals in Nature Theme
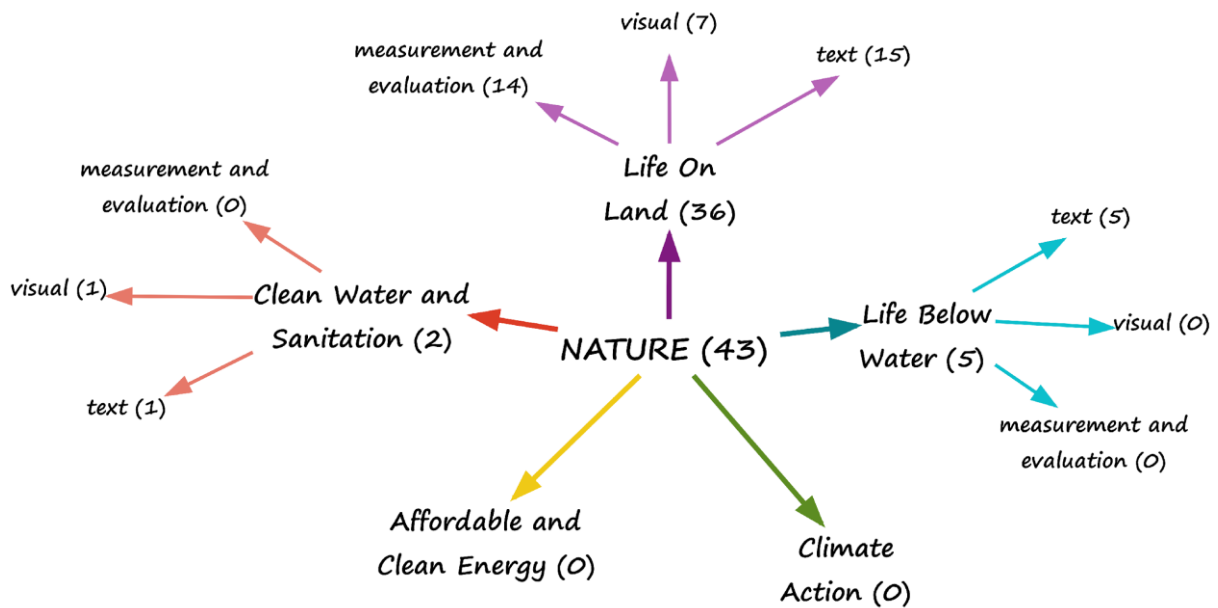
Findings Pertaining to the "Life on Land" Goal

In the life studies coursebook, there were 36 findings related to life on land. Among them, 15 of these findings were text, 7 were visual, and 14 were measurement and evaluation. Some examples were given below:
My parents believe that it is best for our health to eat seasonal produce. Fruits and vegetables do not taste the same every season. For instance, the taste of tomatoes consumed in the summer and winter differs. (p.83)

Visual 15: Children taking care of animals (p.55)
Children help in feeding animals in Visual 15.

Findings Pertaining to the "Life Below Water" Goal
There were 5 findings about Life Below Water in the Life Studies coursebook. All of these findings were included in the text. There was no finding related to visual and measurement and evaluation activities. Some examples were given below:

"My father says even there is a seafood season. When the anchovy is plentiful, it is the most delicious. Consuming sea bream and bonito throughout their respective seasons is the healthiest option. "(p.83)

"Another vital natural resource is water. We should be mindful in our water use and avoid dumping rubbish into the water if we do not want to contribute to pollution and avoid drought. "(p.171)

Findings Pertaining to "Clean Water and Sanitation" Goal
There were 2 findings related to Clean Water and Sanitation in the Life Studies coursebook. One of these findings was text and one was visual. Some examples were given below:

"... We assist my grandfather in fixing the plumbing problems since the home is extremely old. "(p.56)

Visual 16: Visual of a repair in the house (p.33)
Visual 16 demonstrates that the repairs made to the damaged plumbing have been completed.

Findings Pertaining to the "Affordable and Clean Energy" Goal

No findings were found for this goal.

Findings Pertaining to the "Climate Action" Goal

No findings were found for this goal.

CONCLUSION AND DISCUSSION
There were 327 goals altogether when looking at the "Sustainability Development Goals" in the life studies coursebook in terms of text, visuals, measurement, and evaluation activities. In the book, goals are included with the frequency as follows: text (f=118), measurement and evaluation (f= 105), and visual (f=104). While the most common goals in the book were "Responsible Consumption and Production", and " Good Health and Well-Being, the least common goals were "Decent Work and Economic Growth" and "Clean Water and Sanitation". Among the 17 goals examined, no findings were found regarding the "Climate Action" and "Affordable Clean Energy" targets. The fact that the book has a unit titled " Good Health and Well-Being" and that its topics are connected to

health and conscious consumption implies that the results towards the objectives of "Responsible Consumption and Production" and " Good Health and Well-Being" are more likely to be observed.

It can be observed that the results of the "No Poverty" goal include research that was carried out to identify solutions to the challenges faced by those who are affected by natural disasters. For this reason, the most information presented in the form of text and visuals, together with the least opportunities for evaluation and measurement were included.

The goal of "Responsible Consumption and Production" was the most mentioned topic in the book. In addition to the activities of measurement and evaluation, the sub-goals for this goal include the prevention of waste, the sparing use of natural resources, the reduction of waste emissions into the atmosphere, water, and land, and the promotion of recycling.

It can be observed that the activities for text, visual, and measurement assessment were spread rather evenly across the goals for "Zero Hunger" and "Industry, Innovation, and Infrastructure." In order to achieve the goal of "Zero Hunger," activities that address malnutrition, provide access to food that is both safe and adequate and boost agricultural and animal production were included. In the "Industry, Innovation and Infrastructure" goal, activities for the sub-goal of developing technology were mentioned the most.

More research on the sub-goals of combatting road accidents, lowering mortality, and preventing illnesses were included in the book regarding the " Good Health and Well-Being" goal. Only the specific days and weeks chapter addresses the problem of battling drug abuse, which is one of the sub-goals. Since these chapters are not covered by the curriculum (MoNE, 2018), it is up to the teacher to take the initiative to cover the material. In addition, an addiction intervention program was implemented by Yeşilay in schools. The purpose of this program is to increase awareness without promoting addiction to drinks, drugs, tobacco, or digital products (YEŞİLAY, 2019). Coursebooks should be among the most crucial tools used in raising this knowledge in schools, but the fact that this subject is covered in just a small portion of the life studies textbook limits research on the issue of drug abuse, which is a concern of the UN and poses a danger to society. Again, no activities related to family planning were included in the sub-goals. According to Sungur (2018), it would be better for the teacher to deliver sexual education from a young age within a specific strategy rather than letting the kids discover the incorrect things on their own. "Sustainable Cities and Communities" was among the most common goals in the book. Specifically, actions that intended to safeguard cultural and natural heritage, reduce the danger of natural disasters, and ensure sustainable urbanization were included.

Findings related to quality education and offering education for everyone were included in the "Quality Education" goal. The findings that pertain to having knowledge of reading and mathematics as well as giving access to preschool education were not included in the sub-goals of this goal. It is noteworthy that there were 7 findings related to quality education in the coursebook.

In the framework of "Gender Inequality," the goal is to put an end to discrimination against women and girls and to make sure that there is equality between the genders. However, this issue was not taken into consideration in the visuals and texts in the book. Because the visuals in the games include colors, professions, and gender standards that are imposed by society, efforts to maintain gender equality failed. Those individuals who do not adhere to the rules outlined in the texts are often male, while those individuals who do adhere to the standards are typically female. The idea that "girls do not misbehave, they behave wisely" is perpetuated by society in this context, even though the situation seems to be favorable for girls. The book also contains illustrations to help end discrimination in the distribution of household responsibilities. However, Doğanay and Çopur (2021) argue that the fact that the mother is the one doing the housework and the father is the helper in the visuals from the life studies coursebook is an indication of the continuation of the sexist mindset since that is the role that society has assigned to women. There were two activities as text and visual, aimed at the goal of "Clean Water and Sanitation". This goal's sub-goals include preventing water pollution, ensuring that everyone has access to clean drinking water, and providing appropriate sewage services. According to the Chamber of Environmental Engineers World Environmental Day Turkey Report (2018) of the Union of Chambers of Turkish Engineers and Architects, Turkey's surface waters are contaminated to a degree of 79%. According to Turkey's "Surface Water Quality Regulation ", the water is 4th class which means very contaminated. The fact that this issue, which poses a danger to our country, is seldom mentioned in life studies textbooks, raises some concerns.

One of the least discussed chapters in the book is the one devoted to the goal of "Decent Work and Economic Growth," which includes sub-goals like entrepreneurship, employee rights protection, employment opportunities, the development of sustainable tourism, the promotion of domestic culture and products, and ensuring occupational

safety. Within the context of the life studies curriculum, these sub-goals include "taking initiative and entrepreneurship," "cultural awareness and expression," and "digital competencies." (MEB, 2018). However, the fact that these topics are not covered in the life studies book serves to bring to our attention the fact that the curriculum and the book are not compatible with one another.

The overarching objective of "Reduced Inequalities" has several subgoals, including "eliminating inequality of opportunity" and "supporting policies that avoid inequality." In conjunction with these goals, the book will include activities that emphasize visuals and activities to increase awareness.

The "Life Below Water" initiative has many sub-goals, including the reduction of marine pollution, the protection of marine and coastal ecosystems, the fight against overfishing, and the promotion of line fishing. According to Zaman (2005), although Turkey is a country that is encircled by seas on three sides and is rich in underground and aboveground freshwater resources, this potential has not been used most effectively. The battle against reckless hunting is not being carried out effectively. Hence this situation damages the aquatic ecosystem. As Zaman pointed out, it is essential to emphasize the significance of this struggle with education from a young age. Students who cultivate an awareness of life below water will develop a heightened sensitivity to the aquatic ecosystem. However, when the coursebook is examined, discovering a few findings exclusively in the texts is seen as a situation that hinders awareness.

Text, as well as activities involving measurement and evaluation, were regularly incorporated as part of the "Life on Land" goal. It can be observed that the sub-goals of preventing desertification, enhancing biodiversity, and protecting plant and animal species are included to achieve this overall goal.

Participatory democracy and the avoidance of violence against children are both components of the "Peace and Justice" goal. The findings that pertain to the goals of guaranteeing equitable access to justice, combatting corruption and bribery, and restricting the flow of unlawful finances have not been included.

The goal of the program known as "Partnerships for Goals" is to foster collaboration on economic, technological, and political fronts with all of the nations of the globe. This goal was specifically highlighted in the text via the inclusion of international aid organizations.

Activities for "Affordable and Clean Energy" and "Climate Action" goals were not included. While "Affordable and Clean Energy" seeks to make renewable energy accessible, assure energy efficiency, and encourage the use of clean fossil fuels, "Climate Action" seeks to increase public understanding of climate change and combat its hazards. While it is vital to invest in the energies of the future and to create awareness about climate change to establish a secure future, the absence of these topics in the textbooks would delay the development of renewable energy technologies and the hope for a habitable world.

As per a study on the evaluation of primary school curricula in terms of the "Sustainable Development Goals," there were 74 learning achievements in the life studies curriculum related to the subject, but quality education, gender inequality, affordable and clean energy, industry, innovation and infrastructure, life below water, and peace and justice were not included (Özgür, 2020). Although there were 11 learning achievements at total which were connected to clean water and sanitation and climate action, the textbook's absence of text, visual, and quantitative assessment activities relating to these objectives is thought-provoking. This may be due in part to the fact that researchers assess the results using a similar goal theme. In qualitative research, researchers' perspectives may differ. In addition, the statement that " Good Health and Well-Being, Responsible Production and Consumption, and Sustainable Cities and Life" are the most often listed goals in the list of accomplishments is consistent with the findings of the research.

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Annex.1 Sustainable Development Goals Review Form
NO POVERTY
1. **Equal Access:** Economic resource, heritage, natural resource, technology
2. **Resilience:** Reducing the susceptibility of persons affected by social and natural catastrophes.
ZERO HUNGER
1. **Malnutrition:** Combating malnutrition
2. **Sufficient Food:** Safe, nutritious, access to sufficient food.
3. **Agricultural and Animal Productivity:** Increasing the employment and earnings of food producers, farmers, shepherds, and fishers, while guaranteeing agricultural output.
GOOD HEALTH AND WELL-BEING
1. **Fighting Against Diseases:** Combating, in particular, infectious diseases
2. **Fighting Against Substance Addiction:** Strengthening drug and alcohol addiction treatment and prevention.
3. **Fighting Against Traffic Accidents:** Reducing deaths and injuries caused by traffic accidents.
4. **Family Planning:** Including family planning and reproductive health in national initiatives will guarantee that everyone has access to services for sexual and reproductive health.
5. **Eradication of Death and Diseases:** Reducing diseases resulting from hazardous chemicals, resulting from air, water, and soil pollution
QUALITY EDUCATION
1. **Free, equitable, and quality education:** Proving them for all children
2. **Ensuring access to early childhood development and preschool education**
3. **Equal education at all levels, including vocational training: (Disabled individuals at school are covered in this context)**
4. **Everyone should be literate and have certain mathematical knowledge**
GENDER INEQUALITY
1. **Ending discrimination against women**
2. **Ensuring equal opportunities**
3. **Granting everyone equal rights**
4. **Promoting gender equality**
CLEAN WATER AND SANITATION
1. **Access to clean drinking water**

2.   **Access to affordable drinking water**
3.   **Access to adequate sewage service**
4.   **Fight against water pollution**
5.   **Water efficiency**
6.   **Protection of the aquatic ecosystem**

ACCESSIBLE AND CLEAN ENERGY
1.   **Access to renewable energies**
2.   **Energy efficiency**
3.   **Use of clean fossil fuels**

DECENT WORK AND ECONOMIC GROWTH
1.   **Achieving high productivity:** Upgrading technology, being innovative
2.   **Supporting entrepreneurship and creativity**
3.   **Providing work opportunities to all individuals:** without prejudice against women, persons with disabilities, or young people
4.   **Combating child labor**
5.   **Protection of workers' rights**
6.   **Ensuring occupational safety:** Especially for female migrant workers who are employed in hazardous occupations.
7.   **Creating employment opportunities**
8.   **Promoting local culture and products**
9.   **Supporting sustainable tourism**

INDUSTRY, INNOVATION, AND INFRASTRUCTURE
1.   **Providing a sound infrastructure for economic development**
2.   **Enhancing the industry:** Using clean and environmentally friendly technologies
3.   **Development of scientific research**
4.   **Supporting underdeveloped countries**
5.   **Developing technology**
6.   **Supporting R&D studies**

REDUCED INEQUALITY
1.   **Providing social, economic, and political support:** Regardless of age, gender, disability, race, ethnicity, lineage, religion
2.   **Guaranteeing equal opportunity**
3.   **Reducing inequality of opportunities**

SUSTAINABLE CITIES AND COMMUNITIES
1.   **Access to safe and adequate housing**
2.   **Widespread usage of public transport**
3.   **Ensuring sustainable urbanization**
4.   **Protection of cultural and natural heritage**
5.   **Disaster risk reduction**
6.   **Combat the unfavorable environment**
7.   **Access to green spaces and open spaces**
8.   **Emission reduction:** Resource efficiency and climate change
9.   **Construction of enduring buildings**

RESPONSIBLE CONSUMPTION AND PRODUCTION
1.   **Responsible use of natural resources**
2.   **Fight Against Food Waste Across the World**
3.   **Ensuring environmentally responsible management**
4.   **Reducing waste-related emissions to the air, water, and soil**
5.   **Supporting recycling**
6.   **Nature-compatible lifestyles**
7.   **Increasing scientific and technological capacities**
8.   **Structuring taxation system**
9.   **Switching to sustainable consumption and production models**

CLIMATE ACTION
1.   **Addressing the threats posed by climate change**
2.   **Ensuring a reduction in emissions**
3.   **Raising awareness about climate change**

LIFE BELOW WATER
1.   **Prevention of marine pollution**
2.   **Enhancing the endurance of coastal and marine ecosystems**

3. **Combating overfishing and illegal fishing**
4. **Supporting water tourism**
5. **Supporting small-scale hand-line fishing**

LIFE ON LAND
1. **Combating desertification**
2. **Safeguarding the internal freshwater environment and the land**
3. **Increasing forestation**
4. **Increasing biodiversity**
5. **Protection of plant and animal species**
6. **Fighting the poaching of endangered species**

PEACE AND JUSTICE
1. **Reducing violence**
2. **Minimizing the number of violent fatalities**
3. **The spread of the rule of law**
4. **Equal access to justice**
5. **Decreasing the flow of illicit finances.**
6. **Fight against organized crime**
7. **Avoiding harassment, abuse, kidnapping, and violence against children**
8. **Fight against corruption and bribery**
9. **Participatory representative decision-making**
10. **Providing identity to everyone**
11. **Dissemination of nondiscriminatory policies**

PARTNERSHIPS FOR THE GOALS
1. **Providing financial resources to developing countries**
2. **Transferring technology to developing countries**
3. **Creating aligned policies for sustainable development**
4. **Respect for the political sphere and leadership of each country**

Homelessness Liaisons' Strategies to Promote School Connectedness During Extended School Closures

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ABSTRACT
This case study aimed to discover how homelessness liaisons promoted school connectedness to students experiencing homelessness during extended school closures at XYSD (pseudonym). The theory guiding this study is Blum's Multidimensional Theory of School Connectedness, as it provides a framework for understanding how school connectedness acts as a protective factor for students experiencing homelessness. This case study used questionnaires, individual interviews, a focus group, and multiple coding iterations to deduce themes. Findings suggest that the massive transition to online learning and a lack of boundaries contributed to significant academic and maturation delays in students experiencing homelessness. Liaisons are experiencing significant violence in the school they attribute to social media. Further, liaisons must manage more frequent and severe internalizing behaviors like suicide attempts and ideation that they blame on technology and the lack of connectedness during the COVID Closures.

INTRODUCTION
According to the Hechinger Report, school districts in the United States lost 420,000 students experiencing homelessness and fear they will never be found (Morgan, 2021). XYSD in the United States Midwest region lost 20% of their students experiencing homelessness. When surveyed, school districts estimate they lost roughly 20% of the most vulnerable and marginalized population in the United States (Tamez-Robledo, 2021). Regardless of affluence, poverty, rural, or urban, that 20% number is constant. It is possible that when the government closed the schools in the United States, they also shut down the one positive connection students experiencing homelessness have, their homelessness liaison. The overarching hypothesis of this study is that COVID-19 had dire consequences beyond public health. This study's guiding research question is: How do homelessness liaisons foster school connectedness with students experiencing homelessness during times of school closures? Secondary research questions aim to answer COVID Closures' impact on their students and what part technology played in maintaining connectivity during these extended closures.

Research is emerging regarding the toll transitioning to online learning during the COVID Closures has taken on children's education and social, emotional, and mental well-being. Multiple articles elaborate on "The COVID Slide" and how students are behind academically (Dorn, Hancock, Sarakatsannis, & Viruleg, 2020; Goldstein, 2021; Kadian, 2022; Tamez-Robledo, 2021). New studies are surfacing regarding how COVID-19 and masking have negatively impacted our students' social-emotional health. Studies indicate the damage COVID-19 caused to America's mental health. Still, no peer-reviewed study has reported how COVID Closures disconnected students experiencing homelessness (SEHs) from their only safe space (Korman, O'Keefe, & Repka, 2021). Missing in the Margins 2021: Revisiting the COVID-19 Attendance Crisis. This study investigates the impact closing schools and shifting to remote learning had on SEHs through the multidimensional theory of school connectedness (MTSC) lens.

The United States had documented 1.2 million SEHs just before COVID-19 in 2019 (National Center for Educational Statistics, 2021). Poverty Solutions has estimated that as many as 1.4 million SEHs may be unidentified (Morgan, 2021).). Statisticians argue this number is significantly higher given the spike in homelessness and displaced families during the Pandemic (Hallet & Skrla, 2021). For example, Detroit City School District has not identified or rostered 88% of students experiencing homelessness (Slagter & Wadley, 2021). Between 2012 and 2019, homelessness among students increased roughly 15% annually (Hallet & Skrla, 2021). Further, homelessness encampments in America have increased by 1300% since 2007 (Haghanikar & Hooper, 2021), and 37% of those encampments include families with children (Wright, Nankin, Boonstra, & Blair, 2019).

According to the National Center for Homeless Education, students experiencing homelessness "lack a fixed, regular, and adequate nighttime residence." (2021, p. 1). The government recognizes student homelessness when students live in a shelter, hotel, car, park, trailer, or are doubled-up. Doubled up means students move in with friends or family due to an economic downturn and the inability to afford their own homes. Unaccompanied youth, also known as youth experiencing homelessness (YEH), are typically teenagers who have run away from home or whose parents expelled them from their homes (Ingram et al., 2017; Morgan, 2018). YEH typically "couch surf," meaning they sleep on couches with friends and family (Ingram et al., 2017). Liaisons often refer to these youth as "couch-surfers" (Low et al., 2017;

Morgan, 2018). Most SEHs in America live in a doubled-up situation (Ingram et al., 2017). United States regulations under The McKinney-Vento Homeless Education Assistance Improvements Act (McV) stipulated that every school district appoints a liaison to support students experiencing homelessness (SEHs). This liaison's primary function is to identify and roster students and provide services and supports to improve SEHs' academic and personal development.

Child homelessness is a growing problem in the United States (Distefano et al., 2021; Hallet & Skrla, 2020; Palmer et al., 2020; Pavlakis, 2021). When these children disappear without explanation during a crisis, the significance of researching the phenomenon becomes a matter of life and death. It is critical to understand how and why these children disappeared to prevent this from happening again. Further, this research could lead to insights that hopefully will assist entities that find and protect lost children. Finally, school districts have the utmost responsibility to keep their children safe. This study should produce data influencing policy and procedures to ensure our children's safety. This study adds to the limited peer-reviewed research on the multidimensional theory of school connectedness. Finally, no study exists on how liaisons leverage school connectedness to improve SEHs' educational and lifelong outcomes.

SEHs experience obstacles to education greater than even the poorest of children who have adequate housing (Baharav, Leos-rbel, Obradovic, & Bardack, 2017; Camp et al., 2019; Dinnen et al., 2020; Edwards, 2019; Ingram et al. 2017; Lafavor, 2018; Low et al., 2017; Manfra, 2019). Current literature evaluates the status of SEHs in America and provides comprehensive lists of barriers to education and SEHs' protective factors. Little research demonstrates how these protective factors transfer to the classroom, and no research evaluates how the COVID Closures impacted SEHs' Sense of belonging. When reviewing the aftermath of the COVID Closures, much research exists on the widening academic gap in math, English, and science. Still, no peer-reviewed research ideated or explained how and why 20% of the SEH population disappeared. The articles on this phenomenon are not peer reviewed and speculate, providing no research-based evidence of the SEHs' mass exodus from education.

The CDC (2009) defines the Multidimensional Theory of School Connectedness as a "belief by students that adults and peers in the school care about their learning as well as about them as individuals" (p. 3). Blum (2004), the author of MTSC, investigated the importance of belonging or feeling connected in academics. Three components comprise the MTSC: feeling connected to the school, peers, and a caring adult (McNeely, Nonnemaker, & Blum, 2002). Protective factors include adult support, positive peers, and safe school culture (CDC, 2009). To improve student well-being, children need to feel connected to the school's culture, parents, family, peers, and caring adults. Children must feel like they belong to something bigger than themselves to feel school connectedness. Further, they must be committed to education, and the school environment must be nurturing, inviting, comfortable, safe, and predictable (Blum, 2005).

These protective factors mitigate learning obstacles. This sense of belonging increases attendance. Feeling connected to the school reduces substance abuse, sex, violence, injury, emotional distress, disordered eating, and suicidal ideation. The positive, consistent, and nurturing school environment increases self-regulation and social-emotional well-being. The environment also nurtures positive relationships and reduces impulsivity and poor behavior.

Students need to feel safe, protected, and loved before learning. MTSC demands educators nurture positive relationships and build connectedness and belonging in their students. Blum (2004) contended that students who feel like they belong feel connected, and their attention, focus, motivation, and grades improve. Further, positive relationships with a caring adult at school impetus for the student's feeling connected. All SEHs' protective factors are part of MTSC's protective factors. Further, these protective factors rely on positive relationships. Figure 1 illustrates SEHs' and MTSC protective factors.

Figure 1
SEHs' and MTSC's Protective Factors
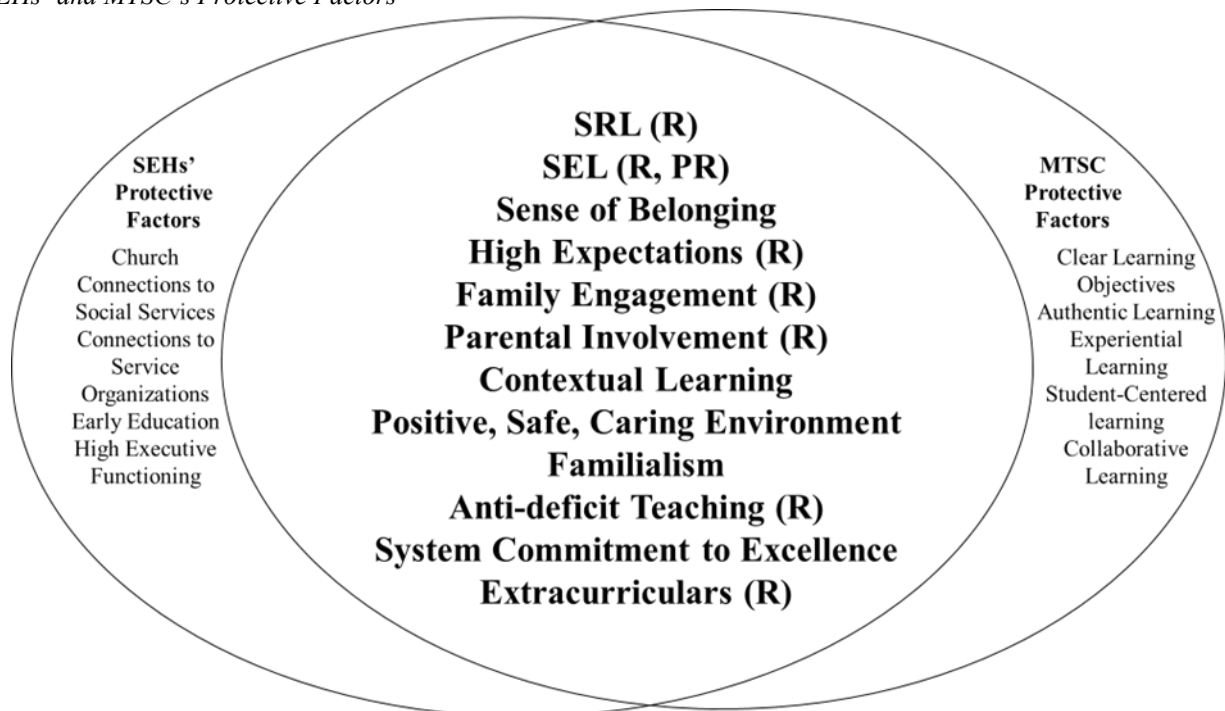
Note: R= relationship oriented; PR = peer relationship oriented.

Figure 1 represents the significant layover of protective factors between SEHs and MTSC. Most of the protective factors MTSC lists are also SEHs' protective factors. For this reason, this theory will provide the foundations for understanding how educators can mitigate SEHs' barriers to learning.

The MTSC cites six strategies, and they align with Social-Emotional Learning (SEL) and Self-Regulatory Learning (SRL):

1. Students can increase their academic achievement by participating in positive relationships and engaging with other students, family, and the community.
2. Educators must engage students' families in their children's academic careers and extracurricular activities.
3. Educators must prioritize students' SEL and solidify their academic foundations to increase engagement.
4. Educators must employ positive classroom management strategies and foster a positive classroom culture using anti-deficit teaching methods.
5. Administrations must provide continuous and sustainable professional learning on the students' cognitive, emotional, and social needs.
6. Schools must nurture "trusting and caring relationships that promote open communication among administrators, teachers, staff, students, families, and communities" (CDC, 2009, p. 9).

Litinor (2021) reported that roughly three million students went missing when schools shut down due to the pandemic. Despite educators' tireless attempts, SEHs remain missing (Schoolhouse Connections, 2022). Polaris Project (2022) reported that human traffickers recruited 22% more from the internet during the pandemic. Attendance is one of the most significant protective factors SEHs have (Manfra, 2019). When students are not in school, the people who protect them have limited access to SEHs. Liaisons reported a profound decline in communications with SEHs during the COVID Closures (Schoolhouse Connections, 2020). Potentially, some of these missing students could have become victims of human trafficking.

According to Murphy (2017), one in five SEHs end up in human trafficking, with 14% going to the sex trade, 8% into forced labor, and 3% enslaved in sex and forced labor. Polaris (2018) reported that 19% of all youth experiencing homelessness participate in "survival sex." Survival sex means "an individual engages in sexual activity in exchange for basic living necessities such as food and housing" (Polaris, 2018, p. 18). Due to identification barriers, Polaris (2018) contends these statistics significantly underreport the survival sex rate. Murphy (2017) states that most labor trafficking is drug-related (81%).

Polaris (2018) reported that 42% of SEH human trafficking included minors and the median age was 16. SEHs risk

factors parallel the risk factors of human trafficking: poverty, adolescent sexual abuse, and mental and emotional health challenges (Murphy, 2017). Most of the homeless who entered sex trafficking started when they first experienced homelessness (National Human Trafficking Hotline, 2022). Predators scope shelters, bus stops, housing authorities, and social service agencies for their victims (Polaris, 2018). These organizations are easy to find and surveil. According to Polaris (2018), predators recruited 15% of their victims at these shelters and government entities. The modus operandi is to befriend youth experiencing homelessness (YEHs) and offer to help them in a non-threatening manner. The predators' common ploy is under the auspices of disguised altruism. Alarmingly, many victims reported their parents or family sent them to the sex trafficking industry (Murphy, 2017).

Predators are friends, significant others, parents, and family (U.S. Department of Housing & Urban Development (HUD) Exchange, 2016). Particularly heinous predators reportedly use church and religion as part of their cover to connect, bond with, and form trusting relationships with their victims (Polaris, 2022). The key for these predators is to gain trust by promising a better life.

The problem is during the COVID Closures, 20% of students experiencing homelessness disengaged and disconnected from school and never returned. Educators have been unable to locate them. Despite tireless attempts to locate these students, they remain disconnected from their schools. Educators and researchers cannot adequately explain these students' disappearances. No research at the date of this study could provide solid evidence which would explain these students' disappearances. This study aimed to answer questions regarding school connectedness during times of school closures. The study's Central Research Question (CRQ) is: How do homelessness liaisons foster school connectedness with students experiencing homelessness during school closures? The study further aims to answer the following sub-questions: (1) What impact did closing schools have on students experiencing homelessness during COVID-19? (2) What role did technology play in maintaining personal connections during COVID-19?

THE STUDY
This study employed a single-case study research design, criterion sampling, and an inductive data analysis process. This section details the research design, instruments, participants, site, procedures, and ethical considerations. Participants included 11 liaisons at an urban school district in the United States Midwest region. The liaisons, which XYSD refers to as "life coaches," are 100% dedicated to supporting SEHs. The department includes the Director, Dr. Zacatecas, one social worker, one psychologist, two administrators, and 15 life coaches. The district has up to 3500 SEHs but fluctuates, given the transient nature of the phenomenon. This extreme case provides maximum evidence of how liaisons foster school connectedness.

Upon IRB approvals at XYSD and Liberty University, the researcher obtained informed consent and collected data from an online questionnaire, individual semi-structured interviews via Zoom, and an in-person focus group on campus. The researcher has a valid and current CITI certification and has kept the data on a password-protected computer that no other person can access. The researcher has no financial or other gains from conducting this research.

The researcher used Atlas.ti qualitative data analysis software to conduct an in-depth portrait of the liaisons' shared experience using the MTSC theoretical lens. Atlas.ti aided in describing the culture, analyzing themes, determining field issues, and interpreting the findings with frequency reports and networks.

FINDINGS
Multiple themes emerged from this study. All life coaches emphasized the importance of building positive relationships. Trust, time, attention, knowing your students, and following through with promises are vital components to building solid relationships. The second theme that emerged was the Covid Closures. The COVID Closures prohibited life coaches from maintaining consistent relationships with their students and families despite tireless attempts to engage them. Finally, the third theme that emerged was the life coach as the conduit to connectedness. The life coach was the most important protective factor for students developing a sense of belonging and connectedness.

All life coaches foster a sense of belonging by being positive and welcoming when they first meet their students. Other life coaches used different language that conveyed the meaning of connectedness and belonging. Positive relationships and engagement encourage students to feel connected to the school. The COVID Closures prohibited students from feeling connected, and part of something bigger than themselves, which caused what the life coaches fear will be irreparable physical, social, emotional, and mental damage.

Positive Relationships
Building relationships with their students requires life coaches to be sensitive, unbiased, non-judgmental, trustworthy, kind, gentle, and understanding. Unbiased and non-judgmental quotes appeared 24 times in the documents. Every coach explicitly expressed that every child of theirs was different. Multiple coaches stressed to their children that they were

not there to judge them; they were there to help them. Eleanor added how her students deserve her dignity and respect, "My whole thing with them is to always show them dignity, no matter what, no matter what they look like, no matter how they may smell… I always try to give them dignity."

Under normal circumstances, the life coaches leverage community engagement to foster positive relationships with the students and families. The COVID Closures halted almost all community and family engagement. At the time of this study, the school district hosted one event with a professional sports team where the parents and families attended a professional hockey game. After the game, the players played games and ate with the families and children. The life coaches raved about the event and were grateful for the event sponsors. Helen stressed, "I think that's such an important piece for our families… just to be able to provide opportunities and outings for the families themselves to get together and just let their hair down just to relax and just be able to spend time with their kids." Helen explained that families experiencing homelessness are so stressed and have no time or money for little luxuries in life. This outing allowed these families to be with their children in a stress-free environment, which also afforded the life coaches to build positive relationships

Facilitating Friendships

Multiple life coaches discussed how they fostered positive peer relationships. Catalina contends, "Consistently we have lots of children who do not know how to make friends because they are constantly moving. They just want to fit in." Unfortunately, students struggle with communicating appropriately and alienate other students rather than connect with them. Catalina, Omar, and Jeff provided multiple strategies to nurture peer relationships and promote friendships which helps students feel connected and like they belong. Catalina starts with her new students' first day at school, "I make them feel welcome. I tell them how fabulous it's going to be." Catalina will ask the teacher to connect her new students with a "buddy for the day."

Before the COVID Closures, Catalina wanted to start a "lunch bunch" program. This dedicated life coach explained, "They [SEHs] get to come have lunch in the library with me for an entire week. And the teacher will hand pick someone to be their lunch buddy. I'm going to teach how to be a friend, how to ask questions, how to play a game, how to find things in common to help them establish a foundation… and they feel like they belong."

Omar agreed and explained how he fosters peer relationships, "I get involved in the school culture the most. Omar expanded on how he engages in small talk with his students, invites them to lunch with him, and tells them to include their friends who are not part of Operation Chrysalis. (Only students who qualify for McV can be part of Operation Chrysalis). Omar will say, "Come on. Let's have lunch together. Let's go to the gym, shoot some hoops. Working with basketball, working with the basketball team helping those guys." As a basketball coach, Omar enlists the players to help his students feel included, welcome, and as if they belong. Jeff also uses sports to help his students connect to school, "I did play in a staff versus student volleyball game." Jeff continued to discuss how it helped build relationships and connections even if his competitive nature got the best of him, and he spiked the ball to go for the win.

One-on-One Attention and Being Present
These children desire more than anything attention. One-on-one and attention appeared 34 times. Life coaches struggle to give their students the attention they deserve juggling massive caseloads and traveling between multiple school districts. Regardless of the obstacles, these life coaches are determined to give their children the best of them and frequent one-on-one attention. Catalina described, "I'm in the lobby. I'm in the library. I'm in the cafeteria. I'm walking around trying to get a pulse." By doing this, Catalina provides a way for her students to see her out in the open. Helen also believes being present and seen is critical to providing the attention these children need, "I'm out in the open… It's a very open area. So, if I'm sitting here and the kids are walking by, they're always seeing a peek into here, and they come get me, sometimes they just need to come to just talk." Omar added to the importance of attention and one-on-one time with his students, "They treasure the moments they have with you." All life coaches provide their children and families with their cell phone numbers and confirm they can call any time for any reason.

COVID Closures
The homeless community suffered the most when COVID-19 hit, and the government decided to shut down the schools and replace in-person learning with online learning. SEHs lacked access to the internet, devices, and an environment conducive to online learning. The lockdown forced these students to remain in a dangerous and abusive environment with no protection for 18 months. The life coaches can see the impact now that the students are back in school, but they are alarmed at the unprecedented mental illness and social-emotional malaise. Additionally, Dr. Zacatecas confirmed multiple SEHs went missing during the COVID Closures despite tireless and superhuman attempts to locate them.

During the COVID Closures, life coaches, like the medical community, did not leave work. These dedicated educators stayed at schools helping to distribute learning packets, food, clothing, hygiene items, Chromebooks, and hotspots. If a

child did not pick up the items at school, the life coaches risked their health and safety and personally drove to the last place of residence. These life coaches drove to apartments, houses, shelters, parks, encampments along the river, cars, hotels, and wherever the students' last place of residence was.

The Great Disconnect

Unfortunately, life coaches, teachers, principals, and other staff could not reach many of these students. Even the superintendent tried to reach these students. Finding these students was of the utmost importance to the entire district. Joe noted, "a lot of students really fell off and were impossible to contact." The life coach speculated, "maybe due to transience, bouncing around a lot, might not have Wi-Fi, maybe couch-surfing." Only a handful of life coaches knew what happened to some students. Three life coaches confirmed that they had students that ended up in sex trafficking.

Beth described how one of her elementary school students ended up in sex trafficking, "They [predators] look for the kids who are maybe riding the bus by themselves and kind of look like they're upset or lonely or they find the ones that are mad at the world, or they find them online." Jenny experienced incidents with her elementary students at a residential facility. The incident happened when XYSD was completely remote. Jenny had a hard time finding the words to describe how one of her students was sex trafficked from a residential facility that was supposed to be a safe place.

During the COVID Closures, SEHs experienced intense trauma, from violence to sexual abuse. The students had no boundaries and had to take care of their siblings so their parents could work. Little to no learning occurred during the COVID Closures. Equally important was the social, emotional, and mental impact the closures had on these students. Not only have they lost a minimum of two years of academic growth, but they have also lost two years of maturation. Eleanor expanded, "These kids have not been in school for a whole year. Ninth graders that have come in (are) still in middle school in their minds. So, they're still doing middle school things in high school." The life coaches that support elementary school students confirmed a similar scenario. Bernie indicated his third and fourth graders are at a preschool level academically and in maturity.

Technology

Instead of connecting students to schools and caring adults, technology disconnected SEHs. Technology placed students in greater danger and contributed to the COVID Slide. Finally, technology contributed to SEHs' delayed maturation. All life coaches experienced the consequences of technology replacing in-person learning. Three life coaches added that technology did have some benefits. One life coach expressed technology's ability to help him connect to his students when he could not physically be with them.

Technology impacted students' academic and social well-being. Unfortunately, rather than supporting the students, the technology regressed the students' maturation. Eleanor pleaded, "If we could just wipe out social media. Turn it off. It's always where [fights] stem from." Life coaches blamed technology for the horrendous fighting they had never seen before. Eleanor revealed the scene, "I've seen fights in the high school, but these, you have to call the ambulance." Eleanor described how the students form a circle so adults cannot intervene, "They kind of circle a person like they're gonna kill. It's calculated... like a lion is trying to get his prey, and they circle it, separate it from the other ones, and then they attack it."

Sean added the violence stems from social media like YouTube, Facebook, and Instagram, "There's so many high school fights that you can watch on YouTube. You don't even have to search for it. They will direct you there." Sean continued to describe how students glorify violence on social media, "I've seen students of mine at A.B. Elementary School holding AK47s, assault rifles like, so the attitude is just more violent in America for children, especially our inner-city kids."

Further, the life coaches explained how technology provides students access to pornography, inappropriate content, and contact with dangerous people. Bernie exclaimed, "What did they do FOR A YEAR? They were watching T.V. and playing Fortnight or shooting people. Right? That was their year. Think about that!"

Sean added that during the COVID Closures, parents did not provide children with boundaries and allowed them access to all parts of the internet, including the dangerous areas of sex, violence, and drugs. Children cannot self-regulate their time or content using technology, and according to Beth, "That's the problem. They don't know how to turn it off!" Despite the school district's mandate to include technology in teaching and learning, Beth refuses, saying, "They have enough screen time at home. They don't need it during the day."

The COVID Closures caused excessive mental and emotional trauma. Most life coaches agreed that the lockdown prevented SEHs' liaisons from communicating with them, seeing any bruises or even a terrified look on their faces that would indicate they were in trouble. The life coaches felt helpless, and the children suffered. Ruth described one of

Catalina's students in elementary school who tried to kill herself by drinking bleach, "The after-effects of COVID have been really challenging. Suicide, thoughts of suicide, anxiety, and depression, and lack of social interactions… feelings of doom…" Ruth, distressed, continued to explain how she sees younger children experiencing disturbing internalizing behavior than before the COVID Closures, "I'm talking six years old… They're just very gloomy. They're depressed. We have a five-year-old that has had suicide ideation. FIVE. She's in kindergarten! It just seems like it's starting a lot earlier."

Catalina described multiple elementary school students who have attempted suicide, have suicide ideation and are currently hospitalized for suicide, "The needs seem to be much more intense… There have always been mental health issues, but our mental health issues seem to be much more extreme. I have had three children hospitalized for suicidal ideation this year." Catalina continued to describe hospitalized second-, third, and fourth-graders and six-graders who have attempted suicide multiple times.

Catalina elaborated on the student who drank bleach, "She attempted suicide once a week every week for three weeks. I have been calling child protective services for MONTHS before that." Frustrated, she explained how the girl downed the pills that were supposed to prevent her from suicide, "After her second suicide attempt when they sent her home with a bottle of pills. She downed them in front of her mother. The whole bottle of pills and ended up back in the ICU."

Life Coaches as the Conduit to Connection
Life coaches themselves are SEHs' conduit to helping SEHs feel connected and like they belong. Separating life coaches from their students during the COVID Closures illuminated that these caring adults are the most significant factor in SEHs' success. Figure 2 displays the most frequent codes associated with the life coaches' behaviors that encourage a sense of belonging and connectedness.

The most influential codes related to developing a sense of belonging are compassion, relationship building, promoting self-regulation, SEL, and evidence-based learning strategies. Life coaches' attributes and attitudes are vital in fostering a sense of belonging in their students. Compassion, dignity, respect, positivity, and the attitude of "I will never leave you" and "I will always be there for you" convince SEHs that they can depend on this person. Omar described this sentiment the best: "We love you, man. We love you. We got your back."

These attitudes help SEHs to believe they are not alone in their struggles and help them to connect with learning. Life coaches create personal experiences with their students, which transfer to their home environment. Each memory of reading a story, creating an artifact, or just shooting hoops helps the student feel connected to someone who loves and supports them—that feeling transfers to their environment outside the classroom's four walls.

SRL and SEL are critical factors in promoting connectedness. High expectations and goal setting provide students with structure. Life coaches empower their students by creating agency so they will advocate for themselves. These educators help their students create an environment conducive to learning despite boundless obstacles and chaos. Life coaches provide small rewards for smaller goals and build up to greater rewards trying to create intrinsic motivation.

The life coach ultimately becomes the reward for these students. The students do not want to disappoint their life coach, which motivates them to succeed. Bernie explained, "You put your arm around the kid, and you say, "How are you doing today? You connect. It's about connecting. People need it; people need a connection. My kids hug me because they need the connection." That hug is the reward; it is the conduit to belonging.

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Figure 2
Connectedness Codes
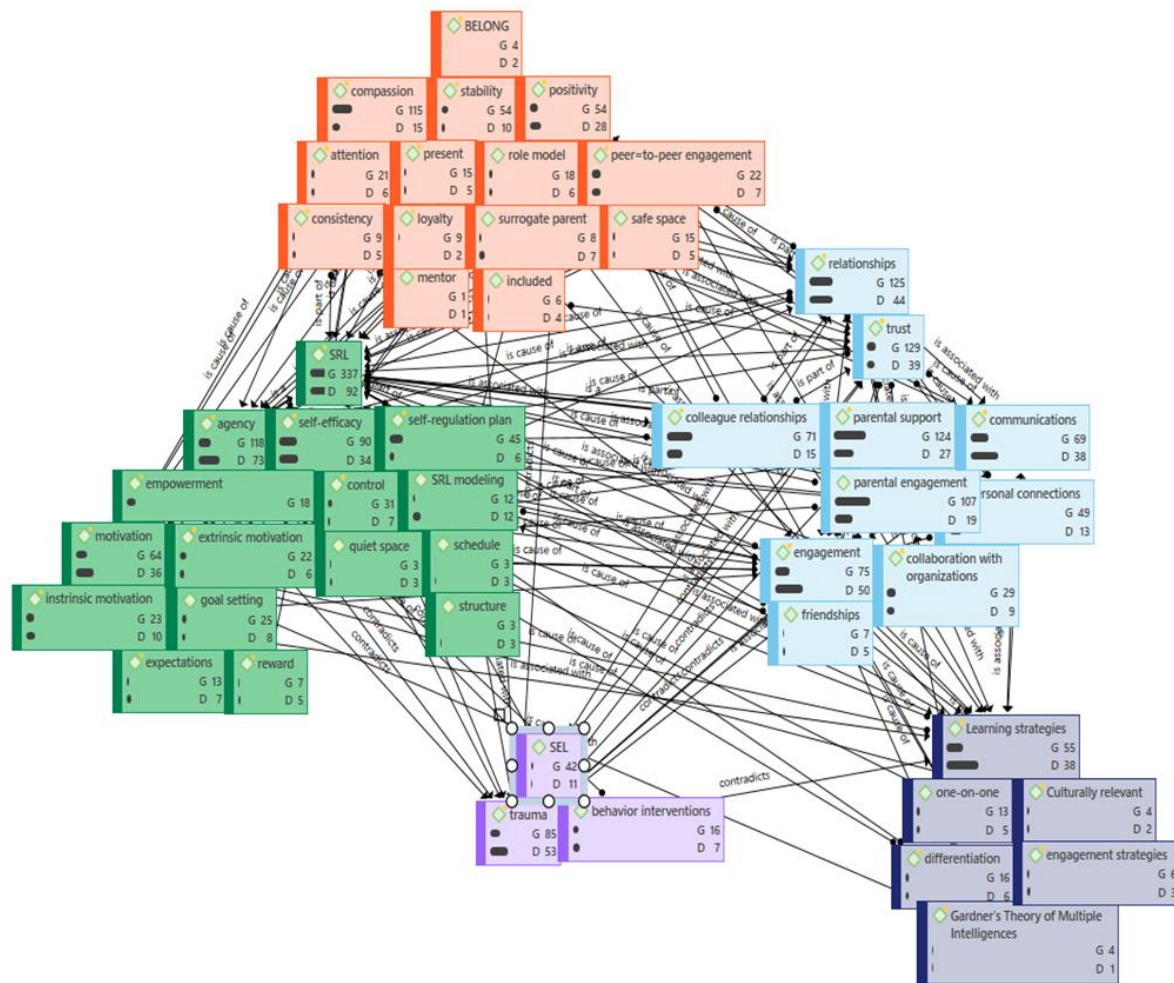
Note: G= Grounded. D= Density

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CONCLUSIONS
All life coaches foster a sense of belonging by being positive and welcoming when they first meet their students. Other life coaches used different language that conveyed the meaning of connectedness and belonging. Positive relationships and engagement encourage students to feel connected to the school. The COVID Closures separated the one caring adult in SEHs' lives. Life coaches provide stability, self-regulation, social-emotional and academic support, and basic life needs to SEHs. When the schools closed during the pandemic and opted for replacing in-person learning with technology, the consequences were disastrous and, at times, life-threatening. Life coaches' anguish over helping their students in the

aftermath of these closures takes a toll on their own social, emotional, and physical well-being.

Although many educators are hesitant to use technology after adverse experiences during COVID-19 and the switch to online learning, they must learn from the mistakes made and improve how they leverage technology. With marginalized populations, it is even more critical to ensure technology does not separate students from the school's culture and caring adults. Future research should focus on intervention studies that investigate how to implement technology to maximize school connectedness through student-centered and experiential learning. Future research should also investigate strategies to empower SEHs with technology rather than foster abuse. Finally, school districts and the United States government must prioritize finding the students who disappeared during the COVID Closures and implement policies and procedures to prevent this phenomenon from happening again.

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Individuals' Opinions on Digital Game Preferences and Educational Computer Games for Coding

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ABSTRACT
The users of digital games are increasing day by day. In particular, the time that individuals spare for games during the pandemic process has been more than in their normal lives. Digital educational games can provide engaging learning experiences for students. The educational contribution of games has been investigated by many studies. Considering the young people's interest in digital games, it is important to develop educational games in this area and to investigate their effects. In the study, the opinions of participants were taken using the survey method. The research was carried out with the participation of a total of 150, in the pandemic term of 2021. According to results digital game preferences, digital game preferences, educational coding game preferences of the participants are presented.
Keywords: Educational games, coding, digital game, computer game.

INTRODUCTION

The users of digital games are increasing day by day. In particular, the time that individuals spare for games during the pandemic process has been more than in their normal lives (Aktaş and Daştan, 2021; Şener et al., 2021). During the pandemic process, distance education has continued, and online education material can be used for educational purposes from digital games (Khan et al., 2017).

Digital educational games can provide engaging learning experiences for students (Kiili, 2005). Digital educational games are used for creativity (Behnamnia et al., 2020), learning achievement (Chen, 2017), intrinsic motivation (Liao et al. 2019), cognitive load (Hawlitschek and Joeckel, 2017) willingness to communicate (Yeh, 2017) and as effective learning tools (De Freitas, 2018). The educational contribution of games has been investigated by many studies. Considering the young people's interest in digital games, it is important to develop educational games in this area and to investigate their effects.

Coding education is important for Achieving 21st-Century Skills (Kanbul and Uzunboylu, 2017), so to make coding education attractive digital computer games developed and educational research has been done in this area. Seo and Cho (2018) designed a coding puzzle game and implemented the game to students' coding assessment system. Cho and Park (2018) developed a coding educational game for C language beginner learners. Butt (2016) used CodinGame for game based coding learning. According to the researches, it has been determined that the effects of educational coding games on learning coding are positive.

In this research, the digital game preferences of individuals were determined. Also, it was carried out to determine the opinions of individuals about educational computer games and usage of educational digital games for code learning. The research was carried out during the 2021 pandemic period. This research reflects the thoughts and knowledge of individuals about digital games during the pandemic period.

METHOD

In this study, individuals' digital game preferences and opinions about educational computer games was discussed during the COVID-19 pandemic. The opinions of participants were taken using the survey method. In the questionnaire, there are a total of 13 questions, 6 of them about digital game preferences and 7 items about opinions about educational computer games. Participants were reached from social media groups and digital game platforms to participate in the online survey.

The research was carried out with the participation of a total of 150, 30 whom were female (20%) and 120 whom were male (80%) in the pandemic term of 2021 (Table 1). The age, education level, duration of owning a smart mobile phone and duration of owning a computer of the survey participants are presented in Table 1.

Table 1. Demographic information

		Frequency	Percentage
Gender			
	Female	30	20
	Male	120	80
Age			
	10 and lower	9	6
	11-20	42	28
	21-30	78	52
	31-40	13	8.7
	41 and upper	8	5.3
Education level			
	Primary school	12	8
	High school	60	40
	Associates	39	26
	Undergraduate	32	21.3
	Graduate	5	3.3
	Doctoral	2	1.4
Duration of owning a smart mobile phone			
	3 and lower	15	10
	3-4 year	17	11.3
	5-6 year	47	31.3
	7 and upper	71	47.3
Duration of owning a computer			
	3 and lower	18	12
	3-5 year	22	14.6
	6-10 year	35	23.3
	10 and upper	75	50

FINDINGS

The 21-item survey conducted within the scope of this study was represented by 3 factors: "digital game preferences", "digital game preferences", "educational coding game preferences" and the findings are presented in these titles.

Digital Game Preferences

In the study, digital game preferences are researched as digital game playing case, device for playing game, 82% of the participants play digital games; 94.3% use computer, 63.4% mobile phone, 28.5% PlayStation, 11.4% tablet and 8.1% Xbox device to play games (Table 2). Participates stated that they have been playing digital games for over a year (3.3%), 8.1% for 2-3 years, 18.7% for 4-5 years, 26% for 6-10 years, and 43.9% for 11 years and upper. 91.9% of the participants stated that they play games to have fun, 74.8% to relieve stress, 51.2% to spend free time and 39% to socialize.

Table 2. Digital game preferences

		Frequency	Percentage
Digital game playing			
	Yes	123	82
	No	27	18
Device for playing game			
	Computer	116	94.3
	Mobile phone	78	63.4
	PlayStation	35	28.5
	Tablet	14	11.4
	Xbox	10	8.1
Time to start playing digital games			
	1 year	4	3.3
	2-3 year	10	8.1
	4-5 year	23	18.7
	6-10 year	32	26

11 and upper	54	43.9
Reasons to play		
Fun	113	91.9
Relieve stress	92	74.8
Spend free time	63	51.2
Socialize	48	39
Game type preferences		
Adventure/action	100	81
Strategy	85	69.1
War/fighting	77	62.6
Racing/sports	59	48
Card/table	28	22.8
Educational games	26	21.1
Simulation	3	2.4
Game structure preferences		
Team	95	77.2
Multiplayer	89	72.4
Single-player	78	63.4
Competitive	74	60.2
Role-playing	64	52

Participants stated that they played 81% adventure/action, 69.1% strategy, 62.6% war/fighting, 48% racing/sports, 22.8% card/table, 21.1% educational games, 2.4% simulation games. 77.2% of the participants stated that they liked team games, 72.4% multiplayer, 63.4% single-player, 60.2% competitive and 52% role-playing games.

Use of Games for Educational Purposes
The participants think that the games can be used for educational purposes (88%.) It was determined that 58.5% of the participants had played educational computer games before, and 39% of them played games that included computer coding training. In Table 3, course and educational game name are given as stated by the participants.

Table 3. Use of games for educational purposes

	Frequency	Percentage
Usability of computer games for educational purposes		
Yes	132	88
No	18	12
Educational game playing situation		
Yes	72	58.5
No	51	41.5
Playing a coding educational game		
Yes	48	39
No	71	61
Course/Game name		
Computer programming	48	32
CodinGame	26	17.33
CSS Diner	21	14.00
Flexbox Froggy	18	12.00
CodeCombat	17	11.33
Ruby Warrior	17	11.33
Untrusted	12	8.00
Code Hunt	11	7.33
Robocode	5	3.33
CheckIO ve Empire of Code	5	3.33
VIM Adventures	4	2.67
Siber Dojo	3	2.00
Elevator Saga	3	2.00
Tryhackme	2	1.33
Code Wars	2	1.33
Cyber-dojo	1	0.67

Math	68	45.33
Science	49	32.67
Music	3	2.00

Educational Coding Game Preferences

Participants' educational coding game preferences and coding training status were determined. It was determined that 54% of the participants had previously received coding training. According to the participants, the areas that need interactive training in the field of informatics are 69.9% software, 67.1% artificial intelligence, 62.3% cyber security, 45.2% project and software management, 45.2% database management, 41.8% image processing, 41.1% network management, 37.3% system management, 36.5% big data processing, 35.7% cryptology.

Table 4. Educational coding game preferences

	Frequency	Percentage
Coding training status		
Yes	81	54
No	69	46
Interactive training in the field of informatics		
Software	102	69.9
Artificial intelligence	98	67.1
Cyber security	91	62.3
Project and software management	66	45.2
Database management	66	45.2
Image processing	61	41.8
Network management	60	41.1
System management	51	34.9
Big data processing	51	34.9
Cryptology	50	34.2
Considerations in digital education		
Training should be done with examples	123	82
Being able to test what is taught at any time	91	60.7
Being in contact with other users thanks to virtual communities	83	55.3
Having a verbal explanation	66	44
Explaining the training theoretically	49	32.7

When the important situations in digital education are examined, 82% of the participants stated that the training should be done with examples, being able to test what is taught at any time (60.7%), 55.3% of them wanted to be in contact with other users thanks to virtual communities, having a verbal explanation (44%) and explaining the training theoretically (32.7%).

RESULTS

In this research, digital game preferences, digital game preferences, educational coding game preferences of the participants are researched. The research was carried out during the 2021 pandemic period, this study reflects the thoughts and knowledge of individuals about digital games during the pandemic period. In the world changed by the pandemic, it is important to determine the preferences of individuals and to prepare educational games for these needs.

In digital game preferences factor, most of the participants playing digital games on computer for eleven and more years' information is detected. Also game type and structure preferences of the participants can be examined. According to use of games for educational purposes factor, participants are aware of educational games, they can give the course or game name that they have played. Educational coding game preferences factor created to present user information to researchers who are considering developing games in the field of coding. It is thought that the research reflects the game preferences of individuals in the pandemic in detail.

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Investigation of Teachers' Materials Design Self-Efficiency Beliefs and Attitudes to Use Instructional Technologies[1]

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ABSTRACT
In this study, it was aimed to examine the relationship between teacher candidates' material design self-efficacy beliefs and their attitudes towards using instructional technologies in the distance education process in the COVID-19 period. The participant group of the study, in which the relational screening design was used, consisted of 90 males and 214 females, who were studying in their second year in the fields of Science, Mathematics, Preschool, Classroom, Social Studies, Turkish and English education and who took the Instructional Technologies course as distance education due to the Covid-19 epidemic. It consists of 304 teacher candidates. In the study, the "Material Design Self-Efficacy Belief Scale (MDSEE)" developed by Bakaç and Özen (2015) and the "Attitude Scale towards the Use of Instructional Technologies for Pre-service Teachers (ATUIT)" developed by Metin, Kaleli-Yılmaz, Coşkun, and Birişçi (2012) were used. Since the data obtained did not show normal distribution as a result of the normality tests, Mann Withney U, Kruskal Wallis and (r) effect size from non-parametric statistics; arithmetic mean, standard deviation, frequency and percentage from descriptive statistics were also used. The Spearman correlation coefficient was calculated for the relationship between the total scores of both scales. Statistical significance level was determined as $p<.05$ in these analyzes.

No significant difference was observed between the participants' views on gender, the necessity of the Instructional Technologies course, and whether the course was taught in accordance with their own branches and their MDSEE scores.

A significant difference was determined between some of the programs that the participants studied and their MDSEE scores.

While there was a significant difference between the participants' gender and education program variables and the comparison of ATUIT scores; There was no difference between ATUIT scores regarding the necessity of the Instructional Technologies course and whether this course was taught in accordance with their own branches. In addition, a moderate and positive relationship was found between MDSEE and ATUIT scores.
Keywords: Instructional material, material design, Instructional technologies, self-efficacy belief.

INTRODUCTION
Scientific and technological changes constitute the center of our individual and social lives at the point we have reached today. In this context, it is not possible to consider educational practices separately from these changes. For this reason, every society should strive to increase the quality of education and training activities in order to be successful in the process of change. One of the most important variables that will serve to increase the quality of educational activities is instructional technology. The concept of instructional technology (IT) has been defined in different ways in the literature. These definitions include instructional technology, (Yalın, 2010) using tools and materials in the teaching-learning process; (Yanpar, 2015) systematic efforts to ensure the effectiveness of teaching activities; Saettler (1998), on the other hand, considers the teaching process and resources to include planning, development, implementation and evaluation.

There are many studies in the literature emphasizing the importance and benefits of using instructional technologies (materials) in the teaching-learning process. Some of these studies (Çelikkaya, 2017, Güneş & İskenderoğlu 2014; Wang et.al., 2013; Yalın, 2010; Balkı & Saban, 2009; Yaşar & Gültekin, 2009; Kaya, 2008; İşman, 2008; Yavuz & Coşkun, 2008) was made by. In these studies, it was found that teaching materials provide multiple learning environments by affecting multiple senses, thus offering options to students with different learning styles and needs; It is frequently stated that by arranging abstract and complex information in a concrete and simple way, it increases understanding and perception and thus facilitates memorability.In addition, it is stated

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[1] Part of this study is presented in the International Educational Technology Conference (IETC-2022).

that it provides the opportunity to observe events and situations that cannot be brought to the classroom environment or that are dangerous in terms of safety, and provides the opportunity to use time more effectively and efficiently for both teachers and students in the teaching-learning process.In order for instructional technologies to provide these benefits in terms of teaching and learning, pre-service teachers should acquire the competencies of both choosing and preparing appropriate instructional technology and using it effectively (Davis, 2003; Gündüz ve Odabaşı, 2004, McNair ve Galanouli, 2002). In this process, teacher candidates should gain professional skills related to gaining knowledge and experience about instructional design in their fields, recognizing instructional materials, gaining awareness of their functions, and preparing new materials suitable for their needs (Yanpar, 2015).

In this context, while the Ministry of National Education (MoNE, 2006) considers teacher competencies for instructional technology among the competencies that should be possessed in the field of information technologies; (MoNE, 2017), on the other hand, highlights the teaching-professional skills in the sub-dimension of managing the teaching-learning process of the competency area, with the statement "teacher uses information and instructional technologies effectively in the teaching-learning process". In this case, the behaviors of preparing materials and using technology in teaching, which are one of the professional competencies that every teacher should have regardless of their field, appear as a compulsory need (Korkmaz, 2011). In order to meet this need of teacher candidates, the Council of Higher Education (CoHE) included the Instructional Technologies (/Material Development and Design) course in its 1997, 2006 and 2018 teacher training programs. From these courses, it is basically envisaged that pre-service teachers will gain the competence to use technology effectively in the teaching processes of their own courses (Gündüz & Odabaşı, 2004). Therefore, pre-service teachers need to develop positive attitudes towards the technologies used in teaching, as well as gain self-efficacy belief in preparing teaching materials and using it effectively. While self-efficacy belief is put forward in the form of judgments that individuals can effectively use their qualities to achieve certain goals; It is emphasized that the person prefers the behaviors that will reach his goal and is effective on the results achieved. (Zimmerman, 1995; Bandura, 1997, 2006). Attitude, on the other hand, is defined as the learned preference and preliminary preparation, which is the basis of the behavior of individuals towards the events and objects they encounter (Demirel, 2010; Kırel, 2004). Based on these definitions, when the two concepts are considered together, it can be seen as the two main factors that predetermine which behaviors the individual should exhibit in order to reach a certain goal, why, how much and in what way. As a matter of fact, some of the studies revealing that individuals' self-efficacy beliefs and attitudes are related (Arastaman, 2013; Yavuz et. Al. 2013; Kaleli-Yılmaz, 2012; Çetin et.al, 2012; Evans, 2011; Usta & Korkmaz, 2010; Conrad & Munro, 2008, Moyer, 2001).

When the concepts of material design self-efficacy belief and attitude towards the use of instructional technologies are considered from the point of view of the teacher, while designing and using instructional technologies in the teaching-learning process in order to achieve the instructional objectives of the lessons, first of all, the achievements, development and learning characteristics of the student, physical and economic conditions, real life relationship, usefulness, etc. it has to take into account many variables (Demirel, 2003). In order to successfully perform these processes in accordance with the criteria, teachers are expected to have both self-efficacy beliefs and positive attitudes, as well as those who have professional skills related to instructional technologies (/material design).

During the Covid-19 epidemic, all educational activities in Turkey as well as in the whole world were tried to be carried out via distance education system (online) with the opportunities provided by technology as a necessity. With this study, it was aimed to determine the quality and relationship of teacher candidates who took instructional technology lessons with online activities during the epidemic process, their material preparation self-efficacy beliefs and their attitudes towards instructional technologies.

SUB PROBLEMS

1.What is the level of teacher candidates' material design self-efficacy belief (MDSEE)) and attitude towards using instructional technologies (ATUİT) scores?

2.Teacher candidates;

a.) Gender, b.) The program they are studying, c.) The necessity of the IT course, and d.) Is there a significant difference between the appropriateness of the IT course to their fields and the MDSEE scores of the pre-service teachers?

3. Teacher candidates

a.) Gender, b.) The program they are studying, c.) The necessity of the IT course, and d.) Is there a significant difference between the ATUİT scores and the suitability of the IT course to its fields?

4.Is there a significant relationship between prospective teachers' MDSEE and ATUİT?

METHOD

In this study, it was aimed to examine the relationship between teacher candidates' material design self-efficacy beliefs in the distance education process and their attitudes towards using instructional technologies in terms of various variables. For this reason, relational screening design was used in the study.

POPULATION AND SAMPLE

The study population of the research consists of 563 teacher candidates studying in the second year of the Faculty of Education. The number and proportions of the participants in the randomly selected sample from these candidates according to the programs are presented in Table 1.

Table 1. Information on the Study Population and Sampling

Programs	N	n	%
Science Teaching	34	32	94
Maths Teaching	65	40	62
Pre-school Teaching	115	67	58
Classroom Teaching	78	44	56
Social Studies Teaching	65	44	68
Turkish Teaching	68	40	59
English Teaching	72	37	51
Total	**497**	**304**	**61**

As seen in Table 1, 304 pre-service teachers randomly selected from 497 pre-service teachers studying in the second grade constitute the participant group. The participants forming the sample group constitute approximately 61% of the study population.

DATA COLLECTION TOOL

In this study, the "Material Design Self-Efficacy Belief Scale" developed by Bakaç and Özen (2015) was used to determine the self-efficacy characteristics of prospective teachers regarding material design. This scale consists of three sub-dimensions, namely Material Preparation on the Computer (12 items), Three-Dimensional Material Design (7 items) and Two-Dimensional Material Design (6 items) and 25 items in a five-point Likert structure. While the Cronbach Alpha coefficient for the sub-dimensions of the scale was 0.92, it was found to be 0.878 in this study. The attitudes of pre-service teachers towards using instructional technologies were determined by the "Attitude Scale Towards the Use of Instructional Technologies Towards Pre-service Teachers" developed by Metin, Kaleli-Yılmaz, Coşkun, and Birişçi (2012). This scale consists of believing in the use of instructional technologies in lessons (10 items), Enjoying the use of instructional technologies in lessons (9 items), Not enjoying the use of instructional technologies (9 items), Unwillingness to use instructional technologies (7 items), and Believing in the benefits of instructional technologies (2 items).) consists of five sub-dimensions and a total of 37 items. The Cronbach Alpha coefficient of the scale was 0.94 and this application was determined as 0.936.

ANALYSIS OF DATA

The normality of the scores was tested by testing the normal distribution feature and the equality of variances of the scores obtained in the analysis of the data (Table 2).

Table 2. Normality Test Results

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MDSEE	,148	304	,000	,931	304	,000
ATUİT	,093	304	,000	,973	304	,000

In Table 2, it is seen that the scores obtained with the MDSEE and ATUIT scales do not show normal distribution.. For this reason, in the analysis of the data, Mann Withney U, Kruskal Wallis and (r) effect size; Among the descriptive statistics, arithmetic mean, standard deviation, frequency and percentage were used. The Spearman correlation coefficient was calculated for the relationship between the total scores of both scales. Statistical significance level was determined as $p < .05$ in these analyzes.

ETHICAL PERMISSION TO RESEARCH

Ethical approval of this study was obtained from Burdur Mehmet Akif Ersoy University Non-Interventional Clinical Research Ethics Committee with the document dated 03.02.2021 and numbered GO 2021/67.

RESULTS

In this section, the data obtained during the research process were analyzed and presented in the form of tables in line with their sub-problems.

Sub Problem 1. Descriptive statistics for MDSEE and ATUIT

Table 3. Descriptive Statistics for MDSEE and ATUIT

Ölçekler	n	x̄	ss
MDSEE	304	4,08	,28269
ATUIT	304	4,07	,34530

As seen in Table 3, the teacher candidates' material design self-efficacy belief scores (x̄ =4.08) and their attitudes towards using instructional technologies (x̄=4.07) were determined to be high.

Sub Problem 2.

2a. Comparison of the scores obtained from MDSEE in terms of gender variable

Table 4. Comparison of The Scores Obtained From MDSEE in Terms of Gender Variable

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p
Male	90	167,48	15073,50	8281,500	-1,931	,054
Female	214	146,20	31286,50			

As seen in Table 4, no significant difference (p>.05) was observed in the scores of teacher candidates regarding material design self-efficacy beliefs. Female and male teacher candidates may think that they have similar characteristics in terms of MDSEE.

2b. Comparison of the scores obtained from MDSEE in terms of department variable

Table 5. Comparison of The Scores Obtained From MDSEE in Terms of Department Variable

Groups	n	x̄	ss	Mean Rank	df	χ²	p
Science Teaching	32	3,9238	,17985	100,30			
Maths Teaching	40	3,8850	,20778	86,29			
Pre-school Teaching	67	4,0119	,21360	130,78			
Classroom Teaching	44	3,9609	,15492	113,05	6	135,043	,000*
Social Studies Teaching	44	4,0645	,18182	161,30			
Turkish Teaching	40	4,3470	,28521	231,64			
English Teaching	37	4,4595	,20213	259,47			

When the Kruskal Wallis-H Test results in Table 5 are examined, a significant difference was determined in the MDSEE scores of the participants according to the programs they studied. The Mann Whitney-U test was used to determine between which pairs these differences were, and the results are given in Table 6.

Table 6. Comparison of The Scores Obtained From MDSEE in Terms of Department Variable

Groups (Programs)	n	Mean Rank	Sum of Ranks	U	Z Value	p	r
Science	32	39,53	1265,00	543,000	-1,103	,270	————
Maths	40	34,08	1363,00				
Science	32	43,22	1383,00	855,000	-1,629	,103	————
Pre-school	67	53,24	3567,004				
Science	32	35,48	1135,50	607,500	-1,024	,306	————
Classroom	44	40,69	1790,50				
Science	32	27,09	867,00	339,000	-3,876	,000*	,38
Social S.	44	46,80	2059,00				
Science	32	19,92	637,50	109,500	-6,020	,000*	,71

Turkish	40	49,76	1990,50				
Fen Bilgisi	32	17,55	561,50	33,500	-6,727	,000*	,81
English	37	50,09	1853,50				
Maths	40	41,56	1662,50	842,500	-3,211	,001*	,31
Pre-school	67	61,43	4115,50				
Maths	40	36,63	1465,00	432,000	-4,045	,000*	,44
Classroom	44	47,84	2105,00				
Maths	40	31,30	1252,00	645,000	-2,116	,034*	,23
Social S.	44	52,68	2318,00				
Maths	40	23,64	945,50	125,500	-6,504	,000*	,72
Turkish	40	57,36	2294,50				
Maths	40	21,59	863,50	43,500	-7,113	,000*	,81
English	37	57,82	2139,50				
Pre-school	67	57,28	3838,00	1388,000	-,521	,602	—
Classroom	44	54,05	2378,00				
Pre-school	67	50,74	3399,50	1121,500	-2,133	033*	,20
Social S.	44	64,01	2816,50				
Pre-school	67	41,22	2762,00	484,000	-5,521	,000*	,54
Turkish	40	75,40	3016,00				
Pre-school	67	36,87	2470,00	192,000	-7,123	,000*	,70
English	37	80,81	2990,00				
Classroom	44	32,90	1447,50	457,500	-4,316	,000*	,46
Social S.	44	56,10	2468,50				
Classroom	44	26,27	1156,00	166,000	-6,413	,000*	,70
Türkçe	40	60,35	2414,00				
Classroom	44	23,80	1047,00	57,000	-7,200	,000*	,80
English	37	61,46	2274,00				
Social S.	44	29,13	1281,50	291,500	-5,300	,000*	,58
Turkish	40	57,21	2288,50				
Social S.	44	25,08	1103,50	113,500	-6,674	,000*	,74
English	37	59,93	2217,50				
Turkish	40	34,05	1362,00	542,000	-2,023	,043*	,23
English	37	44,35	1641,00				

In Table 6, when the MDSEE scores of the participants differ between which two programs they studied, Science -Social Studies; It is observed that the difference between the scores of the candidates in Science -Turkish, Science -English programs is against Science. Mathematics-Preschool; Mathematics – classroom education; Mathematics-Social studies; The difference between the MDSEE scores of the candidates in the Mathematics-Turkish programs was also determined against the Mathematics education. In addition, the scores of pre-service teachers in Preschool-Social Studies and Preschool-English programs are against pre-school, and the difference between MDSEE scores of participants studying in Classroom Education-Social Studies, Classroom Education-Turkish and Classroom Education-English programs is against Classroom education. The difference in the scores of the candidates in the Social Studies-Turkish, Social Studies-English programs was observed against the candidates studying in the Social Studies program, and the difference between the scores of the participants in the Turkish-English programs was observed against the candidates in the Turkish program.

On the other hand, it was determined that the effect score (r) of the significant difference calculated between the scores of the participants in the Science, Mathematics, Preschool, Classroom education and Social studies programs, for which a significant difference was determined with the scores of the pre-service teachers studying in Turkish and English programs, was found to be high. Again, the scores of the candidates in Social Studies, Science, Mathematics, Preschool, Classroom education; It is seen that the effect size (r) value of the significant difference between the scores of the participants in the classroom education in Mathematics and those in the English program in the Turkish education program is at a medium level.

2c. Comparison of the scores obtained from MDSEE whit whether IT course is necessary variable

Table 7. Comparison of The Scores Obtained From MDSEE Whit Whether IT Course is Necessary Variable

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p
Yes	293	149,28	43739,50	668,500	-1,006	,315
No	6	185,08	1110,50			

When Table 7 is examined, no significant difference was observed between the opinions of the pre-service teachers on whether the IT course is necessary and their MDSEE scores.

2d. Comparison of MDSEE scores with whether the IT course was completed in accordance with the branch

Table 8. Comparison of MDSEE Scores With Whether The IT Course Was Completed in Accordance With The Branch

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p
Yes	269	150,48	40478,00	3907,000	-1,006	,775
No	30	145,73	4372,00			

As seen in Table 8, there was no significant difference between the participants' views on whether the IT course was taught in accordance with their branches and their MDSEE scores.

Sub Problem 3.

3a. Comparison of the scores obtained from ATUIT in terms of gender variable

Table 9. Comparison of The Scores Obtained From ATUIT In Terms of Gender Variable

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p	r
Male	90	173,47	15612,00	7743,000	-2,699	,007*	
Female	214	143,68	30748,00				

As can be seen in Table 9, there was a significant difference between the ATUIT scores of the participants according to the gender variable, and this difference is seen in favor of men. In other words, male teacher candidates have more positive ATUIT than female participants.

3b. Comparison of the scores obtained from AYUIT in terms of department variable

Table 10. Comparison of The Scores Obtained From ATUIT in Terms of Department Variable

Groups	n	x̄	ss	Mean Rank	df	χ²	p
Science Teaching	32	3,8598	,30827	101,38			
Maths Teaching	40	3,8250	,33028	89,38			
Pre-school Teaching	67	4,1166	,29719	166,40			
Classroom Teaching	44	4,0412	,26484	141,50	6	67,377	,000*
Social Studies	44	4,0197	,27080	139,33			
Turkish Teaching	40	4,2466	,34769	196,39			
English Teaching	37	4,3492	,33232	221,08			

When the Kruskal Wallis-H Test results are analyzed in Table 10, a significant difference was observed in the ATUIT scores of the participants according to the programs they studied. The Mann Whitney-U test was used to determine between which pairs these differences were, and the results are presented in Table 11:

Table 11. Comparison of The Scores Obtained From ATUIT in Terms of Department Variable

Groups (Programs)	n	Mean Rank	Sum of Ranks	U	Z Value	p	r
Science	32	37,95	1214,50	593,500	-,528	,598	
Maths	40	35,34	1413,50				
Science	32	35,41	1133,00	605,000	-3,496	,000*	,35
Pre-school	67	56,97	3817,00				
Science	32	31,47	1007,00	479,000	-2,371	,018*	,27
Classroom	44	43,61	1919,00				
Science	32	32,39	1036,50	508,500	-2,059	,039*	,23
Social S.	44	42,94	1889,50				
Science	32	24,91	797,00	269,000	-4,207	,000*	,50
Turkish	40	45,78	1831,00				
Fen Bilgisi	32	21,75	696,00	168,000	-5,105	,000*	,61
English	37	46,46	1719,00				
Maths	40	36,88	1475,00	655,000	-4,414	,000*	,42
Pre-school	67	64,22	4303,00				
Maths	40	33,50	1340,00	533,000	-3,112	,002*	,34
Classroom	44	50,68	2230,00				
Maths	40	33,83	1353,00	520,000	-3,229	,001*	,35
Social S.	44	50,39	2217,00				
Maths	40	27,75	1110,00	290,000	-4,910	,000*	,55
Turkish	40	53,25	2130,00				
Maths	40	24,59	983,50	163,500	-5,882	,000*	,63
English	37	54,58	2019,50				
Pre-school	67	60,25	4037,00	1188,000	-1,726	,084	
Classroom	44	49,52	2179,00				
Pre-school	67	60,27	4038,00	1188,000	-1,726	,084	
Social S.	44	49,50	2178,00				
Pre-school	67	49,49	3316,00	1038,000	-1,946	,052	
Turkish	40	61,55	2462,00				
Pre-school	67	45,19	3028,00	750,000	-3,326	,001*	,33
English	37	65,73	2432,00				
Classroom	44	44,64	1964,00	962,000	-,050	,960	
Social S.	44	44,36	1952,00				
Classroom	44	34,94	1537,50	547,500	-2,982	,030*	,32
Türkçe	40	50,81	2032,50				
Classroom	44	30,60	1346,50	356,500	-4,342	,000*	,48
English	37	53,36	1974,50				
Social S.	44	34,45	1516,00	526,000	-3,173	,020*	,34
Turkish	40	51,35	2054,00				
Social S.	44	30,18	1328,00	338,000	-4,517	,000*	,50
English	37	53,86	1993,00				
Turkish	40	36,15	1446,00	626,000	-1,163	,245	
English	37	42,08	1557,00				

As a result of the comparison of the ATUIT scores of the participants in Table 11, it was determined that the scores of the pre-service teachers in the Science and Mathematics program were significantly lower than the scores of the candidates studying in all the programs in the study. In addition, it was observed that the scores of the participants in the English program were significantly higher than the scores of the pre-service teachers in preschool, classroom education and Turkish. The difference between the scores of the candidates studying in the fields of classroom education and Turkish emerged in favor of the participants in the Turkish program.

On the other hand, Turkish and English with Science; Preschool with Mathematics, Turkish, English; It was seen that the effect size (r) of the significant difference observed in the scores of the participants in the English and Social Studies and Classroom education programs was at a high level. Again with Science, Pre-School and Classroom education; Classroom education with Mathematics, Social studies; The effect size of the significant difference between pre-school and English and Classroom education and Turkish programs is medium.

3c. Comparison of the scores obtained from ATUIT whit whether IT course is necessary variable

Table 12. Comparison of The Scores Obtained From **ATUIT** Whit Whether IT Course is Necessary Variable

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p
Yes	293	150,53	44106,50	722,500	-,285	,455
No	6	123,92	743,50			

Tablo 12 incelendiğinde Öğretmen adaylarının Öğretim Teknolojileri dersinin gerekli olup olmadığı konusundaki görüşleri ile ATUIT puanları arasında anlamlı fark belirlenmemiştir.

3d. Comparison of ATUIT scores with whether the IT course was completed in accordance with the branch

Table 13. Comparison of ATUIT Scores With Whether The IT Course Was Completed in Accordance With The Branch

Groups	n	Mean Rank	Sum of Ranks	U	Z Value	p
Yes	269	151,99	40884,00	3501,000	-1,190	,234
No	30	132,20	3966,00			

As can be seen in Table 13, the difference between the participants' views on whether the Instructional Technologies course is taught in accordance with their own branches and their ATUIT scores is not statistically significant.

Sub Problem 4. Correlation Analyses between the MDSEE and ATUIT scores

Table 14. Correlation Analyses Results Between The MDSEE and ATUIT Score

Scales	ATUIT	p
MDSEE	457**	.000*

When the results in Table 14 are examined, it is seen that there is a moderate and positive relationship between the MDSEE and ATUIT scores of the participants.

CONCLUSION and DISCUSSION
In this study, while no difference was observed in the MDSEE-related scores of teacher candidates according to gender; It has been determined that male candidates have more positive attitudes than female candidates in ATUIT scores. Accordingly, it can be said that teacher candidates are similar in terms of material design self-efficacy beliefs according to gender variable. This result, Aktepe, Uzunöz and Gündüz (2018); Alım (2015), Kaleli-Yılmaz and Koparan (2015) and Metin, Birişçi, and Coşkun (2013) support the findings of Bektaş, Nalçacı and Ercoşkun (2009) Bain and Rice (2006). However, in terms of technology use, it does not seem to be compatible with a significant result against male teacher candidates (Erdemir, Bakırcı, & Eyduran, 2009).

When the MDSEE scores of teacher candidates differ between which two programs they study;

- Participants in Science, Social studies, Turkish and English;
- Mathematics education participants, Classroom education, Social studies and Turkish;
- Social studies and English of pre-school participants;
- Social studies, Turkish and English;
- Social studies candidates with Turkish and English
- It has been determined that the candidates studying Turkish are also significantly lower than the candidates in English programs. While these results are in line with the findings of Demirtaş, Cömert, and Özer (2011) that Turkish and Social Studies candidates perceive themselves more competent than candidates in other programs; Çetin, Çalışkan, and Menzi (2012) do not support the conclusion that social studies teacher candidates evaluate themselves less adequately than science and classroom teacher candidates.

On the other hand, it was determined that the effect value of the significant difference calculated between the scores of the pre-service teachers studying in Turkish and English programs and the scores of the participants in the Science, Mathematics, Preschool, Classroom education and Social studies programs was found to be high. According to these results, it can be said that the candidates who receive teacher education in the field of language education (English and Turkish) have more material design self-efficacy beliefs than the participants in other programs. In addition, the scores of the candidates in Social Studies, Science, Mathematics, Preschool, Classroom education; It was determined that the effect size value of the significant difference between the scores of the participants in the classroom education in Mathematics and those in the English program in the Turkish education program was at a medium level.

Although there was no difference between the MDSEE and ATUIT scores on whether the IT course is necessary or not, it was determined that the pre-service teachers had similar thoughts about the necessity of the course. In terms of their opinions about whether the IT course is taught in a way that is suitable for their own branches, there was no significant difference between both MDSEE and ATUIT scores, although the participants had positive thoughts.

As a result of the comparison of the program studied and the ATUIT scores, it was determined that the scores of the pre-service teachers in the Science and Mathematics program were significantly lower than the scores of the pre-service teachers in all the programs included in the study. In addition, it was observed that the scores of the participants in the English program were significantly higher than the scores of the pre-service teachers in preschool, classroom education and Turkish. The difference between the scores of the candidates studying in classroom education and Turkish fields emerged in favor of the participants in the Turkish program.

Accordingly, it was concluded that the attitudes of pre-service science and mathematics teachers towards using technology were more negative than the candidates in all other programs in the study. On the other hand, it is seen that the attitudes of the participants in English teaching towards using technology are more positive than the teacher candidates in all other programs.Şad and Nalçacı (2015), who revealed that pre-service teachers studying in both Science and Mathematics (numerical) fields have higher perceptions than the candidates in other programs; Usta and Korkmaz (2010); It is not compatible with the results obtained from the studies of Akkoyunlu and Soylu (2010) as well as (Albayrak-Sarı, Canbazoğlu-Bilici, Baran and Özbay (2016), who did not detect any differentiation according to the programs in terms of attitudes towards information and communication technologies.

In this study, Science and Turkish and English; Preschool with Mathematics, Turkish and English; It was concluded that the effect size value of the significant difference observed in the scores of the participants in the English and Social Studies and Classroom education programs was also at a high level.In addition, pre-school and classroom education with Science; Classroom education with Mathematics, Social studies; English with preschool; The effect size of the significant difference between classroom education and Turkish programs was found to be medium.

The results of the differences in both MDSEE and ATUIT scores of teacher candidates between the programs studied do not show parallelism with the results of some studies in the literature. Among the possible reasons for this situation, the fact that this study is based on online course applications, the scope and structural features of data collection tools, and the effect of students' social and cultural characteristics can be considered.

According to another finding obtained in this study, a moderate and positive relationship was observed between pre-service teachers' self-efficacy beliefs regarding material design and their attitude scores towards the use of instructional technology. In other words, this result can be evaluated as teacher candidates' material design self-efficacy beliefs and their attitudes towards the use of instructional technology affect each other at a moderate level and in the same direction.

Based on these results, the following suggestions can be made: In pre-service education processes, pre-service teachers should focus on face-to-face and online teaching practices in the teaching-student process. It should be investigated what kind of results the relationship between MDSEE and ATUIT will give in face-to-face and online education applications. In addition, it is aimed to examine what kind of activities in pre-service teacher training processes affect teacher candidates' material design self-efficacy beliefs and attitudes towards technology use in a positive or negative way..

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Investigation of the Evaluation Questions in 5th Grade Science Textbooks According to Revised Bloom's Taxonomy*

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ABSTRACT
The aim of this study is to investigate the end-of-unit evaluation questions in 5th grade primary school science workbook according to dimensions of the Revised Bloom's Taxonomy (RBT). For that purpose, 191 end-of-unit evaluation questions of 5th grade science workbook which is approved by the Republic of Turkey -the Ministry of National Education, the Board of Education and Discipline- were evaluated with document analyses method with considering RBT. During the evaluation, document analysis was performed that is one of the qualitative investigation methods. Classification of the questions were performed via considering previously published studies and the criteria of Anderson et al which is published in 2001, and translated into Turkish in 2010 by Ozcelik et al. The results of the analyses were interpreted with obtaining ratio and frequencies. As a results of this study, we observed that unit evaluation questions of 5th grade science workbook was belonging to low level cognitive domain step of RBT. As a conclusion, we believe that the unit evaluation questions of 5th grade Science Workbook should be equally distributed between low and high level cognitive domain steps of RBT.
Keywords: Science, Curriculum, Revised Bloom's Taxonomy, 5th grade

 * This study is a part of the master's thesis entitled "Investigation of the Evaluation Questions in 5th 6th 7th and 8th Grade Science Textbooks According to Revised Bloom's Taxonomy".

INTRODUCTION
It is believed that the most important thing needed to improve the quality of education is teachers who can prepare appropriate and good questions (Karamustafaoğlu et al., 2003). Humans are social creatures and interact and communicate with each other. The beginning of communication is asking questions. Because asking questions is a way of learning and development throughout life. In order to make children active in education, the ability to ask questions should be developed. It is thought that a good science education starts with well-formed questions (Koray.ve Yaman, 2002). Learning occurs with the formation of synapses between two neurons in the brain. In other words, questions that will spark sparks in the minds of students increase the permanence of learning. Questions that will shine in the minds of students increase the permanence of learning. Because the moment when we learn a piece of information best and we don't forget it is when we interact with intense emotion and information. Good and qualified questions are one of the basic and most important tools that can be used to increase the interaction between the teacher and the student, to experience whether learning takes place and to encourage learning (Topçu, 2017). The content of the questions and the methods of creating the questions by the teachers are an important factor in determining the reliability of the question.

Revised Bloom's Taxonomy (RBT)
Bloom's taxonomy approach; some features that are aimed to be gained by the person through education and training; There are three basic structures as cognitive feature, affective feature and psychomotor feature. The cognitive domain is concerned with knowledge. It includes the recognition, understanding and use of information by people (Doğanay & Sarı, 2017). The most important feature of RBT is that this taxonomy transforms the one-dimensional structure of the cognitive domain into a two-dimensional structure (Krathwohl, 2002). Between 1995-1999, under the leadership of Anderson and Krathwohl, a research group consisting of cognitive psychologists, curriculum development, teaching and assessment and evaluation experts created a new taxonomic classification in order to reorganize Bloom's taxonomy (Anderson et al., 2014). This classification includes the ability of individuals to recognize, understand and use information (Doğanay & Sarı, 2017). The most striking feature of this revised arrangement is that the one-dimensional cognitive field has been transformed into a two-dimensional structure (Krathwohl, 2002). In the taxonomic structure, the information level used "noun and verb cases" together. In order for an action to be activated, the information had to be in the students' memory and remembered. Another aspect of the revised taxonomy that makes it different from the orignal is that the

steps of "knowledge, comprehend and synthesis" can be renamed as "remembering, understanding and creating". In addition, in the revised taxonomy, the synthesis and evaluation steps have been replaced with each other. The prerequisite rule of the revised taxonomic approach was canceled and the criticisms against the original taxonomy in this direction were blocked (Arı, 2011).

Blooms vs Anderson/Krathwohl taxonomy revised

https://dreamlikechild.weebly.com/blooms-vs-andersonkrathwohl-taxonomy-revised.html
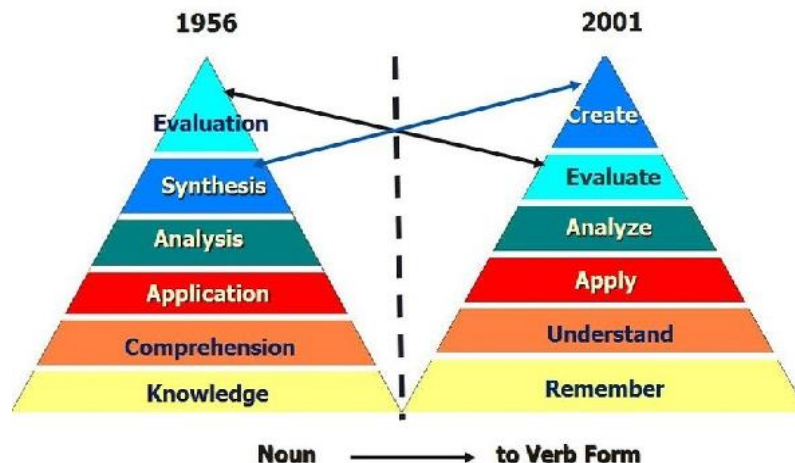
In the original Bloom's Taxonomy, the noun and verb forms of the knowledge level were used together. In order for students to turn it into an actual activity, they must first keep the information in their memory and remember it. In the revised taxonomy, this situation has been changed and discussed in two separate categories as knowledge and cognitive process dimensions (Hamurcu & Ekinci 2020). In the revised taxonomic structure, similar to the original classification, cognitive process dimensions consist of six basic parts, from simple to complex, and six main categories were divided into categories within themselves and grouped in a total of 19 steps in order to avoid information confusion. The validity of Bloom's Taxonomy, which Bloom gave his name in 1956, has been the subject of relevant field articles for many years. As a result of these researches and discussions, Anderson et al. put forward the Revised Bloom Taxonomy in 2001 to reorganize the Original Bloom Taxonomy. Two of the most basic reasons for the renewal of Original Bloom Taxonomy have been suggested. First; To enable educators to focus on Taxonomy, second; America's progress in the field of psychology is the development of developmental psychology and the psychology of learning, and teaching methods and techniques, measurement and evaluation are adapted to the contemporary education system and tried to be combined with taxonomy.

AIM OF RESEARCH
The aim of this research is to try to determine which level of RBT they belong to, considering the end-of-unit evaluation questions included in the Science Curriculum, which is based on the constructivist attitude. For this purpose, it is aimed to examine the questions in the said curriculum.

IMPORTANCE OF RESEARCH
The 4 basic elements of the training program are; The target is content, learning-teaching process and measurement-evaluation, and the evaluation process should be considered as a whole with other elements. Bloom's Taxonomy (1956), one of the most well-known taxonomies, was created to determine the knowledge and skill levels in order to make the evaluation process more systematic and regular (Zorluoğlu et al., 2017). Teachers need to know which cognitive process the questions correspond to for formative or summative assessments in order to better understand the lesson topics. A certain part of the questions in the curriculum can set an example for teachers. For this reason, it may be important to know at which cognitive level the questions in the curriculum are.

MODEL OF THE RESEARCH
This study, which aims to examine the end-of-unit evaluation questions of primary school 5th grade science textbooks according to the Cognitive Field Levels of the Revised Bloom Taxonomy, is a descriptive study conducted with the survey model. Survey models are research approaches that aim to describe a situation that is in the past or still exists (Karasar, 2007). Research data were obtained through document analysis, which is one of the qualitative research methods. Document analysis includes the analysis of written materials containing

information about the case or cases that are aimed to be investigated (Yıldırım & Şimşek, 2013). Document analysis is the process of systematically analyzing the data obtained by reviewing and evaluating electronic and printed materials (Bowen, 2009). In the research, 191 evaluation questions at the end of the units of the 5th grade science textbooks, which were accepted as an educational tool with the 2018-2019 dated and 76198665 letter of the Board of Education and Discipline (TTK) affiliated to the Ministry of National Education, were examined using the document analysis method. According to Karasar, (2005), the document analysis method enables the analysis of a certain text, document, by enumerating certain features with content analysis. The document review method used as an information collection method, as stated by Foster;

1- Access to documents,
2- Checking the originality,
3- Understanding the documents,
4- Analyzing the data,
5- Using the data
made in the form (cited in Yıldırım and Şimşek, 2008, p. 193)

DATA COLLECTION TOOLS AND ANALYSIS
In this research, it was accepted as a textbook for 5 (five) years with the board decision dated 18.04.2019 and numbered 8 and the letter 10444088 of the Ministry of National Education, Board of Education and Discipline, which is included in the science course curriculum in the 2020-2021 academic year. 191 questions in the end-unit evaluation questions of the science textbooks, which were prepared and approved to be taught, were classified according to the dimensions of knowledge and cognitive process, taking into account the criteria in the YBT table and two program development experts were presented and the classification was made in line with the feedback received. The classification was finalized in line with expert opinions. The percentages and frequencies of the findings were taken and transferred to various tables and graphics. The data obtained in the research were analyzed using the SPSS 2.0 package program in the computer environment.

FINDINGS

Table 1: The Ratio of Unit Evaluation Questions in the 5th Grade Science Curriculum Units at the Lower and Upper Level Cognitive Field Levels.

Cognitive Process size	1. Unit	2. Unit	3. Unit	4. Unit	5. Unit	6. Unit	7. Unit	Total	
Remember	22	19	11	20	12	15	13	**112**	**53,10%**
Understanding	4	6	12	9	13	11	5	**60**	**39,20%**
Apply	1	1	1	1	5	0	5	**14**	**5,20%**
Total	**27**	**26**	**24**	**30**	**31**	**25**	**23**	**186**	**97,40%**
Analyze	0	0	2	0	0	1	1	**4**	**2,10%**
Evaluation	0	0	0	0	1	0	0	**1**	**0,50%**
Creating	0	0	0	0	0	0	0	**0**	**0,00%**
Total	**0**	**0**	**2**	**0**	**1**	**1**	**1**	**5**	**2,60%**
The overall Total	**27**	**26**	**27**	**30**	**31**	**27**	**27**	**191**	**100,00%**

When Table 1 is examined; Out of a total of 191 questions in the 5th Grade Sciences Curriculum, 186 (97.4%) of the sub-cognitive domain steps are seen. 112 (53.1%) of these questions belong to remembering, 60 (39.2%) comprehension, 14 (5.2%) implementation steps. Out of a total of 191 questions, there are 5 (2.6%) questions belonging to the upper level cognitive domain steps. Of these questions, 4 (2.1%) belong to the analysis step and 1 (0.5%) to the evaluation step. In the 8th Grade Science Curriculum, there are too many questions for low-level cognitive domains, while there are very few questions for high-level cognitive domains.
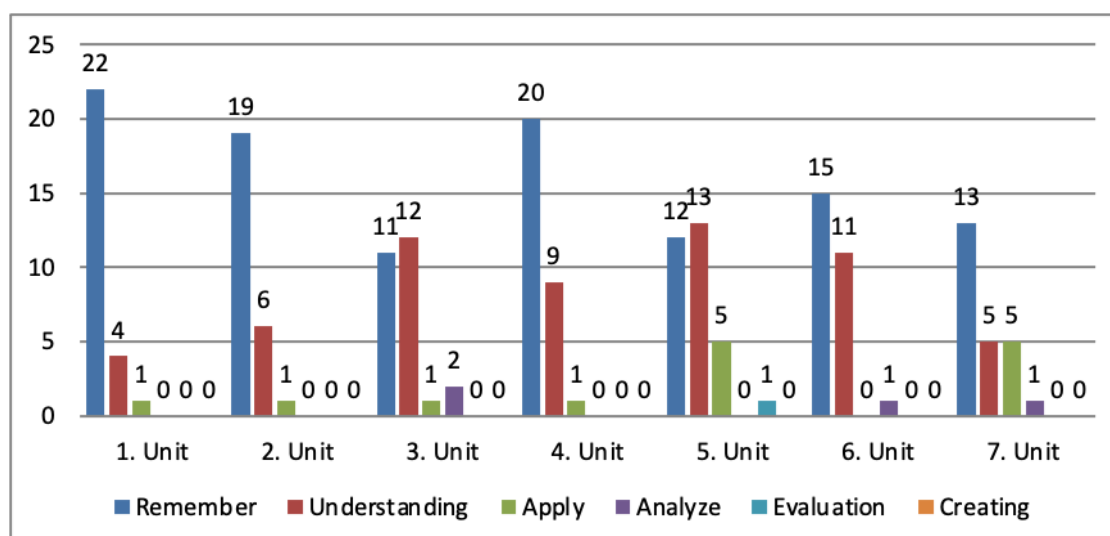
Figure 1: Graph of Distribution of 5th Grade Science Curriculum End-of-Unit Evaluation Questions by YBT.

Looking at Figure 1; In the units in the 5th Grade Science Curriculum, it is seen that the rates in the Remembering step are high, so it is concentrated at the sub-cognitive level.

Table 2: The Ratio of the Questions at the End of the Units of the 5th Grade Science Curriculum in the Lower and Upper Level Cognitive Field Levels.

5th grade	Low Level Cognitive Domain Levels Number of Questions		Top level Cognitive Domain Levels Number of Questions		Total Number of Questions	
1. Unit	27	100,00%	0	0,00%	27	100,00%
2. Unit	26	100,00%	0	0,00%	26	100,00%
3. Unit	24	92,60%	2	7,40%	26	100,00%
4. Unit	30	100,00%	0	0,00%	30	100,00%
5. Unit	30	96,90%	1	3,10%	31	100,00%
6. Unit	26	96,20%	1	3,80%	27	100,00%
7. Unit	23	92,00%	2	8,00%	27	100,00%

When Table 2 is examined; Unit 1: Sun, Earth and Moon, there are 27 questions in total. 100% of these questions belong to the lower level cognitive domain steps. There are no questions pertaining to the higher-level cognitive domain steps. Unit 2: World of Creatures has a total of 26 questions. 100% of these questions belong to the lower cognitive steps and there are no questions related to the metacognitive domain steps. 3. Unit: Measuring Force and Friction There are 26 questions in total, 92.6% of which belong to the lower cognitive domain steps, and 7.4% of them are questions related to the metacognitive domain steps. Unit 4: Matter and Change consists of 30 questions in total, 100% of which belong to the sub-cognitive domain steps. Unit 5: Propagation of Light has a total of 31 questions. Of these questions, 96.9% belong to the lower cognitive domain steps and 3.1% belong to the metacognitive domain steps. Unit 6: Man and the Environment There are 27 questions. 96.2% of these questions belong to the lower cognitive domain steps, and 3.8% of them belong to the metacognitive domain steps. 7. Unit: Electrical Circuit Elements There are 7 questions in total. 92% of these questions belong to the lower cognitive steps and 8% of them are questions related to the metacognitive domain.

CONCLUSIONS
When the questions in the 5th Grade Science Curriculum were classified according to the cognitive process dimension of the RBT, it was determined that the number of questions belonging to the lower-level cognitive domain steps was the highest in the number of recall steps, while the number of questions belonging to the higher-level cognitive domain steps was higher. Among the higher-level cognitive domain steps, more questions related to the decoding step were included. 5. When the transitions between the units in the Science Curriculum are examined; The rates of the classified questions in the lower-level cognitive domain and high-level cognitive domain levels differ. In Units 1, 2 and 4, there are mostly questions related to the lower level cognitive domain

steps. In Units 3, 5 and 7, there are more questions pertaining to higher cognitive domain levels than Units 1, 2 and 4. In addition, when analyzed according to the knowledge dimension, the most factual information and the least metacognitive information are asked. Göçer and Kurt (2016) found that the majority of the questions they analyzed were low-level questions, which is consistent with the results of this study. Since each level requires using different mental skills, while the questions asked in determining the success of the learners should be at a balanced level from each step of the Renewed Bloom Taxonomy, it can be seen as an important deficiency that the questions are asked at the remembering step of the subcognitive domain.

In the studies conducted, it is seen that the questions asked by science teachers during the lesson are more at the lower level cognitive domain levels (Ayvacı & Şahin, 2009; Koray & Yaman, 2002; Baysen, 2006) compared to Bloom's Taxonomy (Özcan & Oluk, 2007).

Balta (2006), in his research examining the importance of using Bloom's Taxonomy in exams applied in primary schools, determined that no progress could be made in the steps such as analysis, synthesis and evaluation, which require examination by measuring the knowledge level of students only in the exams. Additional unplanned exam applications do not provide much benefit in terms of mental development in primary schools, and there is evidence of low achievement performances detected in national exams.

Similarly, Dindar and Demir (2006) analyze the 5th grade science exam questions according to Bloom's Taxonomy, which shows homogeneity with the research. In both studies, it was determined that most of the questions were at the knowledge level. Similar to these studies, Ayvacı and Türkdoğan (2009) concluded that the questions in the exam papers examined by science teachers according to RBT belong to low-level cognitive domain steps. Gündüz (2009) examined the 6th, 7th and 8th grade science and technology exam questions according to the cognitive domain steps of Bloom's Taxonomy; It was determined that 92.19% of the questions were asked to measure low-level thinking skills and 7.79% to measure high-level thinking skills.

SUGGESTIONS
• The revised taxonomy that brought these important changes to the field of curriculum development should be included in in-service and pre-service teacher education in our country. Planning the trainings on this subject, rather than being theoretical, is practical and based on examples can increase efficiency.
• It should not be ignored that the deficiencies of the previous years should be eliminated in the new training programs to be created.
• In order to increase teachers' awareness of Taxonomy, it is necessary to give importance to the Revised Bloom Taxonomy in in-service trainings.
• More studies should be conducted in order to show parallelism between the acquisitions in the science curriculum and the questions according to the cognitive domain steps.

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Lifelong Learning on Distance Education Journey in Turkey

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ABSTRACT
With the growing technology, information technology has become global and trainers are integrated. Many students and educators who are complementary to educational training and involved in communication tools in education can establish these models with training and voice. The importance of distance education activities in Turkey has increased even more due to the suspension of face-to-face formal and non-formal education activities in the Ministry of National Education due to the COVID-19 epidemic. The Ministry of National Education has made an effort to meet the educational needs of students through online platforms and distance education solutions, adapting quickly to the new situation caused by the ongoing COVID-19 pandemic worldwide. In this context, studies on how distance education is applied in lifelong learning attracted considerable attention, and it was necessary to present these studies holistically. This study aims to present the distance education studies in lifelong learning in Turkey holistically and contribute to the literature. All these studies in the literature have aimed to increase the access of trainees to lifelong learning in the distance education process and expand its scope. Expanding the mentioned studies to cover different learning areas and increase the number of authorized institutions will make it easier to respond to the interests and needs of individuals. In addition, conducting research and studies on the qualities of digital content and the satisfaction of people who receive distance education will contribute to the structuring of this new field of study.
Keywords: Distance education, lifelong learning, learning space

INTRODUCTION

In the 21st century, individuals have to be in constant change and development by renewing themselves while fulfilling the requirements of the current age. In this context, Realising this change can only happen through education. The prerequisite for individual and social development is possible with individuals acquiring knowledge and skills in all disciplines and levels.

The century we live in is described as a kind of network society and called as information age (Demir, 2014). By the end of World War II, developments in different economic sectors and predictions about the direction of the industrial society, the discovery of the internet and its widespread use among the public accelerated the journey in digital areas and brought the word information into our language (Castells, 1999). This information age in Turkish has caused the necessity of using different applications and methods in educational experiences. Reasons, such as the increasing number of students in formal and non-formal education institutions, the scarcity of trained and employed teaching staff to meet the educational demands of the increasing number of students, the inadequacy of the physical environments and tools, equipment and materials to provide education, have accelerated the studies conducted on distance education.

Today, compulsory and urgent changes in information technologies have made it necessary for educators to plan learning processes in which the global education model is applied. As a result of the application of these models in education, many students and educators, who are located in distant geographies and participate in education from different environments, can communicate with each other visually and verbally. Moreover, distance education emerges as an understanding that helps overcome many problems, such as physical structure, equipment, need for qualified educators, creation of standard education models, and absenteeism problems related to the education systems of countries (İşman, 2011).

The importance of distance education activities in Turkey has increased even more due to the suspension of face-to-face formal and non-formal education activities in the Ministry of National Education due to the COVID-19 pandemic. The Ministry of National Education has made an effort to meet the educational needs of students through online platforms and distance education solutions by quickly adapting to the new situation caused by the ongoing COVID-19 pandemic worldwide.

Thus, studies on how distance education is applied in the lifelong learning attracted attention and it was necessary to present these studies in holistically.

METHOD

In this study, the literature review model was adopted since the information in the literature on lifelong learning practices in distance education was intended to be considered as a whole. According to this model, the information examined is handled as a whole, and a general evaluation is tried to be reached by establishing a link between this scattered information (Baumeister and Leary, 1997).

Distance Education and its Components

Distance education design has advantages, such as appealing to large student masses, the individual's ability to determine his own learning speed and method, performing it at any time and place, using multimedia tools, supporting lifelong learning, as well as restricting the interaction between the teacher and the learner, and the learning processes are interrupted due to technical disruptions. It also has disadvantages, such as being damaged (Traxler, 2018, Odabaş, 2003, Wang, 2004).

The components of informal distance education processes can be defined as learning, teaching and technology. Among these components, the student assumes a role that organizes and manages their own distance education processes (Markel, 1999). According to Allen, Gower and Allen (2020), students are equipped with the knowledge, skills and attitudes appropriate for the goals instead of memorizing the course contents in distance education processes.

The teacher, on the other hand, acts as a guide that contributes to the effectiveness of the students in the process in the distance education environment and helps the students carry out activities related to the course not only during online hours but also during offline learning environments (Altunçekiç, 2021). However, technology is a component that is the basic element of the interaction between the student and the teacher in the distance education process. Because of these processes, many factors, such as the quality, permanence and applicability of education, depending on the choice of used technology. Bazarbaevna (2021) groups technologies used in distance education as interactive and non-interactive technologies. Interactive technologies are defined as a distance education portal on the internet, audio-video video conferences, e-mail education, independent learning on the internet, online simulators and training programs, test systems, whereas non-interactive technologies are visual, audio and printed materials, television and radio broadcasts that can be listed as downloadable programs. After the formal implementation of distance education processes, the institution component is added to these components. For the success of distance education processes, factors, such as content that raises the academic expectations of students to increase their success, are designed by an experienced educator group, developing the necessary infrastructure and solving the problems that may be encountered are crucial, and these factors are carried out by the institutions responsible for distance education. According to Ross (2010), only institutions that pay attention to these components can increase student participation in distance education and offer qualified distance education processes to their students.

When the lifelong learning dimension is evaluated, distance education can make important contributions to the lifelong learning of the individual with its dimensions that offer different mass media, develop in parallel with the development of knowledge, be independent of the factors of distance, age and education level, and be as effective as traditional education when appropriate methods and technologies are used (Kiryakova, 2009).

Lifelong Learning in Turkey

Lifelong learning is the behavior or experience that includes the knowledge, skills and attitudes individuals acquire in their daily lives, including formal and non-formal learning activities (Dunn, 2003). Lifelong learning, which provides learning opportunities for everyone whose location or personal characteristics cannot prevent them from getting education, is an important value that serves the mission of the learning society in terms of providing flexible and applicable education options where individuals need to acquire new skills (Green, 2002). Lifelong learning is a concept that enables individuals to take an active role in society and sometimes undertakes the task of raising qualified people for the workforce. According to Mascle (2007), lifelong learning has an important place in terms of giving freedom to adult learners and accelerating the transition of education to 24/7 and online methods. Lifelong learning is a concept that includes general and vocational education and training provided through formal and non-formal education, as well as learning that allows the individual to gain knowledge and skills outside of educational organizations.

Although the concepts of education and training were often thought of as target groups in the past, it is now accepted that it appeals to individuals of all ages by being evaluated under the concept of lifelong learning. Lifelong learning includes learning in both formal and informal education processes.

In the past, there was not a consciously planned and systematically implemented lifelong learning system (Büyükdüvenci, 1983). Even if it was not planned, to keep up with the conditions of the age, the individuals were involved in the lifelong learning process no matter what environment and conditions they were in. Although John DEWEY emphasizes that education has no place, age and time, the concept of lifelong learning did not find an international response until the early 1970s (Dehmel, 2006).

The report on the need for lifelong education published by the Adult Education Committee of the British Ministry of Reconstruction in 1919 laid the groundwork for the emergence of the concept of lifelong learning. In the 1970s, with the beginning of the transition to an industrial society, the understanding of lifelong learning emerged (Büyükdüvenci, 1983).

In Turkey, lifelong learning activities are conducted by the General Directorate of Lifelong Learning under the Ministry of National Education. Every year, hundreds and thousands of trainees participate in these activities carried out with lifelong learning institutions in public education centers. When the international literature is examined, it is noteworthy that instead of the concept of public education, the concepts of adult education, continuing education, lifelong education and, since the 1990s, lifelong learning has been used. This differentiation in naming the concepts reveals a differentiation in the content (Kaya, 2015).

When lifelong learning activities are examined, it is observed that in Turkey, general and vocational courses are offered to trainees in this context, and accredited documents are given at the end of vocational course programs that cause people employed. Given the data in 2020, it was seen that 2.151.633 women and 1.424.085 men out of 3.575.718 trainees, and the number of students who graduated from open education schools in 2018-2019 was reported as 2.683.461 (Monitoring and Evaluation Report, 2020).

Application of Distance Education Processes in Lifelong Learning Institutions
This field, which first emerged through distance education by mail in the 1800s, has developed in different areas and dimensions worldwide in the following years with the rapidly developing technology and the increase in the need for adult education (Nizam, 2004). The first example of distance education in our country was implemented in 1956 with a distance certificate program prepared by Ankara University for bank employees. Later, a Letter Teaching Center was established by the Ministry of National Education in 1974. In addition to all these, the biggest development in the field of distance education in Turkey was realized in 1982 with the establishment of the Open Education Faculty within Anadolu University (Özer and Kır, 2018).

In the 21st century, like all other fields, digital transformation is also striking in education. Technological developments, which are becoming more and more important in our daily lives, require us to acquire different knowledge and skills. With the COVID-19 epidemic, which started in 2020 and was declared a "pandemic" by the World Health Organization, digital competencies have come to the fore even more, and it has been understood that it is not possible for individuals of any age and profession to be left behind in this regard.

Due to the need to gain new skills and use human resources more effectively, different learning methods have been started to be used in addition to face-to-face learning. Open and distance education, which allows students to interact with each other and with learning resources, independently of time and/or space, with the help of information and communication technologies, has become an integral part of the modern and innovative education system.

The closure of schools due to the COVID-19 pandemic and the uncertainties about which information will be taught primarily, and how education processes have led to the diversification of distance education applications (Wang et al., 2020). The fact that this transition to distance education is through a crisis has caused this transition to be technically defined as traditional distance education (Hodges et al., 2020). While seven countries decided to close schools across the country until 18 March due to the pandemic, the number of students affected by these closure processes was defined as 861.737.696 (UNESCO, 2020). One of these countries was Turkey, and in Turkey, crisis-based distance education applications were started as synchronous and asynchronous applications. In this context, the General Directorate of Lifelong Learning, which is also responsible for non-formal education activities in Turkey, is the most valuable natural resource of a country. This directorate cannot provide sufficient education to people who have a wide variety of interests, abilities, ages, education levels and cannot meet their educational needs because of their geographical, health or working conditions. Thus, distance education started to offer new opportunities to all individuals with distance education studies. In this context, the General Directorate predicts the individual characteristics of individuals who cannot meet their educational needs with face-to-face education for various reasons, leaving the responsibility of learning to the individual to a large extent, contributing to the development of students' self-decision and entrepreneurship skills, and differing in the

learning of individuals. As of December 2, 2020, it started its distance education applications with 12 lifelong learning institutions. Drawing on these studies, it was aimed to ensure that the non-formal education course programs implemented in lifelong learning institutions within the General Directorate are given to the trainees through asynchronous or synchronous applications through distance or blended learning. In this context, the Hygiene Training Course Program for Employees in the Food and Water Sector was established asynchronously and opened to the use of the trainees. Basic information on the subject has been tried to be gained. The offered studies by the General Directorate continued with digital marketing and digital literacy course programs, and the first aid course program in the field of health is among the programs received by the trainees through distance education. These programs are offered to the trainees through a learning portal developed by the relevant General Directorate, and the exams can also be done electronically. These practices constitute the beginning of studies on integrating non-formal education activities into distance education processes. While applying for the course programs, lifelong learning institutions with suitable physical equipment are given the authority to apply and take exams. In this context, the boundaries of distance education are expanded by giving new authorizations to lifelong learning institutions with sufficient physical equipment.

With the studies conducted within the relevant General Directorate, trainees can apply for courses online, and digital learning contents prepared for distance education can be accessed using the distance education platform. The related documents can be obtained through the e-government system.

In addition to these studies conducted within the Ministry of National Education, in the 2023 Vision Document, the general goal is to increase the access and quality of lifelong learning programs to reach different target groups in lifelong learning processes and increase access to learning, distance education The expression of making use of educational technologies at a high level is defined as the main target.

In this manner, to meet the improvements, the needs of individuals within the framework of lifelong learning without time and space limitations, within the scope of the relevant Ministry, the necessary bureaucratic infrastructure has been established for the organization of general, vocational and technical courses and seminars through distance education. The technological infrastructure of the pilot institutions has been strengthened, and the learning management system has been established. To raise awareness of lifelong learning in all segments of society, a distance education project is also conducted.

The a-School (Open School) distance education project has been put into practice within the scope of the relevant General Directorate for the presentation of interactive course content for open education students.

CONCLUSION
All these studies are aimed to increase the access of trainees to lifelong learning in the distance education process, and it is important to expand their scope. Expanding these studies to cover different learning areas and increasing the number of authorized institutions will make it easier to respond to the interests and needs of individuals. In addition, conducting research and studies on the qualities of digital content and the satisfaction of people who receive distance education will contribute to the structuring of this field of study, which is still a very new field.

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Method-Technical Preferences and Reasons of Candidates of Science Teachers: A Phase Science Research

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Abstract
In this study, it is aimed to investigate the method techniques preferred by science teacher candidates in teaching science course and the reasons of these preferences. The phenomenon science approach, one of the qualitative research methods, was used in the research. Research; was held in the 2020-2021 academic year, with students studying in science in the Firat University Faculty of Education. The study group of the research was constituted according to the purposeful sampling method and a total of 58 science teacher candidates. The data for the purpose of the study were collected through a semi- structured interview form with two questions. Content analysis method was used in the analysis of the data obtained. As a result of the research; it has been determined that science teacher candidates prefer 23 different methods and techniques and among them, methods such as question-answer, brainstorming, demonstration and inquiry-based teaching are active. In addition, teacher candidates ' reasons for method technical preference was Gathering under four main reasons as they originated from method-technic, originated from candidate teacher, originated from students and originated from the course content (subject).
Keywords: Teaching Science, Candidate Teacher, Method and Technic

1. INTRODUCTION

While scientific and technological developments change the society and understanding of education, changing education and social norms trigger new scientific and technological developments (Karataş, 2018). Along with these developments, individuals are able to produce knowledge and use it functionally in life, solve problems, think critically, be entrepreneurial, determined, have communication skills, empathize, contribute to society and culture, etc. It is required to have many features in the qualifications (MEB, 2018a). The way to raise individuals with targeted characteristics is to go through a quality education.

Quality in the field of educational sciences; It is stated as a set of indicators that guide how qualitative components such as teaching methods, learning process, materials, activities, content and options offered to students can be applied more efficiently (Bozpolat, Uğurlu, Usta & Şimşek, 2016). Today, the concept of effective teaching, which has replaced the concept of good teaching, draws attention to the importance of methods and techniques to be used in the education process. Demirel (2011) expresses the teaching method as the shortest pre-planned way to reach the goal, and the teaching technique as the method of putting the method into practice.

The teaching methods and techniques applied in the educational environment have an important place in the realization of the objectives and in the design of the educational process. Information obtained about teaching methods and techniques; The selection of the method and technique suitable for the purpose, the application of the chosen method and technique contributes to an effective teaching in the classroom (Gözütok, 2006; Ocak, 2007). In this respect, it is very important for the teacher to know well which strategy, method or technique will be used in which situations in order to be able to teach effectively (Tan, 2005). Developing technology has led the education world from tradition to innovation with new learning techniques that emerged in the wake of rapidly changing student needs (MEB, 2018b). Innovativeness, which is one of the basic principles of teaching, allows teachers to change the method they apply in certain conditions (Andala & Ng'umbi, 2016). Individuals who are different from each other in many aspects such as cognitive, affective, social and psychomotor characteristics prefer different learning ways in the learning process. Instead of addressing all individuals with different characteristics through similar learning, the application of different learning styles, which should be considered as a richness in the teaching process, contributes positively to the cognitive and affective development of students (Sapancı, 2014).

The use of different methods and techniques by the teachers in the lessons is extremely important in terms of enriching the lesson and making the learning-teaching process qualified (Karasu Avcı ve Ketenoğlu Kayabaşı, 2019). Preferring appropriate and effective teaching methods increases the quality of education in many respects. By applying these methods in the lessons, by ensuring the active participation of the students, they both attract their attention and enable them to learn the subject in an independent environment (Andala & Ng'umbi, 2016). With the updated Science Curriculum, it is envisaged that the lessons will be conducted in learning environments (problem, project, argumentation, cooperative learning, etc.) of teachers based on students. It is aimed to design classroom/in-school and out-of-school learning environments according to inquiry-based learning strategy so that students can learn information meaningfully and permanently (MEB, 2018a). In our student-centered education system, it is only possible for the teacher to decide which method and technique is more suitable for which lesson and subject, only by recognizing different methods and techniques (Uysal, 2010). In this direction, there are many methods and techniques used in science teaching. Some of those; lecture, question-answer, discussion, trip-observation and examination, laboratory, demonstration (demonstration), inquiry-based teaching, project-based teaching, engineering design-based teaching, role playing (drama), case study, brainstorming, station, STEM, problem solving method and technique.

Despite these methods and techniques, the curriculum applied in schools can sometimes be restrictive. In this case, students can apply individually, and each teacher has certain teaching methods and pedagogical approaches individually (MEB, 2018b). The ability of teachers to have this knowledge and professional skills is closely related to the pre-service training they receive. It is necessary and important for teacher candidates to use and recognize various teaching techniques during their education. It will also be possible for pre-service teachers who are in such a learning process to have a high perception of efficacy regarding the choice of teaching techniques when they start to work (Durdukoca, Yardımcıel, Beşeren & Özbek, 2017).

Clark and Latshaw (2012) emphasize that teachers' teaching style preferences should not be ignored in studies on education programs and learners' performance. One of the most important characteristics of teachers, who are implementers of educational programs, is their teaching method and technique preferences. Teaching style plays a key role in the regulation of the educational environment as a reflection of the educational philosophy adopted by the teacher. For an effective teaching, it has become a universal rule that the teacher should go to the richness of method and technique (Küçüahmet , 2014). When the factors that determine the technical preferences of this method are listed in general; objectives, the content of the course and the nature of the subject, physical facilities, the characteristics of the student, the level of readiness of the student, the personality structure and the number are determinative. In addition, it is seen that the personal characteristics of the teacher, method predisposition and professional seniority, educational philosophy, learning and teaching models, teaching and learning approaches, teaching and learning styles, the teacher's self-efficacy belief regarding the method and technique used, teaching levels and course types are effective in the method and technique selection (Andala & Ng'umbi, 2016; Demirel 2012; Gözütok, 2006; Küçükahmet, 2009; Ocak, 2007; Yeşilyurt, 2019). Understanding teaching methods and techniques by teachers and realizing their superior and limited aspects will be effective in increasing the efficiency of teaching programs (Gencel, 2006). In this respect, teaching strategy, method and techniques, which are components of pedagogical content knowledge, appear as the basic elements of the teaching process (Demircioğlu, Genç, & Demircioğlu, 2015). Knowing a subject alone is not enough to teach it. It is necessary to know both the subject to be taught and how that subject will be taught (Uysal, 2010). It is important for teachers to know the effects of the methods and techniques they have determined on learning, and what to pay attention to when applying methods and techniques (Demir & Özden, 2013). and to investigate the reasons for these choices.

2. METHOD
2. 1. Model of the Research
The phenomenology approach, which is one of the qualitative research methods, was used in the research. Phenomenology is the study of cases that are known but not investigated in depth and in detail (Yıldırım & Şimşek, 2011). The aim in phenomenology is to have detailed information about a phenomenon and to go down to the essence of the experiences of individuals with this phenomenon (Aydın, 2016).

2. 2nd Working Group
The study group of the research is the total number of students studying in the 3rd and 4th grades of the Department of Science Teaching at the Faculty of Education of Elazig Fırat University in the 2021-2022 academic year. It consists of 58 teacher candidates. While forming the study group of the research, Criterion sampling, one of the sampling methods, was used. In the criterion sampling method, the sampled people are determined according to certain criteria and allow in-depth research (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz and Demirel, 2019). Our criterion in this research was determined as taking the special teaching methods course with school experience,

which includes the teaching methods and techniques of the science teacher candidates, and the study group was formed according to this criterion.

2. 3. Data Collection Tools of the Study

The data for the purpose of the research were collected with a semi-structured interview form, which is one of the qualitative research data collection tools. Büyüköztürk et al. (2019) state that semi-structured interviews have advantages such as ease of analysis, opportunity for the interviewee to express themselves, and providing in-depth information. A semi-structured interview form with 2 questions was developed to collect data from prospective science teachers.

Before creating the semi-structured interview form, a literature review was conducted (Yıldırım, Köklükaya & Aydoğdu, 2014; Bozpolat, Uğurlu, Usta, & Şimşek, 2016; Yılmaz, 2017; Avcı & Kayabaşı, 2019). Studies conducted by researchers such as These questions were examined by 2 expert lecturers and 2 Turkish teachers. At the end of the expert review, some questions were removed from the interview form and necessary arrangements were made, and the interview form with two questions was finalized. The following questions were asked to the study group with the semi-structured interview form;
- ➤ Which methods and techniques do you prefer to use in teaching science lessons?
- ➤ What is your reason for choosing the method technique you will use? Please explain.

In order to ensure the impartiality of the data collection tools, the students' views were presented in the research as expressed by the students and without any changes.

2. 4. Analysis of Research Data

Content analysis method was used in the analysis of the research data. The purpose of content analysis is to present similar data obtained under certain themes on a regular basis (Aktaş, 2016). In the analysis of the data, the stages of coding the data specified by Yıldırım and Şimşek (2011), then classifying the codes obtained and forming the themes that best explain these codes, and arranging the data according to these codes and themes, were followed.

Within the scope of the reliability study of content analysis, coding and themes made independently by different researchers who are experts in the field were compared, and similar ones were marked as "Agreement" and those that were different were marked as "Disagreement" (Miles & Huberman, 1994). As a result of the calculations, the reliability of the research was calculated as 86%. The fact that the reliability calculations were over 70% showed that the research was reliable. During the analysis, each participant was given a code. These codes are indicated as FA1, FA2 ,…….. FA58 for prospective science teachers.

3. FINDINGS AND COMMENT

In this study, a content analysis was conducted regarding the interview questions asking what the methods and techniques preferred by the science teacher candidates in teaching the science course and the reason for this preference. Among the interview questions, it was first asked what the methods and techniques preferred by the science course in teaching were, and the themes, codes, frequencies and percentages of the answers to this question are given in Table 1.

Table 1. Data on methods and techniques preferred by pre-service science teachers

Theme	Code	Frequency	Percent
	Question answer	14	10.9
	show off	13	10.2
	Brainstorming	13	10.2
	Inquiry-based teaching	13	10.2
	Experiment	9	7.0
	Concept map	9	7.0
	Station	9	7.0
Science Lesson	lecture	7	5.5
	5e	7	5.5
	six hats	6	4.7
	life-based teaching	6	4.7
	trip observation	4	3.1

collaborative learning	4	3.1
Case study	3	2.3
problem-based teaching	2	1.6
computer assisted instruction	2	1.6
Demonstration (Demonstration)	1	.8
Drama	1	.8
role playing	1	.8
Argument	1	.8
cognitive apprenticeship	1	.8
Individualized teaching	1	.8
Argumentation	1	.8
Total	23	100

When Table 1 is examined, it is seen that the most preferred methods and techniques by pre-service science teachers are question-answer (10.9%), demonstration (10.2%), brainstorming (10.2%) and inquiry-based teaching (10.2%). When the methods and techniques preferred by pre-service science teachers in teaching science lessons are evaluated in terms of diversity, it is seen that they use 23 different methods and techniques. Although traditional teacher-centered methods such as lecture (5.5%) and demonstration (.8%) were preferred in the teaching of science lessons, it was determined that mostly student-centered innovative method techniques were preferred.

In the second of the interview questions, the pre-service science teachers were asked the methods and techniques they preferred in teaching the science course and why they preferred it, and the themes, codes, frequencies and percentages of the answers to this question are given in Table 2.

Table 2. Data on the reasons for the methods and techniques preferred by pre-service science teachers

Theme	Percent	Code	Frequency	Percent
Student-related reasons	36.5	Ensuring active participation	19	41.3
		Raise interest	5	10.9
		Bringing their creativity to the fore	4	8.7
		Providing access to information	4	8.7
		Enabling students to follow scientific process skills	3	6.5
		Consideration of their readiness	3	6.5
		Giving opportunity for individual learning	2	4.3
		Build self-confidence	2	4.3
		Get their attention	2	4.3
		According to the number of students	2	4.3
		Total	46	100
Causes based on teacher candidates	13.5	Applying the method technique that he believes will be efficient	9	52.9
		Knowledge of method and technique	4	23.5
		Preferring the frequently used method technique	2	11.8
		Using different methods and techniques on difficult to understand issues	2	11.8
		Total	17	100
Method technical reasons	35.7	Ensuring permanent learning	11	24.4
		Enabling effective learning	10	22.2
		Giving the opportunity to learn by doing and realizing	6	13.3

	Ensuring easy learning		6	13.3
	Allowing group teaching		5	11.1
	Providing socialization		3	6.7
	Ability to evaluate		2	4.4
	Providing reinforcement		2	4.4
	Total		45	100
Reasons based on course content (subject)	14.3	Associating with daily life	6	33.3
		Being suitable for teaching science course	5	27.8
		According to the content of the subject (numeric or verbal)	3	16.7
		Considering the length and difficulty of the subject	2	11.1
		Determining the method according to the time allocated to the gains	2	11.1
		Total	18	100

When Table 2 is examined, it is seen that the answers regarding the reasons for the method-technical preferences of the pre-service science teachers are grouped under 4 themes. These reasons, which were created in line with the answers given; It was collected in 4 different dimensions as student-based, pre-service teacher, method-technical source and course content (subject) source. Among these factors, student-based reasons (36.5%) and method-technical reasons (35.7%) affected the formation of teacher candidates' method-technical preferences more, while pre-service teachers (13.5%) and course content (subject)-based reasons (14.3%) affected them less. determined. Candidates stated the code as providing the active participation of the students the most among the student-related reasons. In addition, he frequently stated that increasing the interest of the students, highlighting their creativity and enabling them to access information. Candidates stated that they would prefer the method technique, which they believed would be efficient, among the reasons arising from them, and that it was necessary to have knowledge about the method and technique. Among the technical reasons of the method, providing permanent learning, providing effective learning, giving the opportunity to learn by doing, and providing easy learning were frequently stated. Finally, they stated that among the reasons stemming from the content (subject) of the course, the fact that the subject is associated with daily life and that it is suitable for the teaching of science lesson is a priority.

Some of the student-based answers regarding the method-technical preferences of teacher candidates are as follows:

PPT52: "I choose a method in which students participate more effectively. This method I will choose should increase the interest of the class in general and ensure active participation.
PT28: "I use group teaching techniques such as the station technique. The reason why I choose such methods is to increase the participation of students who are not active in the lesson and to provide the emergence of very different thoughts and ideas on a subject.

Some of the answers regarding the method-technical reasons of the teacher candidates are as follows:

PT20: "I use the method technique that allows the student to learn permanently and to learn by doing and living ."
FPT24: "When science is taught by applying and applied directly by students, it becomes more permanent and is learned better. This situation determines my preference, I use the method technique that provides this in the teaching of the lessons."

Some of the pre-service teachers' reasons for their method-technical preference are as follows:

FPT50: "I use the method and technique that will be more efficient for the student in teaching the lessons."
PSPT9: "My knowledge about method and technique determines my preference. As a prospective teacher who will graduate, of course, I would like to use the most up-to-date contemporary techniques, but this is related to how well I know the teaching methods. In this respect, I use the student-centered methods I know best."

Some of the answers based on the course content (subject) regarding the method-technical preference reasons of the pre-service teachers are as follows:

PT7: "I make sure that the method I will use is a technique that allows students to learn more easily by associating the subjects with daily life and to increase their interest in the lessons."
PPT57: "It would be wrong to offer only one reason for preference. Different techniques and methods can be used in the narration of each subject. We should use whatever technique we think will better explain the content of that unit."

4. RESULTS AND DISCUSSION

In the study, the methods and techniques preferred by the pre-service science teachers in teaching the science course and the reasons for making this choice were examined. It has been determined that the methods and techniques that the candidates frequently prefer in teaching science courses are question-answer, brainstorming, demonstration and inquiry-based teaching methods in which the student is active. In addition, it was determined that they preferred teacher-centered method techniques such as lectures and demonstrations. In the study, it was concluded that they preferred to use 23 different methods and techniques. When a literature review was made, Yılmaz (2017) found that pre-service science teachers used 9 different methods and techniques in the teaching of the lessons, and among them question-answer, straight-explanation were the most preferred. Güven Yıldırım, Köklükaya & Aydoğdu (2014), on the other hand, stated in their study that pre-service science teachers mostly use traditional teaching methods such as plain lectures and question-answers in the teaching of courses. Similarly, in the study conducted by Taşkaya & Bal (2009), it was determined that teachers mostly used question-answer, lecture and discussion techniques. Avcı (2019) found in his study that primary school teachers use 16 different methods and techniques in science teaching, and they mostly apply direct expression, question-answer and experiment method. Timur & İmer's (2012) study examining the teaching methods and techniques used by Science and Technology teachers in the lesson, stated that teachers generally use techniques such as lectures, question-answers, experiments, demonstrations, educational games, discussions, and case studies; however, it has been determined that teachers do not benefit from methods such as projects, collaborative teaching, computer-based learning, and drama. Khurshid & Ansari (2012) concluded in their study that contemporary teaching methods and techniques are more effective than traditional teaching methods and techniques. In Ganyaupfu's (2013) study investigating the effectiveness of three teaching methods on student academic performance, it was found that the teacher-student interactive method was the most effective teaching method; this is followed by the student-centered method; It was determined that the teacher-centered approach was the least effective teaching method. Bozpolat et al. (2016) stated in a study conducted on students and instructors that the methods and techniques that students and instructors both know best and give the most place in the teaching of the courses are lectures and questions and answers. Although Yurdatapan (2015) accepted that science teachers and pre-service teachers were boring, taking into account their own science teaching background, they preferred teaching methods such as lecture and question-answer more. Karamustafaoğlu, Bayar & Kaya (2014) found in their research that science teachers use the narrative method frequently and stated that they reinforced this method with question-answer, demonstration, case study method and problem solving method.

In the second question of the study, the science teacher candidates were asked about the methods and techniques they preferred in teaching the science course and why they preferred it. The reasons for choosing the method and technique of the candidates were grouped under 4 main reasons: self-induced, method-technical, student-based and course content (subject). Among these, it was seen that the reasons affecting the preference of the candidates were mostly method-technical and student-based reasons. Again, when the main reasons are examined, the main reasons affecting the pre-service teachers' method-technical preferences are using the method technique that will be effective at the beginning of the reasons originating from the teacher candidates, making the student active in student-related reasons, permanent learning in method-technical reasons, and associating the subject with daily life in the reasons related to the content (subject) of the course. conclusion has been reached. When the literature review is made, it is seen that in the teachers' choice of method and technique; It was stated that they should consider factors such as their aptitude for method and technique, time and physical facilities, cost, number of students and knowledge levels, the characteristics of the subject, the qualifications desired to be developed in the student, the objectives in the curriculum (Demirel 2012; Küçükahmet, 2009; Andala & Ng' umbi , 2016). Güven Yıldırım et al. (2014) in his study in which science teacher candidates examined the reasons for choosing method-technical methods, similarly, he stated that 4 main reasons: student, teacher, subject and method-technical origin. In their research, Karasu Avcı & Ketenoğlu Kayabaşı (2009) stated that classroom teachers' method and technique preferences are affected by situations such as taking into account the level of students and the interests and needs of the students, taking into account the physical environment of the classroom and being appropriate for the content of the course. In his research, Kubat (2016) examined what affects pre-service teachers' choice of method and technique. He stated these reasons as ensuring the active participation of the student, the opportunity for the student to express himself comfortably, providing feedback to the student, enabling the application, learning by doing, providing concretization, revealing the readiness, drawing attention to the lesson, applying what is learned to his own life, and caring about individual differences. Taşkaya & Sürmeli (2014) examined the factors affecting the

method-technical preferences of classroom teachers while teaching science; grouped it under three headings: teacher, student and for learning, and stated that the most common reasons for these reasons were providing permanent learning and increasing active participation. Nakagawa (2008), in his research examining the method used by primary school teachers and the reasons for choosing this method, determined that teacher preferences are gathered in six areas of inquiry and these are: curriculum, differentiated elements, content, organizational structure, grouping schemes, and student requests. Demirkan & Saraçoğlu (2016) found that teachers consider the field, subject and course characteristics when choosing the methods and techniques they use, and they also care about student level and student readiness. He also stated that the suitability of the environment and his own experiences also affect the method and technique choices.

In line with the findings of the research, the pre-service training that the teacher candidates will receive comes to the fore in the selection of method and technique. It can be said that the pre-service teachers' mastery of many methods and techniques will increase the quality of teaching the courses. In this regard, pedagogical content knowledge courses, the scope of which is constantly expanding, can be given to teacher candidates every year during their education, so that teacher candidates who will know many methods and techniques can produce alternatives according to the situation during their teaching activities when they start to work. In the continuation of this research, a similar study can be carried out with active duty teachers and the results can be compared. Since this study was conducted with pre-service science teachers, the scope of pre-service training activities can be increased by conducting studies investigating the method-technical preferences and reasons of pre-service teachers in different departments.

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Neo-Retro Civilization: A Philosophical Celebration of Language and Ideas

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ABSTRACT
Language is one of the homes of being human. It can mean both good and bad. In other words, language can also be regarded as an instrument for the quality of existence: as a kind of human-existential tool, as an effective verbal implement. Thus it can be used to encourage or discourage a person. In turn, it leads equally to either well-being or ill-being. Maybe sometimes we should talk about wrong-being as well. So, it's about divergent ways of interpreting the same message. Infiltration, indoctrination, and even manipulation — a conscious tampering — can be associated with the situation.

Language is the tool of the skiful word user. At this point, neo-retro civilization can mean timeless civilization. Correctness and tact are the essential elements of merry-making. Any lack of subtlety is to be avoided.

Merry-making is born of sheer linguistic joy. Malice has no part of it. The goal is a smile, even a laugh. Then the tears are genuine tears of joy (and not crocodile tears). And sorrow does not reside deep within anybody.

ONCE UPON A TIME AT SCHOOL

Modifying a well-known biblical adage and saying that "fear of paper is the beginning of stupidity" may contain some considerable amount of truth. When we talk about a digital leap or jump, do we mean a triple jump, a standing jump, or a numeric jump? Is it perhaps about a running jump or a jump without acceleration? Formerly guidelines on language use unequivocally encouraged avoiding the word digital and using the term numeric instead. At that time, this usually meant the numeric or analogue display on a clockface. Nowadays, the digi- part of a compound word seems to be both a fashionable expression and a favourite term in political language use. I wonder whether this is a leap from one level of existence to another, something familiar from Søren Kierkegaard's philosophy. If it is, it has gone completely unnoticed by me.

Nowadays, the word innovate or innovation can be glimpsed in many statements of opinion and goal definitions. There would therefore be good reason to really reinvent or rediscover school and the ideal of civilization. Perhaps here, then, I am actually outlining an insightful and innovative school reform.

It all starts with a switch from smartphones back to teen calendars. Instead of smartboards, we'll get hold of educational posters and large cloth-backed maps. The docucam will be completely left aside and we'll go back to the overhead projector and epidiascope. A slide projector will also be proving itself necessary. A film projector would also be handy for enlivening teaching and giving it more depth. Mind you, the CAT (as in 'chalk and talk') method would also take us a long way.

Carbon paper and hand-operated duplicators would still be excellent aids. With their help, the classroom would be engulfed in the wistful redolence of the past. We would again be able to acknowledge the value of proper handwriting and see the futility of coding. The sliderule and a pair of compasses would open up completely new perspectives on the ideal of experientiality. We would once again have to practice sharpening a pencil with a knife and rubbing things out with an eraser. The terms sharpener and rubberizing would be best completely forgotten. Perhaps then, anyway, the word pencil sharpener would be linguistically quite admissible.

We should also have to grasp once again the meaning of concrete sheets of paper. Craftsmanship and the idea of philotechnia, or the love of skill, are inextricably linked. Cutting pictures out of magazines and gluing them into an exercise book would elevate us and bring us close to the essence of worldly existence. We would have a holistic understanding of the notion of the present era, of existing in space and of the spirit of a place. However, that would not suffice either because there would also have to be enough books available, and especially textbooks – books that are present in the world as concrete objects. Then it would also be possible to completely remove those partly imaginary and electronic non-books from reality. Imaginariness here refers to the fact that the existence of an electronic non-book is more a matter of the imagination than of the material world.

The desk is the most essential ingredient of the classroom world. Without it, a space is closed down and intellectual togetherness is made impossible. The desk stands for the miniature world existing within the classroom world. I suppose it could also be called the bringer of security. It is also probably an effective help in sitting up straight like an essential backbone. Likewise, it also guarantees and makes possible the right kind of work that does not strain the body unnecessarily. Exercise-based relaxation would go hand in hand with Coca-Cola yo-yos and superballs. The presence of the desk would mean profound poetry in the learning space. Such poetics of livable space would furthermore ensure the excellence of learning outcomes. And probably no one would undervalue such a goal.

School has not been completely lost yet. However, the direction of development is towards its disappearance unless we know how to do a timely backward standing jump. Indeed, it would also mean a leap forward and towards restoring the value of school. Then the language of contemporary speech would again also begin to signify the home of existence. If someone somewhere should need a profound discussant to shed light on the matter and investigate the essential, I might be an excellent choice. After all, I make so bold as to recognize myself as a phenomenalist missionary and visionary: my philosophical career could lie in the creation of multifaceted alternative futures – and in the service of the cultural tourism industry. Neither is the extent of my playfulness to be underestimated. That is why the motto of my neo-cartesian cultural tourism is: "Enjoy while meditating or meditate while enjoying, and you exist."

TIME TRAVELLING
A professional-cultural MEAD analysis
The central scene in this existential display of language-saturated ideational celebration is a philosophical-experimental variation of the SWOT analysis: the MEAD analysis. And here, too, the dimension of playfulness should not be forgotten. On the contrary, we should deliberately avoid critical frowning.

In a SWOT analysis, a 2x2 box is formed, with strengths, weaknesses, opportunities and threats noted in the four boxes. From the outset, the method was created for companies and generally for various institutions and agencies. Since then, the method has been detached from its cultural roots and has begun to be applied to the assessment of people as well. Still, the method seems to be quite suitable for the self-assessment of employees in educational institutions, for example. However, in this context it is not the intention to consider the SWOT analysis in detail. In fact, it has primarily served as an applied starting point.

What does a MEAD analysis actually mean? It is an important tool of the philosophical travel essayist. We are talking about a 2x2 field of experimentation. It could probably also be used for writing a travelogue and for training travel journalists. In addition to deepening self-understanding, the MEAD analysis is also suitable for promoting self-innovation.

Using these four questions, it is possible to set about illustrating the use of the analysis: What kind of traveller have I been? What kind of traveller am I now? What kind of traveller do I expect to be in the future? Am I still to be a sometime hero traveller? An investigative search for answers requires daring and a cultivated roguishness

In a MEAD analysis, the key issues are my selfhood and time. I suppose you could also use the expressions time of being and time of existence. Simultanously, the difference between observing and taking heed becomes clear. Specifically, the four fields of a MEAD analysis would be as follows.

Memory	Expectancy
Attention	Dream (outline)

Figure: The professional-cultural MEAD analysis.

Memory means the self-experienced past. Expectancy, or anticipation, means a future turning out much as expected. Attention, or observation, tells us what each actual present, here right now, is like. The dream builds the best imaginable future, i.e., the ideal future. In other words, the dream also means an outline for a perfect future. Now I ask, "What are great travel ventures like, and what is the ideal of a travel-human or of travel-humanity?"

A person may have a precise image of a place they have previously visited. The memory, in turn, directs attention to a time yet to come and to a possible new visit to the same place. In that way, a certain city, such as Kuopio, already exists in advance. The memory may also contain an indirect memory of Kuopio: the image may have been created on the basis of a book they've read, a movie they've seen or a conversation. Nevertheless, we imagine that the destination is known in advance. Observation, or the attention paid during the actual trip, is then able to prove the content of the prediction to be right or wrong. Disappointment probably makes a person form in their thoughts

the image of a dream trip to Kuopio or of a Kuopio of their dreams. In a Kuopio travelogue of this kind, the visitor always succeeds. He is the *héros* of antiquity, journeying above his surroundings: a perfect and infallible hero.

What would be the characteristic features of a FRESH MEAD or FULL MEAD analysis? Is it possible to talk about a sweetened and unsweetened MEAD analysis? What would an experimental travelling MEAD machine look like if you wanted to facilitate an innovative analysis of the experience? Would it be a succulent meady novelty product for carrying out a self-assessment? It's time to start looking for answers to these significant and eloquent questions.

Does the mental image of the heroic traveller derive from the legacy of antiquity, for example, or from Christianity? Is the ideal of the traveller that of a civilized world citizen who combines curiosity, breadth of experience and knowledge, stoicism, and the poetic? Hardly anyone has the goal of acting like a traveller full of cunning and cruelty and completely devoid of decency. After all, such a character is commonly referred to as a ruffian, an oaf or a pompous braggart. Admittedly, he also resembles a caricature that is like a thin, meaningless, paper picture. He lacks all the qualities other than that consciously accentuated boastfulness. It would be easy to make a FRESH MEAD analysis of a cartoon-like character: in general, a person does this by taking a selfie, or an ownie, thoughtlessly and in completely the wrong place. It's like a report on the scene of an event that always relates the same message: "Here I am. Notice me. I am the most important part of this photograph. Forget the background and just focus on me." A bystander's FRESH MEAD analysis of the situation would probably be quite different. In all probability, it would not flatter a self-righteous, complacent braggart waving a selfie stick and taking their own picture. A live broadcast like this would not be very interesting from the viewpoint of philosophical inquiry. There is therefore good reason to focus on more interesting points.

What is a FULL MEAD analysis like? In order to clarify the matter we need a sufficiently wide-ranging and detailed example of its implementation. During the contemplative process, a person would progress in their self-understanding from the apprentice stage to full mastery. It would be possible to demonstrate their erudition by means of a practical test. The final exam would be to write a photographic travel essay. Perhaps it could also be a research trip, completion of which would also require empathic skills. On the other hand, peering into the essence is only possible by respecting the ideal of truth. A sweetened FULL MEAD analysis would mean colouring observations, discoveries, and conclusions so that they exaggeratedly favour someone or someone's point of view. Such a procedure is unsuited for the goal of philosophical experimental research. What is needed, then, is an unsweetened, sugar-free FULL MEAD analysis in which the researcher is loyal to their own being and the object of research. They nevertheless remain creative and able to produce something new. This is yet another fact that should not be forgotten during the research trip.

Caution and tact are sometimes very essential elements. Even then, they do not mean selectivity or deliberate disregard of some matters. Instead, they can mean politeness and the ability to grasp the inherent nature of varying situations.

In the nested windows of time
An image, in the camera, in the mind, in the memory: this is how the content of an observation is layered. The milieu is Varkaus, an industrial city in eastern Finland. In the foreground lies Taulumäki Square, where the main street – Kauppakatu, formerly Mikkelintie – ends. The highway starts by the edge of the metal industry in Pirtinniemi and continues towards the agora, the market square. The photographer was probably observing the landscape from the water tower.

Photograph 1: The road into 1970s Varkaus.

What are all the things that contemporary education could mean? Does timeless contemporary education exist? What things are precious? And then again, what kind of things are seen as worthless? Is the opposite of good bad or wrong? Does a lack of well-being mean ill-being or wrong-being? Maybe answers will be found as the merry-making proceeds.

Photograph 2: A view of 1940s Varkaus reality.

Photograph one is eloquent: it tells of presents from different times. It is a multi-level timegaze. The current present of the researcher is the year 2022. The camera looks at the world from the 1970s. Photograph two shows the reality of the war years, the early 1940s. Thus, in those nested windows of time are the flickerings of a period of almost 80 years, a period containing a wealth of history both of the individual and of the entire nation. Occasionally the individual is the most essential component of the whole. Sometimes, on the other hand, the community is a more significant element than the individual. At the same time, the national narrative is being constructed.

The central point is the idea of the changing spirit of the times (*Zeitgeist*), a fact that also affects the spirit of the place (*genius loci*). Each modernity speaks its own language. Or perhaps it is a question of the same language of being which every present moment speaks in its own words.

In the background Lake Haukivesi shimmers. It is part of the Suur-Saimaa lakeland, which could also be called the Savonian Sea. There is also a railway line running along the route of the so-called academic blue train: from Joensuu to Turku direct with no changes. To the left of the railway bridge is the traditional Kämäri beach. The route passes through four university cities., which is why Varkaus can be considered to be connected, at least indirectly, to the academic tradition.

From the time of pandemic to the days of war: at the beginning and end of the journey there is a transition period. It is also tinged by an emphasis on the importance of nationalism. Otherness is shunned. Selfness is highlighted. Where once shells were projected, now home movies are projected. The second world war was followed by the cold war. Perhaps the current notion of enforcing peace or of counter-terrorism is a neo-retro cultural form of 1970s peace education. Does education for democracy strive for a similar outcome?

Is a new 'teiniliitto'* what we need? What about some fresh taistoism**? Or does the current Green Left operate on the updated principles of the 1970s? Did both of these aim at promoting a sustainable lifestyle?

There was talk of Finlandization. Should we now, in the 2020s, be thinking about Englishization? If so, what are all the areas of life we should be examining? Could we think of the Finnish language as a home for Englishization to exist? Or would it just be about some specialized areas of language? At least then, apparently, it would mean the languages of sports and science. Surely ordinary everyday language would not be completely cut off from Englishization either. So, the market street with its nested windows of time is therefore also a language street.

During the Continuation War, approximately eight decades ago, there were only two university cities on the academic train route: Turku and Jyväskylä. Nowadays, different things are targeted than in photograph two's time windows. The world of targeting has also changed. There has been a shift from real reality to artificial reality.

Admittedly, nowadays the trend also works in the opposite direction: from the computer world to the bodily experienced concrete world. Examples could, for instance, be the verbs "to open" and "to share". Nowadays, the question is often asked, "Would you like to share your thoughts on the book with others?" However, this means telling others about the thoughts aroused by the book. In the world of the Internet, something can be shared with a large number of people at the touch of a button, something not done so easily when talking face-to-face with other people.

"Could you open up on the film you saw to others," is nowadays a frequent prompt or cue. But it is still a matter of explaining, characterizing, or describing the cinematic experience. A saved file is opened. The experience of the film seen, on the other hand, is not opened. It is explained by word of mouth. A commentary is made on it: a narrative is told about it.

When looking through nested time windows, a person gets an overall picture of how things are. Here, too, it would probably be more fashionable to talk vaguely about the big picture. Again, it's probably about Englishization. Are things now at the time of writing, in 2022, better than in photograph two during the Continuation War? Does a journey from the future into the past differ from a journey from the past into the future?

When you look at the 1970s from the 2020s, you notice that the high street has emptied. Especially at weekends the street was bustling with liveliness and youthfulness. We used to use Finnish slang expressions meaning "to go down town" and "to be down town". It was "groovy" to be there. People who lived their youth at a certain time will recognize the words as their own. Nowadays, they talk about things being "cool". Despite the passage of time, both words are built around the sound 'oo', and they both mean excellent, brilliant, pleasant, interesting or inspiring.

The young people of the 2020s meet in online reality. So are they electronically "down town" or "down electro-town"? Many banks and shops have disappeared. More and more often, the customer encounters a robot instead of a human. Were the two soldiers in photograph two human robots? They mechanically accomplished what they were supposed to do. Still, they weren't robots or machine humans. Yes, they were living and feeling human beings.

In the foreground of photograph one there is a taxi rank. In decades gone by, it was still an actual physical building, a kind of "rental car kiosk" which also took a lot of landline calls. There was no worldwide Uber service. Neither was there a taxi app to download on your smartphone. The identifying sign on the roof of the car read in clear Finnish "taksi". Nowadays only the spelling with the letter 'x' is used: "taxi".

So, the journey from the future to the past is also a journey of letters and words. When people go from a pandemic to a war and vice versa, do they become more civilized? What has it all meant to move from the cannon to the computer? Increasing profundity or superficiality? Has there been any joyful merry-making at all in the move? Is there any situation where it is worth abandoning jesting and jolliness? We can't allow a smile to disappear completely. Otherwise, the world will become too serious a place. Even in times of harshness, there is help to be found in laughter.

I think I'll set up a rejoicing service. The joy of language and the joy of being are connected. A new Finlandization is needed: a genuine pride in Finnishness and the Finnish language. You have to learn to deal with things, to finish them, in a positively critical way. Who or what are today's eaters of Finnish? A person is eating his words if he abandons Finnish.

What kind of gastronomy would they represent, eating Finnish and eating words? To adapt a well-known Finnish saying, the purity of Finnish is half of lexical food***. Is that what good language hygiene means? It is the pride in your mother tongue and the sincere desire to cherish its beauty. Then Finnish will be each and everyone's home language and language of being at home.

POSTSCRIPT: AN ATTEMPT TO TRACE THE NEO-RETRO

This is a conscious follow-up remark. An essayistic writer should not leave overly clear traces of his own attitude and outlook. It would be like someone writing the content of their prejudices in their own footsteps. It would be a very concrete postscript. Then the work done would not leave a perfect imprint. The ideal of neo-retro civilization does not include leaving behind such lexical signs.

You need to be able to appreciate your own handprint afterwards as well. Respecting others is by no means a mark left by a blunt pencil. Even after reading a text by a skilled writer, the reader still has a sense of respect for themself and for the word user. Civilization or neo-retro civilization: valuing good manners is always fashionable. A cultured person has a mastery of good manners.

Could someone ever have a need to cover their tracks? If someone hides their tracks, what is left of them after that? Is it possible that someone's language clock is five decades slow?

Different generations want, each in turn, to leave their fingerprints on the existential landscape of their own era. They don't want to follow in the footsteps of their predecessors. Each of the generations traces back its own present. Time in all its height lies within reach of their merry-making: the present moment arriving and the present moments of every previous generation. The height of time could also mean the height of being. In general, however, all generations reject the "achievements" of their predecessors, the essentialities of layered modernities. In that way, the present of each generation that is always at the centre of being at any given time is existentially thin, rootless.

What could an up-to-date merry-making spree of language and ideas be like? And is there even old-fashioned merry-making? What are all the things meant by the idea of neo-retro civilization? When is it possible to say that merry-making or civilization is imitating an old style? Am I on the right track at all? At least with the benefit of hindsight, that last question could be answered in the affirmative. Then it is probably worth talking about nostalgia and utopia.

The bad things were missing and are missing from a time of happiness and a land of happiness. There an endless era of good things prevails. It is easy to rejoice in the keeping of everlasting joy. Memory and dream shape the spirit of the age (Zeitgeist). So does neo-retro merry-making of the past and future exist?

Indeed, time is the crucial ingredient in the essential examination of the neo-retro. The relationship of the past and the future to the present is also important. The change in perspective affects the way the concept of neo-retro is interpreted and defined. They, in turn, play a role in the study of the ideal of applicability. The form of merry-making considered good in the past can be reproduced as such in the new present. Then the neo-retro would mean copying, imitating. In other words, the old would be repeated as it is: the ideal of civilization would appear as an anachronism in the midst of false modernity. The motive for action would probably have been nostalgia, a longing for the bygone. Perhaps this would give rise to a neo-retro cultural innovation: a visionary novelty for new generations.

However, for the days to come, you should be able to create something completely new, unprecedented. Could it mean the resurrection of an old and once existing thing in a fresh manifestation? In its own present moment, the neo-retro to be located in the future usually manifests itself as a utopia, as an impossible fantasy, as a dreamlike ideal era of civilization. Are the dreams of the future always wishful thinking, castles in the air? Actually, the matter depends on when and what kind of castles you build.

In 2022, the utopia of the digital world and future may seem more or less understandable. The upheaval created by the pandemic has highlighted the need and perhaps the demand for e-inclusion. It has been possible to take part in various events without traveling somewhere away from home. The world has come home and the home has travelled into the world. Each home itself has been transformed into part of the global village. Nevertheless, the distances between have gone nowhere.

Has meaning abandoned its correlate: has the concept given up its literal expressive partner? In other words, has the "shadow" of the word escaped and gone its own way? What is a restless or rebellious "word-substitute" like? And can it sometimes also be a temporal modifier? The neo-retro of civilization may thus serve as a "substitute" for the dream image, as a kind of imaginary pronoun. Being a tricky linguistic substitute, an existential epithet, in a utopia, it could sometimes also appear as retro-neo, neo-neo or retro-retro. Then the idea of the theme and its variations would be realized. There would thus be four options for the realization of possible future civilizations. I suppose we could also talk about the idea's whimsical and multi-faced linguistic merry-making substitute.

When can something truly manifest itself as neo or neo-retro? What should the spirit of the age be like then? And humanity, can it ever be considered existentially civilized? Or cultured in its very essence? We need a poetic path to the edge of a merry-making existence. Who knows, it could even be appropriate to talk about a poetic prescription or set of instructions for poetic being. For a person moving towards the essence of neo-retro civilization, it would be possible to formulate a Lutheran Haustafel, the principles of being a human human.

The instructions for poetic being, i.e., the neo-retro and civilizing maxims remaining to it (in the spirit of the philosopher Martin Heidegger) could be as follows:

I
This is the beginning,
the beginning of the beginning,
opening a door:
a step to be taken.

II
I set off.
I'm starting to see.

III
The movement
Is not interrupted.
I leap.

IV
The step lengthens.
No longer shortening.

V
Here and there,
New into old.
Making a totality.

VI
Passing
is
understanding, seeing.
I know my way forward.
The map
matches the landscape.

VII
I'm part of
The landscape.
The landscape is
within me.
Seeing the essence.

VIII
I learned an attitude,
that leaves
the world open.
For the new,
for understanding the new.

My philosophical journeying into the neo-retro of culturedness is ongoing.

English translation by Glyn Hughes

FOOTNOTES
*The Finnish Teen Association, an organization for secondary school students, existed from 1939 until 1984.
**Taistoism (Finnish: taistolaisuus) was an orthodox pro-Soviet tendency in the mostly Eurocommunist Finnish communist movement in the 1970s and 1980s.
***A Finnish saying: 'Puhtaus on puoli ruoka'. (Cleanliness, i.e. hygiene, is half of the food).

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Network Services - Innovations for Individual and Community Wellbeing

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ABSTRACT
In Italy, the development of social and social-medical services has entailed both the training of professional workers and the furthering of technology and IT, with the precautions necessary for the protection of digital data taking a back seat.

These services, which provide protection for the wellbeing of vulnerable sections of the population, handle sensitive data (ethnic origin, health status or even sex life) relating to an individual. Obviously, this information cannot be lost or tampered with.

This paper describes an operational proposal for effective protection of computer documents containing sensitive data. This is important for intervention aimed at the safeguarding of service-users.
Keywords: Community, Networking; VPN, Social Service.

1.   INTRODUCTION

The tasks of helping and taking care of families and individuals, adults and/or minors, are attributed to the social and social-medical services, whose objective is that of planning intervention aimed at changing problematic situations. Examples are parenting support or home visiting for the support of families with children, or judicial intervention that aims at protecting children at risk (psychosocial distress, socioeconomic disadvantage, sexual abuse, parental disability and so on) (May, Fletcher, 2013; Nyarko et al., 2014).

The direct beneficiaries of protective intervention are therefore the family and the individual, in their respective life cycles (Donati, 1985). On the other hand, the indirect beneficiary is the community, since one person's change involves all levels of the 'ecological' system (Bronfenbrenner, 1979; Roussi, et al., 2006).

This therefore involves community social services, designed to focus on citizen need and, above all, to co-design interventions aimed at personal, family and social well-being (Weiss, 1995).

Welfare social services are therefore complex, made up of various professionals (for instance pedagogists, social workers and psychologists), who in relation to their responsibilities and skills, must guarantee efficiency, effectiveness and participation in achieving institutional and organisational goals.

The services in charge of intervening on behalf of vulnerable families or individuals are integrated not only on a professional level, but also on an institutional and managerial level. On an institutional level this is because it is difficult for a single body/service to meet all social needs, which is why it is necessary to involve other services. On a management level it is because objectives can be achieved through the management of the institutional network, the safeguarding and support of which also require sound communication strategies. The latter must be adequate and able to guarantee the quality and timeliness, of family and individual intervention (Azeez, 2013; de Saxe Zerden, et al.,2018).

The management of the interaction between individual and organisational resources is fundamental in achieving rapid and smooth intervention.

In this regard, it is also necessary to overcome the persistence of a culture of dependency, as well as conditioned responses towards material resources (e.g. technological tools) and human resources in terms of skills required for the use of such tools.

2. THE IMPLEMENTATION OF SERVICES AND TRAINING FOR NETWORKING IN ITALY

The most efficient response to social and individual difficulty is represented by an undertaking of responsibility by integrated services, which are able to exploit the principles of networking for the provision of intervention. In

other words the delivery of a professional and institutional network of services produced and nourished thanks to the correct use of technology (computer network) (Maguire, 1983; 1987).

Indeed, social work is not separate from the Information Technology (IT) era and will have to adapt to it. The same thing will have to be done by the professional worker, who must have adequate skills in the use of technology to successfully carry out both individual tasks and inter-professional and inter-institutional cooperation.

This is in light of the joint European programme for Information and Communication Technologies (ICTs), which has created a new way of electronically processing information, as well as the managing, sharing and storage of sensitive data (i.e. revealing a person's ethnic origin or state of health, or even their sex life), especially regarding minors (De Liso, 2001; Macilotti, 2015; Misuraca et al., 2016; De Rosa, 2017; Laurent, 2008).

Indeed, ICTs can improve the quality of life of communities, provide greater user access to social, health and educational services, and create economic opportunities for at-risk or multi-problem social groups (Mercer, 2001; Reisman et al., 2001). The low costs of ICT, and the fact that users and professionals are not required to have excessively high computer skills, bode well for possible training in its use.

Thus, devices and software are able to reshape and facilitate communication in social work.

Technological tools aim at enhancing service delivery, interaction and cooperation between professionals, even when the latter belong to different institutions. All this is with the aim of effective networking.

Networking is the process of linking several people together through meaningful interpersonal connections, a possible social intervention strategy that allows professional intervention to be coordinated with the resources present within each community (www.cisco.com; Barnes, 1954; Milgram, 1967). But if networking were to be combined with computer-supported Social Network Analysis (SNA), a further increase in professional effectiveness could be achieved. Examples of this are business partnership networks or other networks involving professional cooperation such as the public health system (Seufert et al., 1999; Cattell, 2001; Durland, 2005).

The IT service network can therefore entail two levels: a micro level, which concerns individuals, and a macro level, which includes a wide range of services.

For example, in Italy, the strengthening of the IT network is taking place mainly in the area of health through "electronic medical records" covered by eHealth. This an IT system for management and consultation of health information relating to the clinical history of an individual (www.agid.gov.it/).

In the social work sphere, on the other hand, we talk about 'computerised social records', a resource capable of providing functions both at a professional action level and at an administrative-management level for the bodies that have to plan and coordinate intervention.

However, unfortunately Italy cannot boast the sharing of guidelines for the implementation of computerised social records at a national level and in certain contexts such computerisation has yet to be accomplished. (www.cartellasociale.eu). In the latter case the information related to a user is managed on paper with the associated risks.

In addition, at present the computerised Social File is managed through the cloud computing system. On one hand this makes the use of computer and management applications easy, but on the other does not guarantee strict data protection (Carlin & Curran, 2011; Bazargan et al., 2012).

Hence, suggestions are made in this paper in order to achieve efficiency in social work. The aim is to propose a way through which the IT work of social and socio-health services can be made more secure by means of networking, enhancing the different levels of professionalism of those employing it as well as enabling them to work harmoniously and in a technologically competent manner (www.attivitasociali.palermo.it).

3.   NETWORK OPERATION
Computer networking allows an exchange of data between people who are physically distant. This is useful for rethinking and reorganising social and health services, their methods of communication and above all the management of streams of information.

The challenge is that of ensuring data security both for large companies and, above all, for small and medium-sized ones or public administration bodies, which manage a considerable amount of sensitive data. The problem is therefore posed by the threat of clouds that allow easy communication and management of data through the use of applications of different Internet Service Providers.

The cloud is mainly characterised by its ease and speed of use, features that often conflict with those of security and reliability. Indeed, the recent episodes of cloud hacking (HO mobile) highlight the inadequacy of security protocols linked to cloud storage. This is a risk that a personal service such as health or social care cannot be allowed to incur.

Another significant weakness is represented by logistics. In fact, the data centres that manage the cloud are not always located in the country in which it is being used, so that data is entrusted to companies that abide by different legislation, even EU legislation, on security. The legislation in force in Italy, for instance, obliges organisations to carry out significant data protection and prudent data management activities, an undertaking that is not always possible in the case of non-European legislation.

In order to clarify the matter, the General Data Protection Regulation (GDPR) has dictated strict guidelines on the proper management of data, considered to a greater or lesser extent sensitive, present within the DB of management (https://www.garanteprivacy.it/). In this way, possible infringements are attributed to the service provider.

4. CLOUD THREATS

In addition to its advantages, the cloud presents a number of threats, which is why it is often not recommended for certain purposes. To date, in addition to the criticism highlighted above, the cloud alternatives available on the market have weaknesses in terms of:
- **Governance**, lack of security management system processes, both internal and linked to the chain of sub-providers.
- **Compliance**, inability of the provider to meet compliance requirements with laws, regulations and standards. This typically includes lack of compliance with privacy regulations (e.g. GDPR), and the geographical location of data centres not allowing for regulation and guarantees of data management.
- **Business Continuity**, does not allow assessment of the provider's ability to guarantee the continuity of the services offered or the availability of operations and data (including backup management, Disaster Recovery, etc.).
- **Infrastructure Security**, the company policies that include network security as well as physical and environmental security measures (ranging from physical checks to fire and flood protection systems) are not known.
- **Identity & Access Management**, inadequate knowledge of measures to control logical access to systems, equipment, services and applications, both on the part of provider staff for management purposes and those who use the services and data. This problem includes the lack of user and password management solutions as well as strong authentication processes.
- **Data Protection**, assesses the ability of the provider to protect customer data from unauthorised access or tampering and/or data theft. This policy is often not made known to users of cloud services.

The abovementioned weaknesses underline the fact that applications in cloud infrastructures are not adequate for the necessary security of a service user's sensitive data.
It is therefore appropriate to consider modern, fast and above all secure network measures to improve and speed up work between services and individuals. This has to be done while maintaining a strict policy on security of data transmission and management.

Interconnection can be provided by systems governed by VPN (Virtual Private Network) connections, i.e. methods that provide the opportunity to make rapid connections between the various structures with greater security, when using public networks. In addition, VPNs allow management and regulation of data and security policies under the direct responsibility of the structures that create such connection and according to the regulations of individual countries.

Furthermore, VPNs are used for activities that require geographical expansion without significant investment in IT infrastructure (hardware, software and network), not least because they are provided through devices that telephone operators offer together with ADSL or fibre optic connections.

5. VPN TYPES

VPN connections ensure simple information exchange between different structures using normal Internet connections. Their strength lies in their ability to generate a virtual tunnel in which data travel from source to destination in an encrypted manner (i.e. data are converted from a readable format to an encrypted format) despite crossing public networks (the Internet). The strategic network device, necessary for the creation and maintenance of such a tunnel, is the router, which in this particular context is called a VPN gateway (McDonald, 2020).

Regardless of the configuration of this device, its key function is to allow
- entry into the virtual tunnel, when the data flow crosses the Internet to reach a remote destination, for instance the company LAN of one's office;
- exit from the virtual tunnel, when the data flow exits the Internet and reaches the aforementioned destination (Ibid).

There are several VPN measures capable of satisfying the needs of the intervention-oriented models conceived for institutions and social and health services. These options are represented by Site-to-site VPN and Remote access VPN, which perform essentially the same function but differ in the number of VPN gateways used (www.cisco.com).

In fact, a site-to-site VPN is created when the devices on both sides of the VPN connection (e.g. two interacting services) are set up and actively configured.

In a site-to-site VPN, host terminals (e.g. office PCs used for the provision of a service) send and receive normal TCP/IP traffic through a VPN 'gateway', which is responsible for encapsulating and encrypting the traffic. This VPN gateway then encapsulates the data in a VPN tunnel that crosses the Internet and terminates at a second, pre-established VPN gateway at the recipient's site. More specifically, a site-to-site VPN uses two VPN gateways: one for site A and the other for site B (Fig.1)

Figure 1 - VPN site to site. *Site2Site https://www.cisco.com/c/dam/en/us/support/docs/security-vpn/ipsec-negotiation-ike-protocols/119425-configure-ipsec-01.png (adapted)*

In this scenario, for example, users of Service 1 can securely connect with the network of Service 2 and vice versa, without being aware that their connection will cross the Internet in a private tunnel. The two VPN gateways of Site A and Site B will manage the entry and exit operations from the tunnel automatically, without any action being required from the computers in the respective offices (www.cisco.com).

This aspect is undoubtedly advantageous, since no specific training is required by employees for the correct use of the VPN; moreover, the VPN tunnel always remains active and available (static tunnel) and if the gateway also incorporates a security function (firewalling), like the VPN Gateway of Site B, access to specific resources of the local network (servers, archives, local files) can be further filtered with rules created ad hoc (McDonald, 2020).
However, the complex management and constant maintenance of this type of infrastructure entails very high economic and manpower costs. In this respect, its implementation in the operational framework, considered in this contribution, seems unsuitable.
On the other hand, the second approach -VPN remote access - uses a single gateway and is much more versatile for the context in which the pandemic has accelerated an exponential spread of teleworking. Figure 2 shows its infrastructure.

Figure 2– VPN remote access. RemoteAccess + OPTIONS
https://www.cisco.com/c/dam/en/us/support/docs/smb/routers/cisco-rv-series-small-business-routers/images/gss-04272017-anyconnectrv34xvpn-a.png (adapted)

The strength of this approach lies in the ability to connect one's desktop or mobile device remotely to the company LAN (Local Area Network). A VPN tunnel (dynamic tunnel) - tunnel on demand - connects the personal device to the VPN gateway of the relevant health or social service. This tunnel is generated straight away and deactivated at the end of the connection (www.cisco.com).

Another advantage of using this infrastructure is that it is easy to install and subsequently manage/maintain, both in terms of time and cost. In a service-based context the remote access solution therefore appears to be more practical in terms of the physical and virtual support of the network.

There are two options (A and B) for Remote access VPN. Figure 3 shows how these options can be implemented, and therefore installed on the devices to be connected to the VPN tunnel.

Figure 3 – VPN remote access OPTIONS. RemoteAccess + OPTIONS
https://www.cisco.com/c/dam/en/us/support/docs/smb/routers/cisco-rv-series-small-business-routers/images/gss-04272017-anyconnectrv34xvpn-a.png (adapted)

Option A is described as client-less because it does not use specific software. In fact, it is sufficient to connect to one's company using the browser of one's device (Edge, Chrome, Firefox, Opera, Explorer, etc...) and then enter the username and password required by the gateway (Riva, 2016). The on-demand tunnel created by the browser uses digital certification to provide authentication at the gateway and an SSL (Secure Sockets Layer) security protocol through which to encrypt data once the connection is initiated (www.cisco.com).

However, the scope of application of this type of connection, which requires basic training on the part of the remote worker, is mainly limited to the navigation of web pages and the use of e-mail servers (Riva, 2012).

Alternatively, there is option B. This is described as client-based because it uses a specific software client to be installed and configured on the device belonging to the remote worker. The latter must launch the customer software and set the parameters provided by the service for which (s)he works in order to establish the connection with the gateway. In this case, a tunnel is generated with even more robust security protocols than option A; an example is the IP-Sec VPN tunnel, which encrypts the flow of data during transit and also protects it from the risk of potential tampering (www.cisco.com).

This second option requires initial training to use the client software correctly.

6. DATA MANAGEMENT

The type of connection described so far (VPN) makes it possible to connect the various points involved in service provision. (service/professional/beneficiary). The objective of creating a specific application allows professionals (social workers, psychologists, educationalists, etc.) to access information, manage data and intervene quickly. Furthermore, the risks caused by the transportation of paper documents and their possible loss are avoided. Such risks can lead to serious consequences that slow down operation of the service, as well as cause harm to the service beneficiary.

 In order to support connection activities, management software with certain technical features, such as security, user-friendliness (intuitive use) and ease of searching and managing information, is recommended. On closer examination:

Security. In view of the particular confidentiality of data and data integrity, it is necessary to adopt the "3A" policy, Authentication, Authorisation, Accounting. This is based on the appropriate use of different information, in line with the characteristics of the software user (user/professional) In fact, only the information necessary to carry out the activities related to their role will be displayed. Moreover, what is done by the professional can only be monitored when necessary.
This condition is fundamental for proper use of the application and above all for the security of the data it contains.
Ease of use (intuitive use). The different professional figures who use the application means the software has to be user-friendly. This is considered an essential requirement for the success of the entire network system, for networking between the various structures and for full use of the resources of the application. It will allow maximum use by all those who have to enter, produce and retrieve information within the application.
Simplicity of information search and management. A direct consequence of the previous point is ease of searching for and managing information, as well as that of entering it. The simplicity of use and ease of retrieval of data make the application a tool of daily use, as well as speeding up information exchange procedures.

The positioning of a server, in which the application will be inserted, also guarantees proper management of the application from a hardware and software point of view.

The server must be located in a safe place and in a protected environment that is not easily accessible, except by authorised personnel. The server will have the task of managing all the information to be exchanged between the various services in an absolutely secure manner. For this reason, in addition to environmental security systems (constant temperatures, medium/low humidity, UPS systems to guarantee a constant supply of electricity),

backup systems must always be made available to this machine, both internal and external to the server (e.g. HDDs placed in secure external locations).

Finally, security policies must be created and countersigned by all the software users.

7. ADVANTAGES AND DISADVANTAGES

The proposal put forward here presents some disadvantages, such as the running costs, the maintenance of the infrastructure and the resistance to change that general staff and professionals may experience when faced with the demand for training. Although it is relatively easy to learn this new operational procedure, it is not immune to the familiar dynamics of resistance to change, especially in those workers who are heading for retirement, or facing redundancy, and therefore physiologically less inclined, or even reluctant, to do ongoing training (Lavanco & Novara, 2012).

However, once such mistrust and psychological resistance is overcome, the initial investment in this type of training can be abundantly repaid by the operational advantages. After all, we are talking about professionals who, in any case, have to deal with the rapid spread of new technologies that are fundamentally transforming the work of services and generating new interpersonal effectiveness and efficiency, as well as the protection of sensitive data (encryption). These are advantages for the individual user as well as for the whole organisation and the community (Lewin, 1951).

8. CONCLUSIONS

An intervention-oriented approach to information and data lays the foundation for the creation of advanced applications that meet the needs of governance, management, monitoring and research in the social/health field. The aim is to provide smart tools that allow professionals working in the social sector to use its bank of information and translate this into added value for the community. The latter comes about from effective intercommunication and coordination between professionals belonging to different services.

The Internet is the best example of how to achieve this, as well as devices, applications, databases, services and networks in general. They represent an excellent opportunity for services on the ground that are accustomed to anachronistic means and tools or situations where the staff don't have the technological skills to use the latest technological tools, which are therefore put aside.

In some countries social work and its related policies, legislation and cultural traditions broadly speaking are not homogeneous. This calls for general reflection on the widespread use of digital tools, the web and social media, both for internal communication within services and for the provision of intervention to support vulnerable individuals.

The extent to which such technological tools are used appropriately deserves further attention, and this is particularly so in the case of sensitive data protection. The latter should not be underestimated and requires the sharing of guidelines for the use and management of applications and databases, as well as the implementation of network security standards.

Finally, the establishment of digital literacy courses for employees, as well as the development of IT tools within the services, should contribute to an enhancement in professional relations and to the well-being of service-users.

Abbreviations: DB: database; GDPR: General Data Protection Regulation; HDD: Hard Disk Drive; ICT: Information and Communication Technologies; ICTs: Information and Communication Technologies; IT: Information Technology; LAN: Local Area Network; SNA: Social Network Analysis; SSL: Secure Sockets Layer; USP: Uninterruptible Power Supply; VPN: **V**irtual **P**rivate **N**etwork.

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Post Covid-19 Metaphoric Perceptions of Pre-service Arabic Teachers on the Concept of "Distance Education"

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ABSTRACT
During the Covid-19 epidemic, education processes were generally continued with distance education tools. This situation has changed the students' perspectives on the teaching process. The aim of this study is to determine the metaphorical perceptions of pre-service teachers studying in the department of Arabic language education about distance education, which is applied in order not to interrupt the Arabic teaching process due to the Covid-19 epidemic. In the research, phenomenology model was chosen from qualitative research designs. In addition to the demographic characteristics of the participants, "Distance Education is like ………….. because………….." were asked to fill in the blanks through the form. The data were analyzed by content analysis method and divided into categories. The perceptions of the participant teacher candidates about distance education were interpreted according to the determined categories. It was collected in eight categories: "vital necessity", "fun", "accessibility", "useless", "challenging", "tasteful", "boring" and "uncertainty". As a result of this study it has been observed that the majority of teacher candidates use negative metaphors for distance education.
Keywords: Arabic teaching, pre-service teachers, distance education, metaphor.

Introduction

Success in foreign language learning is proportional to the individual's ability to make sense of what he has learned. In order to achieve this, language learning must be made meaningful for the individual (Gömleksiz, 2013, p.651). Although the contribution of technological developments to foreign language teaching is great, it is a phenomenon that should be investigated how effective it is for individuals who want to specialize in foreign language education to take these education processes completely with distance education tools. Due to the rapid spread of the Covid-19 epidemic, all countries of the world have tended to take various measures in the field of education.

In the information shared by UNICEF on its official site in September 2020, it is stated that more than one billion children in the world are at risk of falling behind in the field of education due to Covid-19, and countries implement distance education programs to ensure children's learning in this process. However, it is emphasized that despite these efforts, many children in the world do not have internet access, any technological device, TV or even radio due to poverty, which increases learning inequalities ("Education and COVID-19", 2020). According to the statistics shared by UNESCO, it is understood that many countries closed schools for over 30 (thirty) weeks during the epidemic process, and that the country with schools still closed is very few, all other countries either fully open or continue their education partially by online education ("COVID-19 impact on education", 2022). After the health sector, another area most affected during the epidemic period is education. In this process, the education sector all over the world has tried to quickly integrate the distance education systems they are familiar with in many ways in order to reduce the negative impact of the epidemic.

Yamamoto and Altun (2020) in their study, give information about the transition to the distance education model in different countries around the World and emphasize that during the pandemic, distance education is accepted in all countries and has become the most preferred channel. Distance education is an interdisciplinary field that tries to eliminate the limitations between learners, teachers and learning resources, and uses existing technologies with a pragmatist approach to achieve this (Bozkurt, 2017, p. 87). Distance education can be defined as a type of education that does not require a person to be in a physical place and that enables him to benefit from the education given through different online platforms.

Distance education has become a type of education that has taken place in many areas of life in the recent past, depending on the changing conditions of the world. Hızal (1983, p.71) defines distance education as an educational practice that allows the benefit of the masses in different conditions, and a form of education that largely imposes the responsibility of self-teaching and learning on the individual. Gökçe (2008, p.1) also states that with the technological developments, universities have started to use the distance education system to allow modern people to develop themselves.

Thanks to distance education, individuals who are in different geographical conditions and have various disabilities or individuals with different socio-economic status are provided with the opportunity to easily access information by providing equal opportunities in education. Thus, the individual can access information from anywhere (Başar, Arslan, Günsel, & Akpınar, 2019, p.16). Distance education, which has been forced due to the epidemic that has swept the whole world today, has affected both students and educators who teach in various fields.

Although online programs were used in certain courses of undergraduate and graduate education for various reasons such as conferences, seminars, in-service training in the pre-epidemic period, such a distance education period covering all teaching stages probably happened for the first time due to the Covid-19 epidemic that emerged in 2019 and affected the whole world. Although this process directly affects the students in the education process both in the world and in Turkey, it has also affected many people and fields that are somehow related to education. Situations such as the exposure of students at all levels of education to technological devices and the necessity of families with students at primary school age to be personally involved in education show that this process has very different effects. Even gigantic companies trying to provide internet service, which is the key to online education, experienced a sudden explosion of demand and encountered some negative situations in delivering the services they offer to people.

Arslan, Arı and Kanat (2021, p.193) stated that it was decided to suspend face-to-face education in schools in Turkey, with the thought that student population could increase the contagion of the epidemic. Since approximately 25 million students in Turkey were affected by this decision it was necessary to switch to distance education. In this period, a new decision for distance education was taken by CoHE in March 2020. Accordingly, in higher education institutions, it has been decided that the programs that have been decided to conduct distance education due to the pandemic and which are currently being carried out with distance education, will continue their education remotely, with the exception of the courses that require applied and face-to-face education. This situation has brought about the continuation of teaching completely with distance education, except for the departments with practical courses in many universities. Universities continued their education online with different systems. The fact that some students, who were faced with distance education for the first time, experienced adaptation and motivation problems in this process, naturally affected the efficiency of the lessons.

Technology is one of the most important tools that ensure the uninterrupted continuity of the teaching process in the distance education period. However, this process cannot be accomplished with technology alone. Koc (2013, p.1) states that neither the presence of technology nor awareness of technology alone can guarantee the improvement of teaching and learning. He states that fundamental changes are necessary in the application of technology, the role of teachers and students, teaching strategies and tools, curriculum standards, and school culture. Uşun (2006, p.19-21) states that distance education provides lifelong, individual and independent learning opportunities. Responsibility for learning lies with the individual. In addition, it provides the development of individuals' ability to access information, entrepreneurship and self-decision. However, the risk of not being effective enough for students who do not have the habit of working and learning individually and independently can be seen as a disadvantage of distance education. Sahin and Shelley (2008, p.217), emphasizes that in order for students to benefit from distance education, they should have the ability to use online tools, believe that distance education offers them useful and flexible learning opportunities, and have the opportunity to communicate and share. For these reasons, it is clear that students should make much more efforts to fully benefit from distance education. Studies to understand how students perceive and describe distance education during the epidemic period will provide an idea about this issue.

Metaphor draws attention as a powerful mental mapping and modeling mechanism for individuals to understand and construct their own world (Arslan & Bayrakcı, 2006, p.103). Demirci (2016, p.330) states that in addition to being a very useful expression tool and a structural production tool, Metaphors are used like a productive factory in different fields such as literature, language and education as they provide ease of transition to new situations in mental and structural areas. Özdemir (2017, p.35) also states that metaphors can be seen as the establishment of a relationship between two different phenomena or the reflection of a spesific mental schema on another mental schema. Although metaphors cannot fully convey what they describe, they help to visualize complex elements involving people, events and processes, and to make unfamiliar situations understandable (Kendall & Kendall, 1993; cited in Çivril, Aruğaslan, & Özaydın Özkara, 2018, p.44). Metaphors help people make sense of what they are experiencing and recognize the obvious contradictions and paradoxes they encounter. Metaphors enable people to combine parts into meaningful wholes (Ott, 1989; cited in Kendall & Kendall, 1993, p.150). Learner's perceptions of the foreign language in his mind and affective characteristics are among the important factors in language learning. This situation includes the learner's level of motivation, attitude towards language, acceptances and analogies related to language in the mental world (Gömleksiz, 2013, p.651).

It is thought that this study will contribute to literature in terms of learning the perceptions of students studying in Arabic language education about distance education by utilizing the feature of metaphors to reveal the perceptions of people. The distance education system, which pre-service teachers studying in the field of Arabic language education had to experience personally due to the epidemic that emerged in 2019, offered students the opportunity to compare face-to-face and distance education.

It is important to reveal the metaphorical perceptions of the students studying in the field of Arabic language education about the courses they have attended online during the distance education process, in terms of shedding light on what the students experience in language learning through distance education in this process. Because metaphors are helpful tools that will reveal how students perceive language learning through distance education. In this context, the study aims to reveal the metaphorical perceptions of pre-service Arabic teachers regarding distance education:

1. What are the metaphors of the pre-service Arabic teachers regarding the concept of distance education during the pandemic?
2. Under which conceptual categories are pre-service Arabic teachers metaphors about distance education collected?

Method
This research was designed with the phenomenology approach, which is one of the qualitative research methods. Phenomenology studies, in which the common meaning of individuals' experiences with a concept are sought, focuses on defining the common characteristics of all participants who experience that concept (Creswell, 2016, p.77). In this direction, the phenomenon focused on in the research process; How the prospective teachers who continue the education faculty Arabic teaching program conceptualize their thoughts about distance education with the help of metaphor.

Study Group
In qualitative studies generally small samples of people, nested in their context and studied in depth are worked (Miles & Huberman, 2016, p.27). Purposive sampling method was used while forming the study group of the research. In purposive sampling, researchers purposefully select individuals and research sites in order to learn about or understand the main phenomenon (Creswell, 2017, p.267). The study group of the research consists of 80 pre-service teachers who studied through distance education in the Arabic language education department of the faculty of education in the 2019-2020 academic year. 52 of the pre-service Arabic teachers participating in the research are female and 28 are male. 28 of the participants are freshman and 52 of them are sophomore.

Data Collection
Pre-service teachers' views on distance education were collected through an interview form consisting of open-ended questions developed by the researchers. The interview form consists of two parts. In the first part, the demographic information of the participants was requested. In the first part, the demographic information of the participants was requested. In the second part, pre-service teachers were asked to complete following statement; "Distance education is like …… because …...". They were asked to give a reason for the metaphors they created with the words "like" and "because".

Data Analysis
The data obtained from the answers given by the pre-service teachers to the question in the form were analyzed by content analysis. Content analysis is carried out when the research cannot be expressed very clearly theoretically or when a more in-depth analysis is needed (Yıldırım & Simsek, 2011). At this stage, the answers given by the participants to the form were analyzed in four stages: coding the data, creating the categories, arranging the data according to the codes and categories, and ensuring the validity and reliability. A relational category framework was created with the help of the obtained data.

Establishment of Validity and Reliability
The literature was examined in detail for the validity and reliability of the study. Both in the forms given to the participants for the research and during the application process, care was taken not to make any guiding suggestions. In addition to the expert opinion of the field in the the analysis and categorization of metaphors, the opinion of a faculty member with experience in the field of qualitative educational research was also taken. The categories determined by the researcher and the opinions of the experts were compared and the formula "reliability = number of agreements / number of agreements + number of disagreements" (Miles & Huberman, 1994) was used to calculate reliability. As a result of the comparison, the reliability level of the research was found to be 90%.

Results

Pre-service Arabic teachers who took lessons through distance education created a total of 80 valid metaphors. The metaphors created by the pre-service teachers were grouped under eight different categories (Table 1). These categories are "vital necessity", " entertaining ", "accessibility", "useless", "challenging", "tasteless", "boring" and "uncertainty". The views of the participants on the categories and related metaphors are shown in the sub-headings.

Table 1: *Metaphors and Conceptual Categories Constituted by Pre-service Arabic Teachers*

Conceptual Category	Metaphors	F(%)
Vital necessity	Air (2), water (2), seed, moon	6 (7,6)
Entertaining	Swimming(2), treadmill, mind game	4(5)
Accessibility	oil lamp, clay, comfort, bird, guide (2)	4(7,5)
Useless	Taking half a breath, an empty book, book, flog a dead horse(2), barren soil, putting water in the strainer, unsound building(2), chatting with the ignorant, desert, water drop versus ocean, fruitless tree, dead end street, feather, looking for a needle in a haystack, a dried tree, evaporating lake, a roofless house, explaining colors to a blind person, walking around a dark stadium with a torch, closed box, having the ocean but swimming on the shore, home without stove, the winter sun.	25(31,3)
Challenging	Puzzle(2), exam, swimming in the ocean, a hilly road, a fish that tries to live on water, learning vocabulary in a foreign language, primary school 1. grader, constipation, stairs, seeking water in the desert, understanding the language but not being able to speak it, trying to do something with one hand, bottomless pit(2), wingless bird, hungry but unable to eat, torture, going on a long trip with someone I've never met, tree, death, scraping with a fingernail, poison, one-sided love.	24(30)
Tasteless	Turkish bagels without tea, potato, savourless meal (3)	5(6,3)
Boring	Watching the screen, unfinished poem, watching theater on TV	3(3,8)
Uncertainty	Drawing a picture at home, light, boat, both opportunity and bad luck, space, sky, peach	7(8,8)

Vital Necessity

In this category, six people produced four metaphors, and among these metaphors, "air" and "water" were preferred more to describe distance education. The common idea in the metaphorical images created by the pre-service teachers is that distance education is a prerequisite for human life.

> *"We feel the air, but we cannot see it, and we cannot live without it. We also felt distance education, we could not see it, but we could not do without it."*
>
> *"Distance education has been the savior of our education life; We did not remain uneducated during the pandemic process"*

The participants believe that distance education enlightens their way as a saving factor in the pandemic, but the responsibility belongs to them.

> *"Distance education was like seeds, and our teachers and resources were like sun and water. We were the ones who would grow the seed."*
>
> *"Distance education enlightened our way in a difficult and dark process and we continued our education."*

Entertaining

3 metaphors were expressed in the category of distance education as an entertaining concept. Metaphors in this category; swimming(2) treadmill and a mind game. With these metaphors, the participants stated that they enjoyed distance education despite the difficulties and that they saw it as an instructive concept. Some of the opinions under this category are as follows:

> *"On the treadmill, you walk first, then run. In distance education, we learned slowly at first, but then we accelerated with pleasure"*
>
> *"Arabic is like an ocean. the more you swim there, the more you will enjoy it"*
>
> *"We both had eand learned"*
>
> *"We literally swam in an ocean of knowledge"*

Accessibility

In this category, the participants produced five metaphors: "candle", "clay", "comfort", "bird", "guide (2)". Accordingly, the participants stated that they had easy access to distance education.

> *"Since each student is in communication with each other thanks to distance education, they have eliminated their deficiencies and shined like stars."*
> *"It was a process where I could arrange my lessons according to my own wishes at the place and time I wanted"*
> *"It was the most comfortable, cost-free and educational process I attended whenever I wanted"*
> *"Thanks to the internet, we were able to reach our teachers immediately"*
> *"I had easy access to every information I wanted to learn"*

Useless

In the study in which the metaphorical perceptions of pre-service teachers about distance education were examined, most metaphors were produced in the "useless" category. With the closure of schools as a result of the pandemic, it can be said that the applications within the scope of emergency distance education are not considered beneficial by the pre-service Arabic teachers participating in the research. Some of the statements of the participants who stated that the learning process was inefficient are as follows:

> *"Distance education was shallow and useless"*
> *"An empty book is of no use"*
> *"We can't learn by just reading books. It is also necessary to experience it. We have learned something in distance education, but we have not been able to implement it"*
> *"We have faced a lot of problems in distance education. We flogged a dead horse."*
> *"Distance education and face-to-face education can never be equivalent"*
> *"It was an unfair process that did not help learning a foreign language"*
> *"It was a wasted time, I didn't get any benefit or efficiency"*
> *"We were learning more information in face-to-face education"*
> *"No matter how much you water, you can't eat the fruit of the distance education tree"*
> *"We couldn't see the end of the road and couldn't find the exit"*
> *"No student who can't get a face-to-face education can be like a fruitful tree"*
> *"It is useless to provide a comprehensive process such as language teaching with distance education"*
> *"Since we do not have distance education experience, we could not get efficiency from the lessons"*

Challenging

Pre-service teachers produced 24 metaphors in the category of distance education as a "Challenging" concept. The second most metaphors about distance education are in this category. Puzzle (2) and the concept of "bottomless pit" were the most frequently mentioned concepts among other negative concepts. According to these findings, it can be said that pre-service teachers have difficulties in the distance education process.

> *"Seeing the full picture in the puzzle box guides the person. In distance education, the language student could not communicate with his teacher, namely his guide"*
> *"Trying to learn a lot of information with distance education was difficult, like trying to reach the shore alone in the ocean"*
> *"No matter how hard we worked, we always felt a lack"*
> *"It was a difficult and non-positive process"*
> *"We were able to improve only reading and writing skills in learning Arabic with distance education, but we were unable to improve speaking and listening skills"*
> *"You can't get out once you get in because it's like a bottomless pit"*
> *"We couldn't get efficiency, we couldn't tell what we knew, like birds that know how to fly but don't have wings"*
> *"It was very challenging to try to speak in front of the screen in a language we had just learned"*
> *"Arabic is a difficult language, and it has become even more difficult to learn it with distance education"*

Tasteless

A small part of the participants represented distance education as a boring factor with three different metaphors. The three metaphors expressed in this category were "bagel without tea", "potato", "savourless meal (3)".

> *"We couldn't taste it, everything got mixed up"*
> *"It's easy to reach, but if you don't cook it, you can't eat it. It is tasteless"*
> *"There are no teachers in sight, no dialogue. We didn't get any efficiency"*

"Like food that I can't taste no matter how much I eat, no matter how hard I try, it's always missing..."

Boring

In contrast to the participants who defined distance education with the metaphor of "entertaining", some participants (3) stated that they could not enjoy this process and found face-to-face education more entertaining. Pre-service teachers believe that interaction in distance education is limited, *"Arabic is a very broad landscape and it is not beneficial to just watch this landscape".* They state that learning only through distance education does not take place.

"No matter how well you read the unfinished poem, you cannot enjoy it."

"We can't get the same pleasure we get from watching the theater live on stage while watching it on television. In face-to-face education, it is more entertaining and efficient because there is more interaction."

Uncertainty

Seven of the participant pre-service teachers associated the distance education they received during the pandemic with the concept of uncertainty. According to the statements of the pre-service teachers, it can be deduced that distance education turns into an opportunity in some cases, and in some cases it is seen as a disadvantage.

"Some students paint their canvas multicolored, some leave it blank. Others paint even though they are not interested in painting because their teacher tells them to paint. In distance education, it was meaningless because there was no directing and controlling person."

"Although we were lucky in terms of time and resources, it was difficult to focus on education at comfortable environment like home."

"The starting point was obvious, but the end was uncertain."

"We attended classes not knowing what the process would bring us."

"Like the sky, it was sometimes clear, sometimes overcast."

Discussion and Conclusion

In this metaphorical study, it was aimed to determine the metaphors of pre-service Arabic teachers about the concept of distance education and to determine the conceptual categories of these metaphors. In this context, pre-service Arabic teachers were asked to define distance education conceptually. In the research, the metaphors stated by the participants were coded and categorized, and these categories were associated with the distance education literature.

As a result of the research, a total of 80 metaphors were determined in eight categories: "vital necessity", "entertaining", "accessibility", "useless", "challenging", "tasteless", "boring" and "uncertainty". According to the findings of this research, it is seen that the perceptions of the pre-service teachers participating in the research towards distance education are mostly negative. It is seen that only 11 of the 80 metaphors in total are positive, and these positive expressions are in the categories of "vital necessity", "entertaining" and "accessibility".

The sudden change in education due to the Covid-19 pandemic negatively affected students and made it difficult for them to adapt to distance education. It has been noticed that factors such as the lack of experience in distance education of pre-service Arabic teachers, the inability to effectively teach four language skills in this process, technical deficiencies and internet glitches, limitations in communicating with instructors, and the perception that Arabic is a difficult language cause negative thinking.

Similar to the findings of the research, Yılmaz & Güven (2015) and Görgülü-Arı & Hayır-Kanat (2020) in their study with pre-service teachers state that they do not think distance education is a good alternative to face-to-face education. Likewise, Tang et al. (2020) reports a dissatisfaction about distance education in terms of attendance, assessment and evaluation, and students' pace of learning. In the study (Dolmacı & Dolmacı, 2020) in which the opinions of foreign language instructors about distance education are included, it has been concluded that the instructors in general do not find distance education in foreign language teaching efficient and its negative aspects are quite high.

The fact that the majority of pre-service teachers who expressed their views on distance education thought that this system would not replace face-to-face education can be considered as an indication that they were negatively affected by the process. Pre-service teachers who gave positive opinions especially emphasized that a large number of people can receive education at the same time and in an independent place. In addition, in a vital necessity category they mentioned that distance education is a life-saving factor in this pandemic process that negatively affects education.

As stated by the pre-service teachers in the accessibility category, the fact that students especially emphasize that they have the opportunity to listen to the lesson again and that they do not fall behind in their teaching can be counted as one of the advantages of online education in contrast to face-to-face education. Similarly, Uzoğlu (2017) classified the positive aspects of distance education as time and space independence, economy and access to learning resources in the interviews they conducted with pre-service teachers.

According to the metaphors used by the participants in the "Uncertainty" category, in parallel with the literature (Kan & Fidan, 2016; Tuncer & Bahadır 2017), it can be said that distance education is not superior or unsuccessful on its own. Students find distance education advantageous in some ways and disadvantageous in some ways. It can be stated that pre-service teachers generally prefer face-to-face education and they find it more appropriate to use the distance education system in emergency situations.

Depending on the results obtained within the framework of the study, some suggestions can be made regarding the compulsory distance education period due to the epidemic. Despite the possibility that distance education may be an obligation to implement, trainings on what can be done about an efficient distance education program should be organized for teaching staff at all levels. In addition, various activities should be carried out in order to provide students with access to online resources and benefit from these resources at a high level, or 'distance education' focused courses should be included as elective course content, especially in universities. The platforms of the courses given through distance education should be chosen from the programs that allow the students to listen to the lectures again.

The research findings obtained by taking the opinions of pre-service Arabic teachers are limited to pre-service teachers of an education faculty. In addition, the data of the research were collected for distance education carried out during the Covid-19 pandemic. It reflects the views of pre-service teachers during the sudden pandemic outbreak. Pre-service teachers' views on distance education gathered in different faculties may differ. For this reason, it is important to examine this research in other education faculties that provide Arabic language education.

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Quantum Physics Between Matter, Information and Consciousness: The Case of Quantum Medicine

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Abstract
Quantum physics is revolutionizing the way we read the reality surrounding us and of which we are made. The human being is made up of matter and energy, inextricably linked to each other; energy is also vibration and frequency, so frequencies can be associated with a material body. Each cell of our organism, through the DNA which works as a transmitter-receiver, emits and receives signals in frequency; all cells of the body are in continuous communication and exchange electromagnetic messages with precise biological effects. This dynamics leads to a system of continuous self-regulation, with information traveling between cells to maintain a dynamic balance that adapts to inner and outer changes. The onset of a disturbance in the electromagnetic control network leads to the creation of a pathology. Quantum medicine, a new vision of medicine seen from the perspective of quantum physics, is interested in the study of this energetic-electromagnetic aspect, evaluating the effects on our body of the modification of frequencies that the body emits and receives. The paper analyzes the above indicated concepts and provides an overview of this interesting field of application, defining the properties of a recent study in progress about the deep structure of space.
Keywords: Quantum Physics, Unification, Matter, Information, Consciousness, Quantum Medicine, Primordial Dynamic Space, Science Education

Introduction

Quantum physics has had over time an unprecedented development in scientific knowledge, becoming a representative and very relevant basis in the context of contemporary science. This is a profound conceptual revision, which led to a heated epistemological debate still in progress, with important and profound effects.

These effects are reflected not only in physics in a broad sense (micro- and macro-physics), but also in other disciplines such as biology, neuroscience, biophysics, medicine. The new knowledge of quantum medicine is inspired by a holistic view of reality and integrates the paradigms of conventional medicine.

The term *quantum medicine* considers a new type of medicine seen from the perspective of quantum physics, which is the part of modern physics developed to study the reality that surrounds us at the infinitely small level. The human being is made up of matter and energy, inextricably linked to each other and transformable into each other. Energy is also *vibration* and *frequency*, therefore a material body not only is and possesses energy, but can also emit and absorb it in relation to the frequency.

Our DNA works as a transmitter / receiver, so every cell in our body emits and can receive signals in frequency; all cells of the body are in constant communication and exchange electromagnetic messages with precise biological effects.

This complex process constitutes a system of continuous self-regulation, with data constantly traveling between cells to maintain a dynamic balance that adapts to internal and external changes in the body and tends to give balance and health.

When a disturbance arises in the electromagnetic network and therefore in the self-regulation system, a pathology can arise. Quantum medicine aims to study the energetic-electromagnetic aspect of physiology, intervening on this level.

Emotions such as anger, joy, anxiety, etc. have effects on our body, modifying the emitted frequencies; it is possible to detect such disharmony, therefore through the frequency level it is also possible to investigate emotions. At the level of frequency there is no distinction between body organs, emotions, individual parts, since everything is connected to the vibrational frequencies and their distinction.

Quantum medicine is part of the holistic way of interpretation of reality seen as a totality, including subtle energies, consciousness and the deep structure of space-time in which we are and of which we are made up. The research on in-depth knowledge of the structure of space has taken place since man began to question on the meaning of the reality; recently new developments in this regard are referred to a so called *primordial dynamic space*.

The basic principles of quantum physics
Both light and the fundamental elements of matter (therefore ourselves and the reality manifest to us) are made up of small concentrates of energy called *quanta* with a dual nature, a wave and corpuscular nature.

The concept of quantum as a discrete elementary quantity, also used as a synonym for elementary particle associated with a force field, was first introduced in 1900 by the physicist Max Planck (1858-1947), Nobel laureate for physics in 1918, to solve the problem of the black body spectrum; subsequently the physicist Albert Einstein (1879-1955), Nobel laureate for physics in 1921, in 1905 reconsidered the concept in a more fundamental form and in a physical sense for the description of the photoelectric effect. This concept has become a founding element of quantum mechanics and quantum physics.

From this intuition, it materialized the notion of the wave-particle dualism of matter, leading to the failure of existing classical theories if applied to the microcosm; at the same time, a strong study in chemistry, medicine, biology has been undertaken, about the vision of man and the universe as interconnected by a primordial matrix that allows one to influence the other and vice versa.

The first intuition concerning the dual nature of matter was of the mathematician and physicist Louis De Broglie (1892-1987), Nobel laureate for physics in 1929; the mathematical description of the vibrations properties of the quantum wave has been the work of the mathematician and physicist Erwin Schrödinger (1887-1961), Nobel laureate for physics in 1933 (Di Sia, 2019). The universe, including us, is made up of particles, existing as matter when we observe them and as probability waves when we do not observe them.

The physicist Werner Heisenberg (1901-1976), Nobel laureate for physics in 1932, one of the main architects of quantum mechanics, set out in 1927 an uncertainty principle, now known in his name, which establishes the limits in the measurement of the values of physical conjugated or incompatible quantities in a physical system. This uncertainty does not depend on the limits of the instruments, which necessarily interact with the object to be measured, but represents an intrinsic characteristic of the matter (Ason, 2022).

The phenomenon of *quantum entanglement* is not reducible to classical mechanics; it consists in the fact that, under certain conditions, two or more physical systems represent subsystems of a supersystem with a quantum state that cannot be described individually, but only as a superposition of several states. This implies that the measurement of an observable of a subsystem determines *simultaneously* the value of the others as well.

If two particles interact for a certain time and are then separated, when one of the two is solicited so as to modify its state, a similar solicitation occurs *instantly* on the second one, regardless of their distance. Therefore, a form of permanent action-communication seems to exist between them.

The nature of quantum theory is strange and counter-intuitive, but it has demonstrated its experimental solidity over the years. Despite its strangeness, it has been quite pervasive on a scientific and cultural level (Di Sia, 2021a). Quantum theory studies complex systems, and one of its main tools is statistics. It has a far wider reach than the microscopic world, and can generally be applied to systems where individual parts work together and influence each other. An illuminating example of systems of this type is represented by living beings, since each of us is a complex network of cells, organs and elements that continuously interact.

Quantum medicine
Following the quantum revolution, quantum medicine was also born over the years, with a methodological approach typical of quantum physics, but in any case keeping a fruitful integrative comparison with conventional medicine.

However, it is not content with making only adjustments and improvements from the theoretical point of view, but aims at a global rethinking of the fundamentals of medicine, such as *the idea of disease* and *the raison d'etre of curative science*, in a global unified vision of the human being, seen holistically as body, mind, emotions, consciousness. Furthermore, all connections of the living organism are considered, which is seen as an open system, interacting with the environment and with the cosmos.

Quantum medicine connects and intertwines the foundations of traditional medicine with those of techno science and with the wisdom traditions of Eastern thought. It is based on the holistic awareness that *the whole exceeds the sum of the parts* (Yanick Jr., 2004; Di Sia, 2021b).

Quantum medicine makes use of contacts with external disciplines that draw on centuries-old traditions of studying human reality in its entirety through well-known working techniques, including:

- *the meditation*, which produces physiological and psychological healing effects, significantly shortening the healing time, through the awakening of the individual mind;
- *the conscious attention* and *intentionality*;
- *the music therapy*, which makes use of physical-mathematical research on the healing potential of sound;
- *the dynamics of subtle energies*, which is used in disciplines such as acupuncture, pranotherapy, foot reflexology;
- *the Ayurvedic medicine* (Pole, 2012).

Quantum reality offers the appropriate tools for the study of all aspects of the behavior of mankind and the interactions between parts of the body, mind and emotions as a single interconnected network. Quantum medicine investigates life, health and disease as a network phenomenon, using statistics as an analytical tool.

The fact that quantum theory provides us with probabilistic predictions for what will happen leaves the door open to free will and does not become paradoxical when thinking about human freedom.

Quantum medicine seeks to study the connection of the whole, a connection that is a two-way process, in consideration to the signals that are emitted and received.
Some interesting application examples are:

- *the bioresonance therapy*: it has been shown that the cells of a living organism respond to the solicitations of an electromagnetic field given by the superposition of a constant and a variable field. This type of therapy uses electromagnetic fields of low intensity and frequency, considering that each human cell emits its particular frequency in relation to a situation of balance and health or otherwise in pathological situations.

In light of the fact that all life processes are regulated by electromagnetic oscillations, responsible for biochemical processes, the disease can be interpreted as an incorrect frequency manifesting itself as bodily symptoms; on these disorders it is possible to intervene through a counter-regulation or an enhancement.

The therapy interacts with the responses provided by the patient's body, obtained through electrodes and processed, then stimulating the capacity for self-healing. This therapy tends to restore the correct and normal functionality of the body and its regulatory systems by intervening on the progressive reduction of pathological fluctuations until their elimination.

There are many other fields of application, such as metabolic and endocrine system pathologies, anxious / depressive syndromes, heavy metal intoxications, the treatment of inflammatory pathologies (Muresan, Salcudean, Sabau, Bodo, & Gabos Grecu, 2021).

- *the allergy therapy*: allergies are caused by one or more allergens, characterized by well-defined frequencies; they can be recognized electronically and neutralized through a reverse peak mechanism. The specular oscillations are transmitted to the patient and this reduces the pathological oscillations of the allergen, leading to the elimination of the allergy (Bulnes & Bulnes, 2020).

- *quantum therapies*: the map of organic alterations is identified through quantum devices using a functional criterion, i.e. an energy package aimed at a function of the healthy organism when it is correctly interconnected with the other functions of the same organism. When the functional unit is no longer integrally interconnected with the others, it is the signal of dysfunction, i.e. of the disease. The device records the frequencies of the altered cells, through comparison with the same healthy cells stored in the respective functional unit.

It starts with the emission of the vibrational information of the physiological frequency, directed to the altered cells; about the vibrational emission of the frequencies of active ingredients suitable for therapeutic purposes, they can be allopathic, homeopathic, phytotherapeutic or frequencies of acupuncture maps.

In the case of irreversibly degenerated cells, the body is informed in order to stimulate the natural killer cells to provide for the suppression of degenerated cells; at the same time, the regenerative mechanisms of new healthy cells are strengthened, exploiting the compensation effect of the eliminated cells (Hossu & Rupert, 2006; Goswami, 2004).

Matter, energy, information, consciousness

Matter, energy and information are linked together; the well-known Einstein equation $E = mc^2$ inseparably links matter to energy. Matter could be said to be frozen energy. Then we have the information that, from recent studies in the field of theoretical physics, could become the fifth form of matter, alongside the solid, liquid, gaseous and plasma states.

In 2019 a mass-energy-information equivalence principle has been proposed. Previously, connections between thermodynamics and information had been considered, postulating that the logical irreversibility of a computational process implied physical irreversibility; considering that irreversible processes are dissipative, so is also the logical irreversibility and, by extrapolation, the information is physical. Therefore, destroying information requires a dissipation of energy and, due to the law of energy conservation, an input of energy is required to create it (Vopson, 2019).

It has been hypothesized that a bit of digital information may have a finite and quantifiable mass. Once created and assuming that there are no external perturbations, it can remain in its state without any dissipation of energy; consequently, if the process is able to hold information indefinitely without dissipating energy, when the bit is created it acquires a finite mass.

It is the mass equivalent to the excess energy created in the process of lowering the entropy of information when the bit is deleted, considering the previously indicated Einstein equation. A bit could therefore be seen as *a particle of information*, without charge, without spin but with a rest mass about 10 million times smaller than the electron mass.

Information, energy and matter are therefore intrinsically linked to each other; our mind produces information that is set in motion by energy to act on matter. The levels of existence of reality, i.e. *matter*, *energy*, *information*, *consciousness*, can be summarized through a transdisciplinary scheme, which seeks to study man in a global way, considering the laws governing the universe.

These planes are superposed and connected; recent knowledge of modern and contemporary physics helps us to understand them in depth and on a rational level, in a perspective that overcomes the rigid division between present and past, technology and spirituality, concrete and abstract.

- The first level is made up of *matter*, it is the most immediate and evident one for our senses. It depends by the concepts of space and time, concerns physics and chemistry with its elements, the cells of living organisms, molecules, arriving to the particles considered elementary such as the electron and the photon. All these entities have been studied and well defined to date.

- The *energy* level is connected to the previous one by the famous Einstein equation; it depends by the concepts of space and time, and in recent centuries physics in particular has studied the fields involved at a theoretical and phenomenological level: mechanical energy, thermodynamics (heat, work), electromagnetism (electric currents, magnetic fields), optics (geometric and physical), cellular and molecular physical chemistry, coming to modern physics with elementary particles and their dual particle-wave nature.

- The *information* level has recently been heavily studied, being the one that is least known. Information seems to be the matrix that governs the universe, interconnected to matter with the respective energies (frequencies). At this level there is an interconnection in the universe that goes beyond the laws of space and time. A concept related to the world of information is that of hologram.

- The level of *consciousness* is the recapitulative one, that of interaction with the whole in its various forms, voluntary and involuntary (the conscious, unconscious reality, the collective unconscious, etc.) (Di Sia & Bhadra, 2020; Di Sia, 2018).

One of the most relevant problems of traditional medicine is that it works almost exclusively on the level of matter (with drugs that work only on biochemistry), totally neglecting or giving very little importance to what precedes, i.e. energy and information.

DNA as an antenna

Research in biophysics and molecular biology is increasingly demonstrating that DNA behaves like a biological antenna, capable of receiving and transmitting *electromagnetic signals* thanks to its helical structure that recalls that of a solenoid.

DNA has a double helix spatial structure with two strands oriented in opposite directions; this structural asymmetry fulfills the preconditions for its piezoelectric properties. During the torsion distension and contraction movements, they generate the resonant receiver-transmitter function to signals that respond to the epigenetic information.

DNA has also been assimilated to an electric capacitor with the armatures constituted by the chains of molecules with the helical structure, and the dielectric medium consisting of water containing atoms of various elements such as carbon, nitrogen, oxygen, sulfur, phosphorus.

DNA would therefore have the characteristics of an *oscillating circuit*, i.e. of an *antenna*, and as such it can receive and transmit electromagnetic waves and therefore information (Blank & Goodman, 2011).

Various scientists studied and tested the hypothesis that cells communicate with each other through electromagnetic signals, and not only through biochemistry. It seems proven that DNA acts as a transmitter and receiver, with a certain information density, and that cells communicate through electromagnetic fields, as well as chemically, in the range from infrared to ultraviolet.

Current experiments are showing that chemistry alone does not seem to be enough to fully describe the functioning of the human body, and in general of all living beings, and how it is essential to know and apply the principles of modern physics.

Holographic reality and fractals

Man identifies as distinct objects a correlated reality in a dynamic interconnected network of motions, actions, reactions, energies. In this context we find the concept of *holographic model*, one of the main scientific-philosophical bases of the new holistic science; starting from a physical-mathematical basis, this concept is extended to the entire reality of existence and to the dimensions of consciousness.

It is based on the idea of *global information* that links a part to the whole; the single part contains within it a complete representation of the whole from which it derives. It manifests itself through geometries of a *fractal nature*, in which a reality repeats itself in its form in the same way on different scales, it does not change appearance when viewed on different dimensional scales (Di Sia, 2020).

Also the human body seems to have a holographic-fractal structure, studied and used in various non-canonical medical disciplines, such as *auriculo-therapy*, where information on the state of the whole organism is obtained through the study of the ear, or *iridology*, which analyzes the overall state of the person through the analysis of the iris (Rabischong & Terral, 2014; Jensen, 2011). The cell itself, the basic unit of every living organism, through its DNA provides a unique and complete picture of the whole organism.

The holographic-fractal theory shows us a surprising truth that is not easy to understand and accept: at any point in the universe it seems possible to obtain information about the entire universe. The human brain would create the everyday concrete reality by interpreting frequencies from a primary reality in different dimensions than space-time, a hologram that interprets a holographic universe, with information that does not need to be transmitted, being potentially simultaneous and present everywhere (Bohm, 2002).

The interaction with reality at the primary level (i.e. from the other dimensions with respect to space-time) would explain phenomena such as precognition, psychokinesis, healing processes, the distortion of the sense of time, the experience of unity with the universe, the perception of emptiness as a fullness and of the real as a vacuum.

It has been scientifically proven that 99.9999999999996% of atoms are made up of empty space.

The holographic theory suggested some fundamental hypotheses about life and consciousness:

a) Every aspect of the universe would be in its essence not a material reality but a vibrational / energetic manifestation. The various aspects of the universe are expressed in the form of overlapping energy structures, but always containing the information that defines their identity.

b) Classical science proposed the existence of two general categories of matter, the living one and the non-living one. In this subdivision, living systems are understood as a fundamentally intelligent biological reality, while non-living systems would not have these characteristics. This subdivision does not hold up if all aspects of the universe are energetic expressions.

c) Each aspect of the universe seems to be part of a more complex system.

d) Each aspect of the universe expresses itself in a vibratory way and contains information about the whole and the sets in which it exists.

e) Within the holographic model, time does not exist as following moments in a linear way from now to after. It is our intellect that binds us to time, linking the concept of time to biological decay and death. Through separation from this temporal view, it is possible to consider multi-directional and flexible properties of time (Di Sia, 2021c; Di Sia, 2021d).

The primordial dynamic space

In consideration of the fact that matter is basically *empty space*, the study of the properties of the vacuum has ever attracted the attention of science, but also of philosophy, in particular Eastern philosophy, which has always attributed great importance to the vacuum.

There is unlimited high-frequency energy in the universe and our body has the ability to resonate with this energy; all this has not yet been fully and properly understood by modern science, but this does not mean that it does not exist. Several experiments are highlighting this type of phenomena, the influence of our thoughts, the connection of everything. The human being is not only a physical body, there is a spiritual part in us that plays a significant role, we have a potential that we do not yet know.

Among the attempts to explain the structure of the vacuum, recently the so called *primordial dynamic space* tries to define the structure and the global intrinsic properties of space. It is a space with a multi-dimensional hypercomplex / quaternionic structure, with toroidal, fractal, entanglement, synchronic and holonomic properties (Di Sia & Bhadra, 2021; Di Sia, 2021e; Di Sia, 2022).

Conclusion

The term quantum medicine indicates a new science of health, in which chemistry is increasingly giving way to quantum physics. Quantum medicine studies the energetic-electromagnetic aspect of physiology, to intervene at this level. Life is matter and energy, mutually linked and transformable; energy is vibration, frequency, so a living being is characterized by the ability to absorb and emit frequencies.

Chemical reactions take place in sequence, ordered according to space and time, in a very short time; having a short range, they require very close distance between the selected molecules. If we think about a physical agent capable of covering vast spatial regions, recognizing specific molecules to allow them to arrive in the right place at the right time for the chemical close encounter, the candidate for this role is the electromagnetic field, which can interact with the molecules using electromagnetic frequency codes and operates over great distances at the speed of light.

The cell's DNA can be assimilated to an electric capacitor whose armatures are made up of chains of molecules arranged parallel to each other with a helical structure and the dielectric medium is made up of water containing atoms of various elements (carbon, nitrogen, oxygen, sulfur, phosphorus). The helical DNA chain can also be compared to a solenoid.

For the purposes of a quantum healing, the vibrational range of thoughts is emphasized, in the sense of the continuous interaction existing between thought and vibration. Studies and experiments are scientifically demonstrating how much matter and thoughts are quantistically interconnected and how much the vibrational weight of each determines a flow or stagnation that constrains their phenomenal trend.

Quantum medicine seems to offer important and promising developments in terms of diagnosis and therapy, being tuned to the model of physics which states that the realm is information, matter and energy at the same time; the entire universe is interconnected by a texture that is based on the vibrational level. The state of well-being depends on the tuning between psyche, mind, emotions and body, and otherwise psycho-physical disharmonies are generated.

The development in the study of the properties of the vacuum will undoubtedly give a great impetus to the understanding of reality as a whole. A fascinating example is the primordial dynamic space.

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Relationship between Makeup and Film Industry through Desired Attraction and Attraction to Manipulate General Perception in Character Design: South Korea Digital Media Series

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Abstract
The place of make-up in the characters designed to increase the audience rate and create addiction in the audience; from framing in the film industry; The subject of this research is the possible demands from the make-up industry, along with the existing methods to obtain the desired images, which are thought to affect the general majority, and how these demands can or do lead the industry. Since it is the South Korean Digital Media Drama Industry in question.

The. article is also related to South Korean makeup industry brands and brand approaches. Traditional make-up trends, (racial characteristics), skin features, whiteness, eyelashes, and the effect it creates, hair and body make-up will be included in the content of the article as an influencing factor. Keywords: Character Creation, Hair and Body Design, Yellow Skin, Digital Media Series, Eyelashes
Keywords: Character Creation, Face Design, Yellow Skin, Make Up, Digital Media Series, Eyelashes.

Introduction
His ability to act and manipulate is undoubtedly indisputable. When we look at society, we can see that those who have acting talent shine in life, even in their own lives, because the society and the systems of societies we live in feed such personalities. The reasons for this lie in teaching that has not been transformed into education. It is a system created by the capital cycle that has become entrenched with capitalism, and it is patiently awaited in which century to change. Actors can be much more effective over ordinary people than people in normal life, when the intelligence, abilities and talents related to acting they are born with and the technical acting education they receive are combined. Because it is an undeniable fact that they are much more skilled at wearing and conveying One of the characteristics of the capitalist system is that everything is for sale. Everything is permissible on the way to capital. Any scientific inference to prey on the consumer is capitalism's playground. One of these areas is the personal care and make-up sector, which is growing more and more in parallel with the rapidly growing digital series and cinema platforms. In South Korean TV series, we see that men are becoming more and more courageous about makeup. As can be seen in the following pages of the article, the actor also talks about his make-up as a person in daily life in the content of both the series and/or the movie. Men's wearing of lipstick is both seen and shown. Powder vs. it's already taken for granted. The historical and cultural codes of male makeup already exist on a planetary scale.

Figure 1: Louis XIV of France
https://www.google.com.tr

In 17th century France, we see how male and female body and face care, attitude was alike. One of the best periods was Louis XIV of France, but Far East Asia, East etc…We see that men's make-up takes place in 'Zenne' plays in ancient societies, so that the audience in the back can see it in ancient theaters, in short, both in daily life and in cultural and artistic activities. It can also be thought of as if we are going back to those times when the gender distinction disappeared. In the field of makeup, the gender discrimination that has existed since the enlightenment , in general,
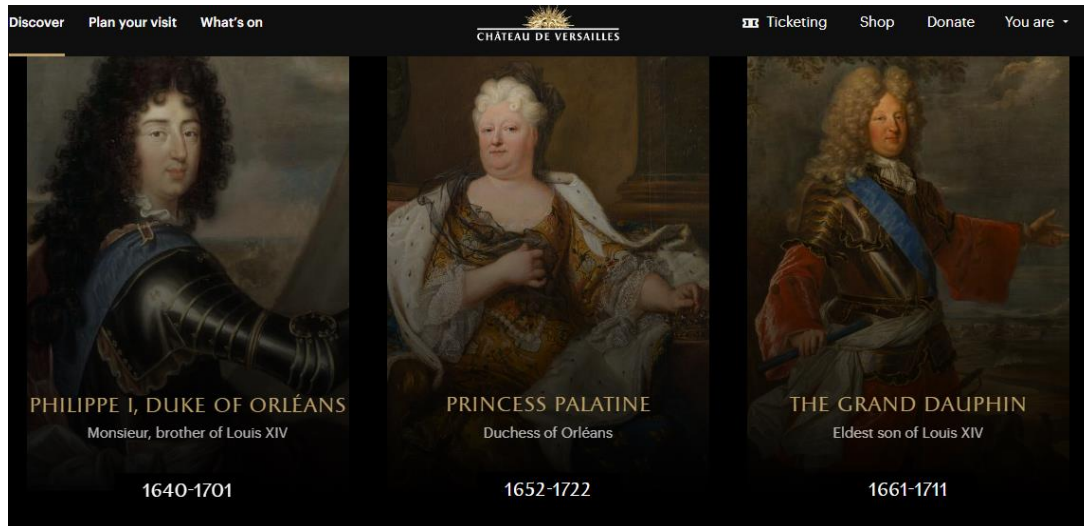
Figure 2: Philippe I: Duke of Orleans, Princess Palatine: Duchess of Orleans, The Grand Dauphin: Eldess Son of Louis XIV
https://en.chateauversailles.fr/discover/history/great-characters?field_personnage_periode_tid_i18n=539&field_personnage_typologie_tid_i18n=53**4**

shows signs of disappearing in a way. There are also TV series and/or movies that seem to be common in the bleaching of the yellowish body color in men or women. The memory of the cultural code may lie behind the still appeal of white. Geisha's faces in Far East Asia, and the faces of men on the stage become white. Especially in 17th Louise France, the faces covered in white; It may be that it is in the genetic code that tan and sunburn are viewed by royalty as a trait of peasantry and nonblue blood.

Mirror mirror tell me; Is there anyone more beautiful than me in this world?
…… .... myself … …. ……?
…… .... I ….. …. ……?

Examples from South Korean TV Series: It is an undeniable fact that the best mascara and eyelash care products are likely to come from this region, thanks to the traditional care, the unique relationship they have established with plants and the methods of doing justice to their work, as there is a society that has few eyelashes due to its racial characteristics. They use these features very well for product sales in their digital series and movies. One of those content : "Wait, do you have eyelashes?", the way to have the enviable eyelashes is shown strong hair, eyelashes, bright and white skin, fruity-honey lips and beyond that offered by South Korean makeup brands. Brand product advertisements introduce and remind the newly released ones very well in their digital series and cinemas embedded in daily life. Below are some examples.

Figure 3
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-4-bolum/

Scenes from Hometown: She takes her newly awakened friend to the bathroom to get ready.
If you have genetically weak eyelashes and droopy eyelids, the most common reasoning is to eliminate these weak points based on the general perception of beauty; It can create a general perception even without being translated into advertisement language. For example, the glorification of make-up from everyday life; An example that the audience can easily internalize.

In fact, we see that the only determining factor of the actor's lack of care, which is declared to be uncared for, is his hair. As we enter the bathroom, it is noticed that the actor in the role of the newcomer actually has makeup on his face. Souls who need a sudden glare and the makeup industry that offers and sells shine. I guess this has to do with global data mining. It may be due to the current of knowledge based on the aging of Western people by appearing drier and duller. They no longer neglect to polish even those who wake up from sleep. Brightness means youth. Of course, the shine on the player's cheeks is not the only one. The dye and symmetry in the eyebrows are also not overlooked. Kas has become a sector in its own right and the place of information flowing from data mining offers an undeniable reality.

Figure 4
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-4-bolum/

After make up, pure self confidence.

Figure 5
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-4-bolum/

Figure 6
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-4-bolum/

However, a careful viewer will not miss the fact that the woman entering the bathroom is also wearing make-up. She might just think that the accent of her lipstick has changed. Even if soap opera serials are for popular enjoyment, these scenes should be considered an understatement. The greater the required difference between the woman entering the bathroom and the woman leaving, provided it is not exaggerated, the higher the make-up will be.

Very attractive, isn't it?
Maybe it's just the color you're looking for.

Figure 7
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-3-bolum

Figure 8
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-3-bolum

The potential customer can learn the techniques of using the product while watching the series.

«Look at that color!»

Şu renge bak.

Figure 9
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-3-bolum/

Figure 10
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-3-bolum/

Perception management and perception creation can be given as an example: Manipulation of the audience.

Conclusion, foresight and Recommendations
The contribution of this industry to the destruction of the planet is the subject of another article, but it covers how far the industry can go for players and spectators. This means: 1. The continuation of the sales techniques embedded in TV series and cinema products and adding new ones to the existing ones so that the make-up industry continues, including personal care for the audience. 2. In terms of players:
   a. These products are ultimately costly in terms of time and money. Recently, products with blue light and protection against its harms and much more for end users can turn into products developed for the variety of damages emitted by the technical tools used. Make-up products in daily life may not be used at all. As a result, the TV series and cinema industry can be within the scope of the capitalism system and the actors can be slaves. The use of healthy products may only be in question even for players with a bright future, making a lot of money
   b. In such a case, some and/or players whose skins are protected against technical aging can be presented with the products they want to sell as if they are make-up. In other words, what appears on the set and what the audience sees can be very different. c. Actors and actors with yellow skin or yellow skin need not be covered in white, like ancient actors, some European royalty in the period leading up to the Age of Enlightenment.

Whether female or male make-up, it should be applied on the real skin color, in accordance with it, so that it does not create an adverse reaction in the audience. d. Depending on the subject, in the recent series, the lip and face make-ups of men are clearly visible if they are upper class and/or white collar. This means that men's make-up will become more common day by day and will be taken for granted. Based on this situation, it can be predicted that the make-up artist and make-up artist industry will develop a lot.

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School Managers/Administrator's Insights Regarding Beginning Female Teachers Induction in Cameroon

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ABSTRACT
The issue of new female teachers remaining in the teaching profession has always been an issue. The induction of these new female teachers by the school administrators in lay private secondary schools in the Republic of Cameroon has also been neglected as well. The study's goal is to investigate how female novice teachers at four lay private secondary schools in Yaounde, Cameroon, were inducted by the administrators of those schools to pursue a career as experienced educators. The difficulties faced by female beginning teachers at these selected schools were examined in this study, as well as the kinds of induction programs that helped them. Pedagogical Leadership serves as the study's theoretical framework, keeping in mind the social learning idea of communities of practice (Wenger, 1998). A qualitative method of research was used with the phenomenal design. Data was collected using open semi-structural interview questions on Google Forms. Eight new female teachers from selected from four lay private schools who volunteered to take part in this research were the respondents. The data collected were analyzed using the inductive analysis approach. According to the findings, the induction procedures employed in these four lay private secondary schools were incredibly poor in helping the female new teachers deal with the issues that were discovered. As a result of this, the researchers advise against viewing the induction of teachers as a one-time activity or practice and they recommend the school admit actors to consider these activities for at least 3 years for the newly recruited teachers to be grounded.
Keywords: new female teacher; school administrator, pedagogical leadership, community practice, and induction program.

Introduction
Few schools in the Republic of Cameroon provide extensive, system-wide introduction aid to female instructors who suffered on their own after joining the profession, despite widespread acknowledgment of the value of induction initiatives. Such institutions frequently include lay private schools. The term "induction" is used here to refer to the socialization process that new teachers go through as they concurrently learn and teach to instruct (Jensen et al., 2012), honing their teaching techniques while working under the supervision of more seasoned instructors and supervisors (Cherian & Daniel, 2008). Beginner educators are people who are either enrolled in programs for beginning instructor preparation or are within their first 3 years of employment as certified educators (Hobson, et. al., 2009).

The training of new teachers in schools is essential, especially given the numerous issues they deal with on a daily basis. Steyn and Van Niekerk (2012) list a number of potential issues for beginning teachers, including lack of experience, reality shock, knowledge gaps, issues with lesson planning, isolation from other adults, work overload, resource shortages, and ambiguous and unclear stakeholder aspirations. As a result, there is a consensus that instructors need support mechanisms (Marcelo, 2009); and induction is viewed as particularly important to help new instructors in their transition into full responsibilities before they acquire all the duties and liabilities of full pro instructors (Schleicher, 2012).

Understanding the issues new teachers face and meeting their needs could assist to reduce dropout rates and assure high-quality instruction in a setting that is changing quickly (Steyn, 2004). One strategy to address the requirements of women novice instructors is via initiation (Dube, 2008). A general definition of induction is professional

development and education intended specifically for first- and second-year instructors (Olebe, 2005). Women beginning instructors need induction because they immediately take on entire, full-time obligations that are comparable to those of their more established coworkers (Magudu, 2014). Due to these obligations, beginning female teachers frequently have to learn their craft by making mistakes (Steyn & Schulze, 2005). However, it appears that despite the need for assistance being acknowledged, official procedures for the induction of new educators are not being widely applied (Veenman, 1984). Although it is known that beginning instructors have many difficulties and need help, Steyn and Schulze (2005) contend that the world has not given beginning instructors' induction the importance it merits.

Since they can help or hinder new instructors who are eligible for professional careers, administrators' job should focus on meeting the needs and providing guidance for new instructors (Rippon & Martin, 2006). Administrators impact the type of professionals' new instructors will become by providing support structures, which not only accelerate their professional but also personal development (Bubb, et. al., 2005). And given that professors are regarded as the most effective predictor of learners' performance, this is at the core of academic work (Barber & Mourshed, 2007).

From all of the above, three main premises were drawn: first, any endeavors to raise learner achievement should concentrate predominantly on instructors; second, management is essential to raising learner achievement indirectly (Leithwood et al., 2004), guess it depends on organizational choices and the capacity to lead others to similar objectives; and third, school heads have a crucial role with regard to new instructors, by boosting their autonomy and skill development by means of effective management techniques.

The Problem of the Statement

If assistance for overcoming obstacles faced by beginning instructors is not provided, this could result in morale issues and early career adjustments on the side of the beginning instructors (Cobbold, 2007). Beginner instructors who have no alternative job options must frequently create coping mechanisms to handle the difficulties they face (Flores & Ferreira, 2009). However, approaching issues in this approach may not be the best course of action and may really make things worse for new instructors (McCaan & Johannessen, 2004). Studies show that many trained teachers leave the field early in their occupations (Ingersoll & Strong, 2011). It is generally known that a significant portion of new teachers quit their jobs during the first 5 years of their careers as they struggle with and ultimately give in to the pressures brought on by stressful situations (Ingersoll & Strong, 2011). Little or no work has been done on this concept as to how new teachers and female teachers in particular are been induced into teaching by the school managers. The literature review conducted in America indicates that the biggest production of scientific publications was created (64 out of 113 publications) with regard to the induction of freshly trained instructors (Kutsyuruba,et. al., 2016). There is a discrepancy between the number of papers produced in Cameroon and Africa as a whole in relation to this topic, as shown by this representation of academic evidence.

Thus the worries of the researchers are the challenges faced by new female teachers in the republic of Cameroon and how the school manager inducted these teachers into their duties; as to reduce the chances of them quitting their job.

Research Questions

What requirements do school managers deem crucial in order to react to the induction of new female instructors in Lay Private Schools in the Republic of Cameroon?

Aim

The study's goal is to investigate how female novice teachers at four lay private secondary schools in Yaounde, Cameroon, were inducted by the administrators of those schools to pursue a career as experienced educators.

Theoretical Framework

Pedagogical Leadership serves as the study's theoretical framework, keeping in mind the social learning idea of communities of practice (Wenger, 1998). Pedagogical leadership is the direction and advising of educational advancement (Elmore, 2000). School heads must engage in a variety of activities, such as implementing the change and seeking out educator collaboration, to have an impact on instructors' behaviors inside the lesson (Hopkins, 2003). Learning-centered leadership, which is another name for pedagogical leadership, should be used so that school administrators can best carry out this type of leadership (Southword, 2005). This results in communities of practice, which are part of Wenger's 1998 social learning theory.

Communities of practice are described by Wenger (1998) as a collection of individuals who collaborate on a common endeavor and who use similar routines, gestures, resources, and stories to engage in their work.

Communities of practice exist in schools at all levels, from beginning instructors to administrators (Bouchamma & Michaud, 2011). In casual settings where participants mingled with each other (experienced teachers), shared personal anecdotes, and had open discussions with supervisors, learning took place frequently during apprenticeship schemes (Nielsen, et al., 2009).

Communities of practice have mostly been used in schools for staff development, especially teacher instruction (Bouchamma & Michaud, 2011). Communities of practice as a social theory of learning must incorporate the elements required to define social involvement as a method of knowing and learning (Wenger, 1998). Meaning, community, identity, and practice, are some of these elements. Communities of practice refer to the process of learning through practical application (Bouchamma & Michaud, 2011). Therefore, involvement is necessary for any significance to be achieved in a society (Magudu, 2014). Hence, by actively participating in events and constantly communicating with their more experienced colleagues, female beginning instructors in a school can make sense of what takes place in their classes.

Research Methodology
The qualitative method of research was applied in this study. A phenomenological case study design was utilized in the qualitative method. This made it possible for the researchers to look into the difficulties new female teachers faced during their admission into Lay Private Schools in the Republic of Cameroon. An approach to qualitative research known as phenomenology focuses on the similarities of living experiences among a given group. Obtaining a description of the origin of the specific phenomenon is the approach's primary objective (Creswell, 2013).

Data Collection Tool
Semi-structured interviews were conducted using a Google form as a data gathering tool. The participants' perspectives on the introduction of female novice teachers were thoroughly explored by the researchers through interviews.

Participants
The Sample Sampling process chose eight participants from among the four randomly chosen Lay private secondary schools in Yaounde, the administrative capital of Cameroon. From each school that agreed to voluntarily take part in the study, two were selected. These participants were recently hired teachers who had only been employed for the 2019–2020 school year.

Data Analysis
Utilizing inductive data analysis, the obtained data were examined. Through specific data as the beginning point, categories, and themes as the end result, qualitative researchers examine and create meaning out of the information using inductive analysis (McMillan & Schumacher, 2010). This study's inductive methodology included six steps. The process began with the researchers organizing the data they had gathered. The second phase essentially consisted of reading the data numerous times. The purpose of doing this was to help the researchers comprehend the broader implications of the participants' responses. The third phase involves doing a thorough analysis. The data was now organized into categories by the researchers. Themes development was the focus of step four. These categories led to the themes. The main conclusions of the study were based on these issues. The choice of how to display the themes to match the findings or study results came first in step 5 once the themes emerged. The researchers decided to convey their findings in a narrative fashion. The researchers were involved in the data analysis and interpretation in step 6's final step. In order to distill the core of the participant responses, the researchers analyzed the data in light of the themes, based on evaluating the theoretical framework and the researchers' comprehension of the research phenomenon. All of the processes took into account recurring themes from participant interview replies as well as prevalent problems in terms of wording.

Research Results and Discussion
The results are divided into two primary subheadings, namely, the difficulties faced by female beginning teachers at various lay private secondary schools and their induction by the school management.

Issues Female New Instructors Face
According to the study, issues faced by female beginning instructors at the sampled schools included student misbehavior, overcrowding, insufficient resources, vulnerable students, and unsupportive parents.

Overcrowding and Students Behaviour
The sample's female new instructors identified overcrowding as one of the main issues they faced at these institutions. A novice said the following;

"*The main issue at my school, in my opinion, is overcrowding in the classrooms. The Secretary of Education is probably aware that the high student enrollment in some lay private schools poses the biggest issue. For instance, I currently have 62 students in form 1. You assign 62 students homework; how will you grade them all? Additionally, it's a nightmare to manage a crowded lesson. For instance, you cannot manage or control a class of more than 30 students. Any teacher would be overwhelmed by that.*". T5

The bulk of the students in these classrooms were teenagers in addition to the fact that they were crammed with some bigger ones. Teaching teenagers, in the eyes of inexperienced teachers, made discipline issues in the classroom worse. One instructor said as follows:

"*They emit a great deal of noise, are energetic, and possess a large amount of energy. Adolescent students can be quite challenging to manage in the classroom. They're hardy. Sometimes it doesn't matter what penalty you offer them. There are few occasions you simply give up because you are exhausted. You just let them get away with it because correcting them every day does not have the desired effects.*" (T1).

Unquestionably, new teachers found it challenging to manage the students while they were teaching huge courses. Let's hire another female educator (T6)

"*There is no order in the classroom, which is the simplest way, to sum up, the instruction. Students could leave and enter the classroom whenever they wanted.*" T6

Inadequate resources

Beginner instructors were impacted by the issue of insufficient resources at the four lay private secondary schools during the collection of data. Some of the participants stated that this was because their classrooms lacked the necessary supplies.

"*Since I must employ other methods to teach, a shortage of resources makes me insane. Additionally, I must move material from one location to the next. As a result, goods are misplaced and break while being transported. I have a skull structure in the office, and I have to bring it with me whenever I go to Form 5. I have to return it to the office after the lesson is over because another might want it. It's odd that the school has only one skull structure for all the classes. Therefore, the other instructor will have to wait until I'm done teaching before using it. I've found that there aren't many resources for lower forms.*" T1

Vulnerable Learners and Unsupportive Parents

Participants also had to contend with non - supportive guardians and vulnerable students in addition to handling crowded lessons and managing unruly students. It seemed as though the parents were unconcerned with their kids' school performance. The parents not only refused to attend talks, but it was also incredibly challenging to contact them when necessary.

"*When a pupil has an issue, we frequently have trouble reaching the parent. If you ask a pupil to deliver a letter to their parents, they won't even care to come and find out what the issue is.*" T2.

Such requests to the parents make it abundantly evident that the instructors understood they could not resolve the issues of the students on their lonesome and that they were required to collaborate closely with the relatives if they would be successful.

Female beginning instructors had to struggle with caring for vulnerable students in addition to the absence of parental support. It was inevitable that the Four schools sampled would have to manage vulnerable students given the high rates of violence and hardship in the neighborhoods.

"*There are students at township institutions who don't have the best living circumstances. They are from low-income families. Some are subjected to abuse both sexually and physically by those who have to look after them. Others of them must take care of their children or relatives. Therefore, despite the fact that she is in the classroom, she is not paying attention to you since she is worried about the child's upcoming meal or outfit.*" T4

Dealing with students that are vulnerable is extremely tough for new instructors. Respondents in the study whose results are presented in this paper experienced emotional distress due to the openness of some of the students they were teaching. The new female instructor, who was visibly moved by the sensitivity of the students, described her feelings as follows:

"I have strong emotions. Therefore, it crushes my heart to witness a child struggling, acting like they are without food or clothing, etc. I consider potential domestic violence, whether it be violent, sexual, or otherwise. Like when they reveal certain details, you simply want to sob and wail. Seeing these children suffer while being aware that you are unable to stop it is difficult." T7

Beginning Instructor Induction
From the data gathered, it is evident that the Four Lay private secondary schools had some sort of induction process. However, it seemed as though this induction was handled a little carelessly. Coaching, orientation training, and peer assistance are all included in the induction activities at the tested schools.

Mentoring
Very few of the participants' comments provided any indication that they were being mentored. The following is how brand-new female instructors characterized their mentoring:

"I recall having some knowledge of the curriculum evaluations, the syllabus, and other topics when I first started at the school. However, I wanted someone to act as a mentor for me with regard to some of the items. Regrettably, mentorship was done carelessly for me. My department boss didn't give a damn about me. She was preoccupied with her tasks when it came time to assist me. I am able to say is that the first several hours after my arrival are when any mentoring took place, assuming any occurred." T3

"The Heads of departments visit our lessons as part of mentorship to see how we instruct the students. They must come, and I believe they must watch us. They provide you with recommendations and an analysis. You must design developing strategies based on their feedback in order to advance and correct some of the deviations they identified." T2

The researchers understood that this was not mentoring because every instructor, whether new or experienced, must go through a staff performance evaluation.

Orientation Workshop
The interview responses made it very evident that the introductory session was crucial in assisting the new instructors at the schools. Prior to they began teaching, each participant attended an instruction. The following exact quote supports this claim:

"I went to the headmaster's office on my initial day of school and was given instructions. Throughout orientation, I received teaching aids, toured the classrooms, and met the faculty members and students. Following my introduction to the students, I began instructing. I couldn't get assistance from my teachers with new concepts in the classroom. I must admit that orientation took place rather swiftly and without a clear direction. I was left on my own in the classroom following presenting myself to the students. Being unfamiliar with the field, I had no idea what to do. What's worse is that I was unable to teach that day since I was still seeking a place to stay." T8.

"The welcome was cordial. I was introduced to the personnel by the principal. I was brought before the HoD, who would help me with all I required. Then I was introduced to my class and started teaching. This entire process takes a half day. I struggled to teach on the first day since I wasn't ready. I have to admit that being left in the classroom by myself without any help was stressful for me. In order to teach me things, I expected a mentor alongside me for at most a week, however that wasn't the case. I had to therefore figure everything out by myself." T2

Peer Support
Female novice instructors who were sampled during interviews acknowledged the help they received from novice teachers at the four institutions.
"As brand-new instructors, we support one another. Thus, you can verify for sure that this institution has a lot of new instructors. We, therefore, support one another, particularly whenever we are grading." T3.

Some of the new instructors received support through their involvement in extracurricular events in addition to discussing concerns in the classroom. Participating in extracurricular athletics, music, or even any social event enabled beginning instructors to leave the classroom and enter fresh environments where they could recharge.

Conclusions and Recommendations
Given the respondents' experiences at the four lay private secondary schools in Cameroon, new female teachers encountered a number of difficulties at secondary schools. Insufficient resources, student disobedience, overcrowding, and coping with vulnerable students and unsupportive parents were some of these difficulties.

Despite the numerous difficulties, this study unequivocally demonstrated that the induction initiatives, which at the four secondary schools under study consisted of peer support, orientation workshops, and mentorship, were utterly worthless at helping women new teachers.

In those other terms, these programs fell short of expectations because they were mishandled during implementation. These schools' subpar induction strategy implementation raises questions about leadership inside the organization, notably among the administrators. Future studies should therefore examine the leadership impact(s) of administrators in the induction of female teachers given the prevalence of female teachers in classrooms.

Armed with their research results, the researchers contend that if the same induction difficulties and feelings that respondents in the four sampled schools experience persist, there will be a problem with teachers' dropout at these schools and any other lay private secondary school, irrespective of where it is located. Induction programs require the involvement and commitment of school leaders. In doing so, they will be able to guide and oversee the induction process and inspire beginning instructors to cultivate a strong passion for teaching, stay put and advance rather than leave for other careers, as some of the volunteers herein consider.

Additionally, studies that support school administrators as the second most significant element in students' learning have been supported by literature (Avalos, 2016), which also demonstrates the significance of the induction phase for new teachers (Leithwood et. al., 2004). As a result of this and the research's findings, the researchers advise against viewing the induction of teachers as a one-time activity or practice, as the person involved narratives in this article suggest because doing so will result in them falling short of induction aspirations, as was the case with the selected school in this study.

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Suggestions for Interdisciplinary Teaching in Mathematics Education: The Case of the History of the Concept of Group

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ABSTRACT
The role of the history of mathematics in mathematics education, as a support in teaching, is widely acknowledged. It can serve to arouse students' interest in mathematics as well as to stimulate reflection on mathematical concepts and methods. This work focuses on the group as "cross-concept", in relation to its history from its origins in algebra to its applications in other areas. Given its very nature, the group should be adequately re-evaluated in an interdisciplinary approach, which may prove particularly captivating in linking the history of mathematics to the history of the psychology of perception. This historical interdisciplinary perspective may be useful in the context of university mathematics teaching, particularly teacher training.
Keywords: education, mathematics education, history of mathematics, history of psychology of perception, group, teacher training

[Hereinafter, the translations from the original texts are made by the authors of this paper.]

1. INTRODUCTION
Promoting historical reflection in mathematics, apart from being remarkable in its own right, takes on particular significance when one considers its possible effects on the improvement of present-day mathematics education, particularly in the field of mathematics teacher education and training. Regarding the interaction of the domains of mathematics education and the history of mathematics in the process of mathematics teaching, see, e.g., Furinghetti & Radford (2008), Fenaroli, Furinghetti & Somaglia (2014), Furinghetti (2020).

In this paper, we focus on the concept of group as a "cross-concept" (Zudini, Antonelli & Stucchi, 2011), proposing an analysis in reference to its history from its origins in algebra to its applications in other areas, especially the psychology of perception. This is done by linking the history of mathematics and the history of the psychology of perception, following a boundary-crossing approach, which makes it possible to see mathematics from a "new" point of view and in a "new" working environment: a "new" perspective, different from traditional approaches, which is particularly captivating and engaging, insofar as it concerns our human nature as perceiving beings.

The present work seeks to combine, on the one hand, the use in teaching of history as a motivating factor for learning, arousing the students' interest in mathematics as well as stimulating the reflection on mathematical concepts and methods; on the other hand, the interdisciplinary approach, in particular, the connection between the history of mathematics and the history of the psychology of perception, which is a particularly suitable example to show that mathematics is indeed useful. In other words, reasoning in mathematical terms even in areas other than mathematics is not wrong; on the contrary, it is potentially fruitful for understanding ourselves and our ability to perceive the world around us. The whole thing could be, for a (future) teacher who wants to teach mathematics and science in the secondary school, a link to a classroom discussion of the sense organs.

We have chosen, specifically, to expound the topic in a simple and perceptively effective manner, according to presentations already made by the authors of the paper recently, on various occasions (a talk addressed to an audience of historians of mathematics, in one case, and a seminar for a group of school mathematics teachers, in the other). This is to "see", with examples, objects and phenomena of perceptual experience.

The treatment proposed here is in line with the work of one of the authors, in which mathematics approaches psychology and cognitive science, in terms of a historical-epistemological study, with spin-offs at the level of university mathematics teaching, particularly teacher training (see, e.g., Zudini, 2014a, 2014b, 2018; Zudini & Zuccheri, 2016; Caprin & Zudini, 2015; Morganti & Zudini, 2021).

2. THE HISTORY OF A "CROSS-CONCEPT"

Group theory is one of the branches of mathematics that has proved to be one of the richest in developments throughout history, from its origins in relation to the problem of finding formulas for solutions of algebraic equations, to its first models ("groups of permutations"), to its extension in view of the classification of various geometries - which became necessary after the advent of non-Euclidean geometries -, to its various applications in the most diverse areas. The group, as a "cross-concept" (Zudini, Antonelli & Stucchi, 2011), has, in fact, found application in the most varied disciplines, from physics to the natural sciences, from the visual arts to music.

The concept of the group was introduced by the French mathematician Évariste Galois (1811-1832), in connection with the problem of finding formulas for solutions of algebraic equations (see Toti Rigatelli, 1989). Galois had the idea of associating each equation with a group, the group of permutations of its roots, and of linking the solvability of the equation by radicals to the nature of this group, obtaining the result that an algebraic equation, with real or complex coefficients, of any degree n, is solvable by radicals when and only when the group associated with it (which will later be called the "Galois group") enjoys the property of being, as we say today, "solvable".

The theory, developed by Galois at a young age, between eighteen and twenty, and known today as "Galois theory", led to a genuine revolution in mathematics and was fundamental to the birth of a "new algebra".

The concept of group was later studied by the Norwegian Sophus Lie (1842-1899) (also in collaboration with the German Felix Klein). Lie indicated a new direction in the study of group theory, aiming to do for differential equations what Galois had done for algebraic ones; he thus came to conceive, in the context of multidimensional geometry, the so-called "finite continuous groups" ("Lie groups"). The "Lie theory" would, in turn, find important applications during the 20th century, particularly in quantum physics.

Felix Klein (1849-1925) put the concept of group at the base of the unifying vision (and systematic organisation) proposed for geometry in the "Erlanger Programm" (1872) (see Rowe, 1985; see also Hawkins, 1984, Ihmig, 1999, and, for further references on Klein's figure and work, Zudini, Antonelli & Stucchi, 2011).

Klein used this to show that every geometry can be characterised by a group of transformations and that the true object of geometry are the invariant properties with respect to this group of transformations (and thus no longer the geometric space derived from the observation of reality). Every geometry is nothing other than the study of the invariant properties with respect to a group of transformations from the space to itself.

If we consider the following groups of transformations in the plane (not all examined by Klein):

G_m (group of rigid motions or congruences)
G_s (group of similarities)
G_a (group of affinities)
G_p (group of projectivities)
G_t (group of topological transformations),

the following chain of inclusions holds:

$$G_m \subset G_s \subset G_a \subset G_p \subset G_t$$

The necessity of the group structure arises from the need to define, from time to time, an equivalence relation between the figures in the geometry considered.
In general, the following criterion of equivalence applies:

Given a group of transformations, G, two figures A and B are G-equivalent when there exists a transformation f belonging to G such that f(A) = B.

In G-geometry, only concepts that are invariant due to transformations of G are admissible. If, for example, we compare Euclidean geometry and affine geometry, we see that the group of rigid motions or congruences is contained in the group of affinities; therefore, everything that is invariant in the latter group of transformations is also invariant in the former.

On the basis of the concept of the group of transformations, we thus move in Klein's system from an ontological problem of truth to a consideration of (ideal) spaces according to their reciprocal relations.

This problem is clearly detached from the question of the true empirical space, which must therefore be decided on in accordance with other criteria, and not on the basis of an intrinsic consistency of geometry.

The criterion underlying ideal geometry is of logical origin, different from that of true physical space.

3. THE MATHEMATICAL GROUP THEORY

The study of groups falls within the mathematical field of algebra, which deals with so-called "algebraic systems" or "algebraic structures", understood, in general, as sets of objects that combine by means of operations.

The group, as a structure, is a fundamental constituent part of the discipline now called "abstract algebra", which also includes other structures such as rings, fields, etc.

In every algebraic treatise, one traditionally starts with groups for natural and profound reasons: firstly, groups, being structures with only one operation (or law of composition), can be described formally in a very simple way; on the other hand, despite this simplicity of description, they are characterised by the same fundamental algebraic concepts, such as homomorphism, quotient, etc., that one encounters in all algebraic structures and in all mathematics and that appear in group theory in an already clear and defined form.

The algebraic systems considered worthy of analysis are those which had been treated in numerous particular cases, until it was seen what the general phenomenon that included them was: as far as groups were concerned, between the end of the 19th and the beginning of the 20th century they were known through particular examples, and only later, during the 20th century, the notion of "abstract group" was given.

In mathematics, a non-empty set of elements G is called a "group" if an operation (or law of composition) is defined in G, whereby the composition of two elements of G is also an element of G (*closure property*), the operation is associative (*associative property*), there exists in G (and is unique) the identity or neutral element (*existence - and uniqueness - of the identity or neutral element in G*), and for each element of G there exists in G (and is unique) the inverse element (*existence - and uniqueness - of the inverse element in G*). A "subgroup" of a group G is a non-empty subset of G, for example H, which is itself a group with respect to the same operation as G. For a more detailed discussion of the mathematical theory of groups, see, for example, Herstein (1975).

4. GROUP THEORY AND THE PSYCHOLOGY OF PERCEPTION

The concept of group has found application in the most diverse disciplines: from physics to the natural sciences, from the visual arts to music.

In particular, psychology has used it to represent its objects and the structures that bind them. The areas of use have been and are diverse (see Zudini, Antonelli & Stucchi, 2011): in social psychology, the concept of subgroup (derived from that of group) has been used in the representation of "social networks", as part of the so-called "relational algebra" or "algebra of social networks" (see Pattison, 1993; Wassermann & Faust, 1994); in the theory of cognitive development developed by Jean Piaget (1896-1980), with outcomes also in the "modern mathematics" movement (see, e.g., Bolondi, 2007), reference is made, in relation to the domain of "propositional operations", to the concept of the "INRC group" (acronym obtained from the words "identity", "negation", "reciprocity", "correlativity"), understood as a system of possible forms of thought mobility of which a subject proves to be capable in performing a task (see Piaget, 1972; see also Ascher, 1984); in the psychology of perception, group theory is used to deal with invariants (e.g., perceptual constants).

In general, one speaks of a "transformational approach to vision" for all areas of the psychology of perception where the algebraic concept of the group of transformations is used, for problems that may specifically concern both the descriptive psychology of perception (understood as the study of the results of perceptual activity) and the genetic one (i.e., the study of the processes of formation of the results of perceptual activity).

5. PERCEPTUAL CONSTANTS

Perceptual constants (of shape, size, and colour) can be interpreted as an invariance with respect to the group of transformations that leave metric properties invariant, i.e., rigid motions in Euclidean three-dimensional space.

Cesare L. Musatti (1897-1989), a psychologist and psychoanalyst who played an important role in Italian science and culture of the last century, speaks in these terms (see Musatti, 1957, 1958a, 1958b).

It is important to remember, in this context, that Musatti knew mathematics well. Here are some biographical notes of interest for our discussion (see Adamo & Zudini, 2006a).

After an initial period of education at home, under the guidance of his mother, Musatti enrolled at the Liceo Classico Foscarini in Venice and began to take an interest in mathematics and philosophy.

After graduating from high school in 1915, he chose to study mathematics at the Faculty of Science at the University of Padua, where prominent figures, such as Gregorio Ricci Curbastro, Francesco Severi, and Tullio Levi-Civita were teaching at the time.

"Dissatisfied with the dogmatic way in which mathematical disciplines are taught" (Reichmann, 1996-1999, p. 39), Musatti soon decided to move to the Faculty of Humanities, a "livelier" (Reichmann, 1996-1999, p. 41) environment than Science. Decisive in this sense was his meeting with Antonio Aliotta (1881-1964), a pupil of Francesco De Sarlo (1864-1937) in Florence and then professor of theoretical philosophy in Padua, whose course on experimental psychology Musatti, a first-year mathematics student, attended in the academic year 1915-1916. In 1916 Musatti interrupted his studies to participate as a volunteer in the First World War. At the end of the conflict, he returned to Padua, to the university, still undecided between mathematics and philosophy.

On Aliotta's advice, he resolved to complete his philosophy studies with a thesis, assigned to him by Aliotta himself, on non-Euclidean geometries.

In 1919, Aliotta moved to Naples and Musatti completed his thesis under the guidance of Vittorio Benussi (1878-1927), who had moved from Graz to Padua at that time and was assigned to teach experimental psychology (on the life and figure of Benussi, see, e.g., Adamo & Zudini, 2006b; Zudini, 2011, 2012). Musatti graduated with him on 3 November 1921, although the thesis does not, on closer inspection, have much to do with psychology.

The thesis, entitled "Geometrie non-euclidee e problema della conoscenza"("Non-Euclidean Geometries and the Problem of Knowledge"), to which Musatti devoted himself for almost two years, is divided along the lines of Bertrand Russell's *An Essay on the Foundations of Geometry* (1897) into a "Saggio storico-critico intorno alle interpretazioni gnoseologiche delle geometrie non-euclidee" ("Historical-critical essay on the gnoseological interpretations of non-Euclidean geometries") and a "Saggio di una teoria generale della conoscenza spaziale geometrica" ("Essay on a general theory of geometric spatial knowledge").

Strongly imbued with Aliotta's lecture, the treatment, starting from a purely mathematical problem, then becomes a philosophical and epistemological study on the conditions of possibility of spatial experience (see Zudini, Antonelli & Stucchi, 2011). For further details on the figure and life of Musatti, see, for example, Adamo & Zudini (2006a).

6. OBJECT PROPERTIES AND RELATIONAL PROPERTIES
Musatti distinguishes between object properties (size, shape, colour) and relational properties of objects (distance, position in space, illumination).

What is the relationship between object properties and relational properties of objects in our perceptual experience?

Object properties and relational properties are interdependent, interacting: changes in shape and size (deformations) covary with changes in distance and position (movement), changes in colour covary with changes in illumination.

What remains constant and what changes?

Let us look at some examples of interdependence between object properties and relational properties:
    1. colour and illumination (Adelson's illusion and shadows);
    2. Shepard's monsters (a location in space determines the perceived size);
    3. depth kinetic effect (a two-dimensional deformation determines the perception of a three-dimensional rotation);

4. stereokinetic phenomena (movement determines the perception of a three-dimensional object).

6.1 ADELSON'S ILLUSION AND SHADOWS
6.1.1 ADELSON'S ILLUSION
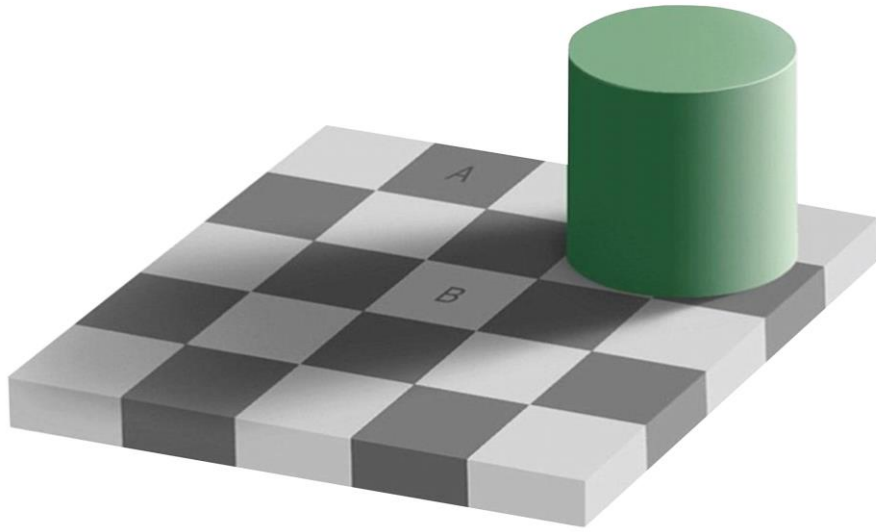
Figure 1. Adelson's checker-shadow illusion (2005)
(Source: public domain, modified)

Interaction between colour and illumination

The effect (Figure 1) depends on the fact that tile A is surrounded by lighter tiles and tile B is surrounded by darker tiles and is also in the shadow cast by the green cylinder. These are typically relational properties that determine the perceived object colour of the tile.

But this is not always the case. In other relational contexts, objectively different colours are perceived as the same colour. This is the case with shadows. See Figure 2.

6.1.2 THE COLOUR OF SHADOWS

Figure 2. The colour of shadows
(Source: public domain, modified)

So, to sum up (Figure 3):
The physical stimulus is the same, but we see a different colour (checker-shadow illusion).
The physical stimulus is different, but we see the same colour (sunlit vs shady).

a)   b)

Figure 3. a) The physical colours of A and B are the same, but in the context of the Adelson's illusion their colour is perceived as different. b) Even if the physical colours of sunlit and shady parts are different, we perceptually assign to them the same colour.

6.2 SHEPARD'S MONSTERS
The size of an object (object property) depends on the context (relational property).
By playing on the interdependence between object properties and relational properties, curious illusory effects can be achieved, as in the following figure (Figure 4).
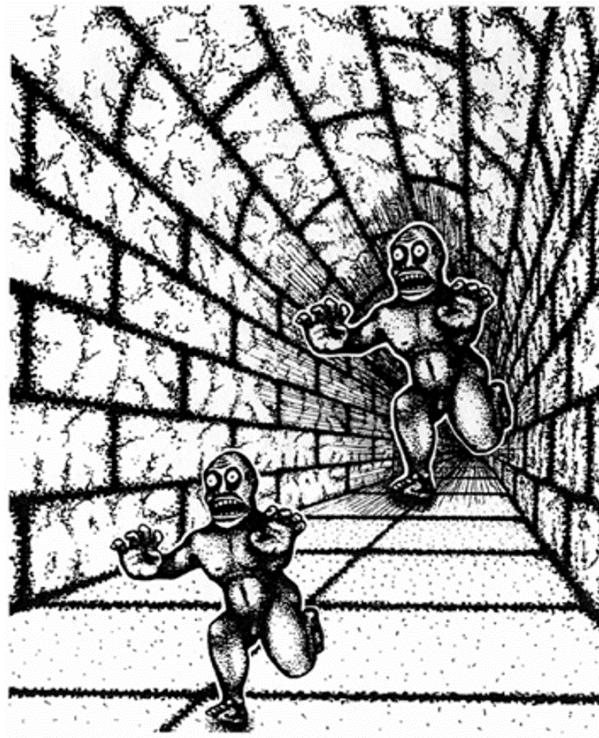
**Figure 4. Shepard's monsters. The physical size of the two monsters is the same
(they are the same picture drawn in different positions), but their size is perceived as different.
(Source: Shepard, 1990)**

Position in space determines perceived magnitude.

6.3 KINETIC DEPTH EFFECT
A two-dimensional deformation of the image results in the perception of a three-dimensional rotation (Figure 5)
(see Wallach & O'Connell, 1953).
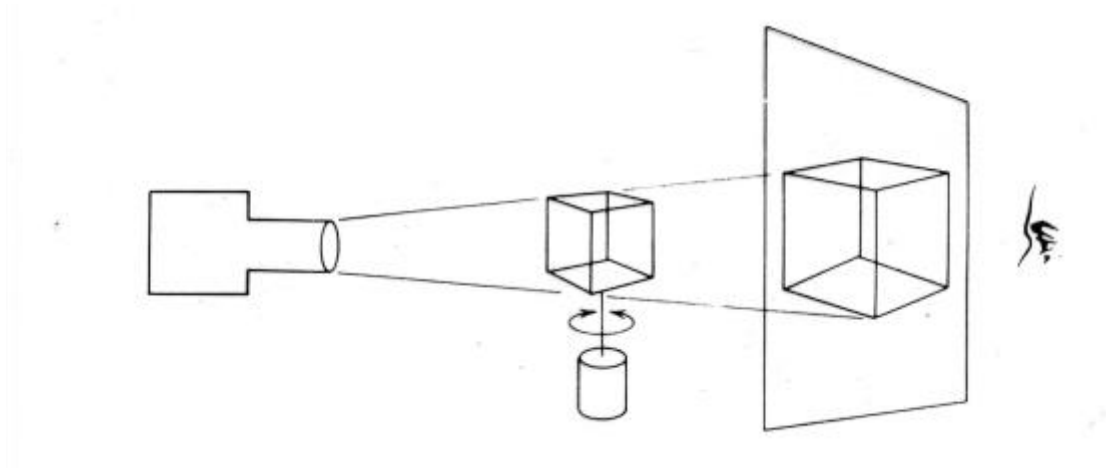
Figure 5. Kinetic depth effect
(Source: Schiffman, 1990, modified)

6.4 STEREOKINETIC PHENOMENA

Changes in the relational properties (position in space of the circle with the dot and their reciprocal position with respect to space) determine the perception of a three-dimensional object corporeity (Figure 6) (see Musatti, 1924, 1975; see also Wallach & O'Connell, 1953; Wallach, Weisz & Adams, 1956).
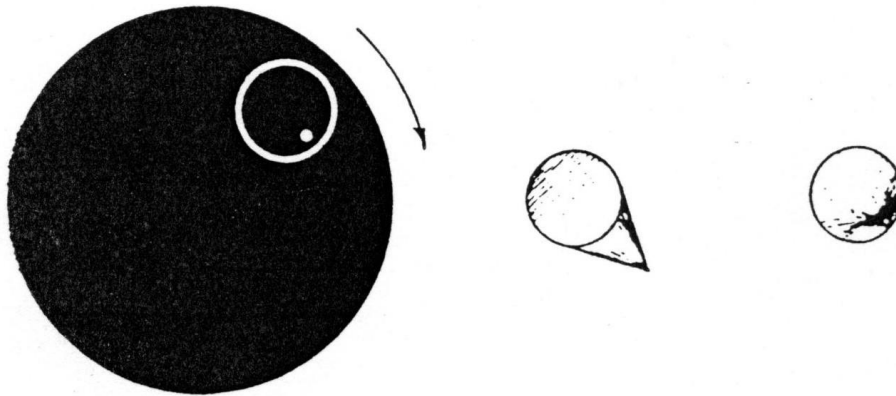
Figure 6. The stereokinetic effect
(Source: Musatti, 1924)

7. INTERACTION BETWEEN OBJECT PROPERTIES AND RELATIONAL PROPERTIES

What is the purpose of the interdependence between object properties and relational properties? Their covariation makes it possible to "extract a constancy [i.e., an *invariant*] from a situation of variability".

For example, from the covariation between object colour and illumination (light composition) we obtain the object's colour constancy (Figure 7).
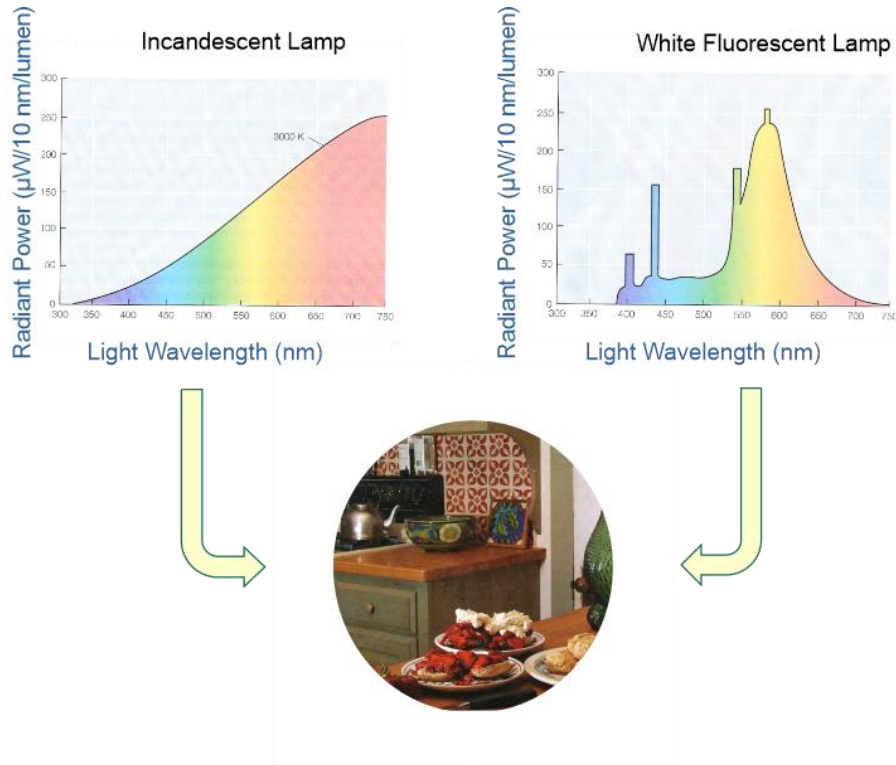
Figure 7. Chromatic constancy. The colours of the objects do not change even if the lighting sources are quite different. (Source: public domain, modified)

Musatti observes that objects appear to us as constant in colour as long as it is possible to convert variations in radiation coming from them into variations in illumination. When this is not possible, the variation is experienced as a variation in object colour.

As we have seen, constancy of colour is the invariant that is maintained. However, this is not always the case. A case in which colour constancy is not maintained occurs when illumination is given by monochromatic light (this is the trick used, for example, in supermarket windows where meat is displayed: a potentially disgusting brown meat is seen in an attractive bright red colour).

8. INTERACTION BETWEEN SHAPE AND SIZE

The same reasoning applies to the covariation between shape-size and position-distance of objects: the variation in shape and size of objects appears to us as a constant object as long as it is possible to convert this variation (due, for example, to movement) into variations of their position and distance in space. When this is not possible, the variation is perceived as a change in the shape and size of the object.

The following figure (Figure 8) shows an example where the background changes the shape of the object.
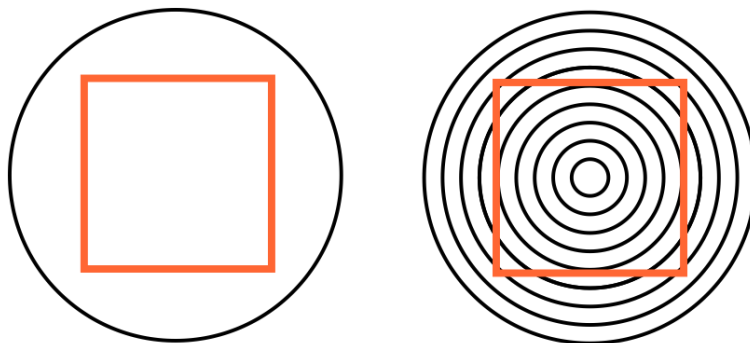
Figure 8. Orbison illusion (1939)

9. CONCLUSION

The question naturally arises at this point:
What remains constant and what changes?

As we have seen in the various examples, in general objects (shape, size, and colour) remain constant (invariant). But we have also seen that this is not always the case.
What is the rule that allows us to perceive a set of covariations between object properties and relational properties as constancy (invariance) of colour, shape, and size of the object?
According to Musatti, this rule can be traced back to the mathematical concept of group. In particular, to the group of transformations that leave metric properties invariant, i.e., rigid motions in Euclidean three-dimensional space.
Therefore, Musatti proposes that the invariances we observe in our perceptual experience are not due to a generic tendency toward constancy, but to a tendency to constancy as invariance with respect to a set of transformations constituting a group.

Thus, Musatti (1957, pp. 338-339):

[...] the perceptual situation determined by a variable retinal image, i.e., one that changes shape and size. Acting in this situation is a tendency to constancy, that is, a tendency to perceive an object invariable in size and shape. But this tendency can only be expressed if that constant object can be seen as undergoing a transformation that falls within that group of transformations that leave precisely the metric properties invariant, i.e., a rigid motion in Euclidean three-dimensional space. If, on the other hand, the deformation of the retinal image is of a different type, one can sometimes also have the perception of a motion in Euclidean three-dimensional space, but with a residual variation, experienced as a partial alteration in form and size. The limiting case is constituted by a null transformation of the group: the object seen does not undergo any dislocation in three-dimensional space, but only deforms; and this because there is no component of the retinal deformation that, given the structure of the group of rigid motions, succeeds in translating into a motion.

The problem is that things are always more complicated than we would like: the retinal image is not Euclidean, but rather describable within elliptic geometry.
Musatti assumes that we automatically transform all deformations that are incompatible with Euclidean geometry (elliptic geometry in the case of the retinal image) into Euclidean transformations (example of "Stratton-like" deformations).
In this way, Musatti assumes that the perceptual world is in fact described by the group of transformations that leave metric properties unchanged (Euclidean geometry). He is in good company, of course: the same assumption is present in scholars such as Hermann von Helmholtz, the aforementioned Felix Klein, Federigo Enriques, and Ernst Cassirer (see Cassirer, 1944, as well as Enriques, 1906).

However, it is legitimate to ask oneself - and to ask students - the "intriguing" question of whether this is really the best hypothesis to describe our perceptual experience of invariants.

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Teacher's Opinions on Values Education in Social Sciences Teaching

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Abstract
This research aims to reveal the views of Social Studies teachers on values education.

The study group of this research, in which the qualitative research method was used, consists of 30 Social Studies teachers working in secondary schools affiliated to the Pendik District Directorate of National Education in the 2020-2021 academic year. In the research, a semi-structured interview form consisting of 5 open-ended questions was used in order to determine the views of Social Studies teachers about values education. The data obtained from the research, what values education means for teachers, which activities are carried out by teachers about values education in Social Studies lesson teaching, the adequacy and quality of the values in the Social Studies lesson curriculum, what problems are experienced in adopting values in Social Studies lesson teaching and these The most important values that students gained during the course were tabulated under the main themes and evaluated by interpreting. According to the research findings, values education is very important, the most used method and technique in values education is group work and cooperative learning, the qualification and quality level of values education in the program is mostly insufficient, the problems experienced in values education are mostly from family and media, It has been concluded that the value gained is patriotism. The research results were supported by direct quotations.
Keywords: Value, Values Education, Social Studies, Social Studies Teacher

INTRODUCTION

Education; It is the process of creating a deliberate and desired behavioral change in the behavior of individuals through their own experiences (Ertürk, 1972).

As it can be understood from this definition, it is seen that education is a planned and programmed process that aims to reveal the behaviors expected and accepted by the society and continues from the cradle to the grave.

It is a situation that is accepted all over the world where human beings continue their lives through education.

Thanks to education, people can improve themselves and make progress. Education, which is a planned and programmed process, has been an important structure for people to realize their dreams, to develop their vital and social adaptation characteristics, to learn their culture, traditions, customs and traditions, and to gain national-spiritual and universal values (Balcı, 2008).

There have been many events in the world until today, many developments and changes have shown themselves. These developments accelerated in some periods and slowed down in others.

Especially in 1990 and after, the increase in international social, cultural, economic and political relations as a result of the advanced acceleration of developments in informatics, technology and communication also affected the culture we live in and these rapid transformations gave birth to the concept of globalization (Izgar and Beyhan, 2015).

The upbringing of the society, which is far from both itself and the environment in which it lives, and the negativities caused by this situation, highlight the necessity of giving values in a planned and programmed way

today. It is possible to do this by giving values education to people within a certain program in education and training institutions.

Because education has an important place in gaining the characteristics of the culture in which the individual lives and shaping his life accordingly (Şahin, 2013).

One of the aims of education, which plays a key role in preparing the society for life, is to create a healthy, consistent and regular personality structure in people.

Another aim is to train individuals in line with their interests, desires and abilities, to prepare them for life and higher education and to provide them with the necessary knowledge, skills, perspectives, behaviors and habits (Şahin, 2013).

Otherwise, a person who does not receive adequate values education and cannot make these values a habit may engage in harmful actions both for himself and for the world he lives in.

In today's world, we see these negativities very often. The learner uses the new knowledge he has created by kneading the previously learned knowledge with the newly learned knowledge to solve the problems that arise in life (Erdem & Demirel, 2002).

This emerging constructivist understanding has a feature that attaches great importance to values. The restructuring and functional change in the philosophy of education necessitated the questioning of the main elements of the social studies course from a critical point of view.

This necessity has led to functional changes in the social studies course curriculum.

According to the perennial and essentialist programs, the social studies course was limited to history, geography and civics. In this state, the values of the social studies course could not be fully internalized by the students and were insufficient in transferring the real values to life.

This uniform understanding has changed today with the introduction of constructivism into the program. Constructivist practice has been implemented in our country since 2005.

The Social Studies curriculum was also rearranged according to this new understanding.
This arrangement has brought a new quality to the social studies course.

In the new program, the education of national and universal values in the teaching of social studies was emphasized with great care and attention. Because raising new values and students with these values is the subject of social studies course. These values were placed in the units in the Social Studies course and it was tried to create virtuous and moral behaviors in the students. The main purpose of these trainings is for the individual to create his own value culture and internalize this culture. In order for this main purpose to be realized, the individual must know his/her own characteristics. The individual's self-knowledge and being a human being who lives his values will be achieved through the students' assimilation of values education in the social studies course. Social studies course is also in an important position at this stage (Balcı, 2008).

Problem Status
Value; "a social group or society accepted by the majority of its members as correct and necessary in order to ensure and maintain its existence, unity, functioning and continuation; Generalized basic moral principles or beliefs that reflect their common feelings, thoughts, goals and interests are called "(Genç & Eryaman, 2008).

The acceptance of values by the society and their transfer from generation to generation are important in terms of creating a social order. Learning values starts in the family and schools take over this task after the family. Today, there are many studies on values education in the world. Values education is the teaching of national, spiritual and universal values in a planned, programmed and regular manner (Sahin, 2013).

Values education is very important to ensure the continuity of society in cultures where human rights and democracy are important. For this reason, it has become a necessity to teach these trainings in a planned and programmed way in educational institutions.

Schools do not just prepare children for life on a cognitive level. The child is prepared for life both cognitively, emotionally and psychomotorly. Values education also plays an important role in the effective use of these skills (Kurdede Fidan, 2013).

Values education program is of great importance in gaining and adopting values to children, but the role of educators, who will bring these values to students, is very important.

Particularly, the contribution of the Social Studies teachers, who took part in the social studies course and the implementation of this course, which is taught in order to raise people who are active, aware of their responsibilities and can fulfill their civic duties, is quite high. (Fidan, 2013).

From this point of view, the views of Social Studies teachers on values education have been tried to be described by the research.

Purpose of the research
The aim of this research is to determine the views of teachers on values education in Social Studies course teaching. In line with the general aims of the research, the following sub-objectives were established:
  - What values education means,
  - Which methods, techniques and activities are used by teachers on values education in Social Studies lesson teaching,
  - The application levels and deficiencies of the values in the Social Studies curriculum,
  - What kind of problems are experienced in the acquisition of values in the teaching of Social Studies course,
  - Answers will be sought to the questions of which values are most important to students during the Social Studies course.

Importance of Research
With the determination of teacher views on values education in Social Studies course teaching:
- More implementation of values education activities in schools,
- Whether the values can be gained in the lessons given to the students,
- Values education activities applied in schools are more suitable for their purpose,
- Examining all aspects of values in social studies course,
- With values education, it will contribute to the development of students with their characteristics in every field,
- It will contribute to the self-development of students studying in the field of Social Studies in higher education,
- It is expected that the researchers who do research on values education will create a resource for their research, by making use of the results of this research, the necessary importance will be given to values education in the teaching of social studies by teachers.

Value Concept
When we examine the sources prepared so far, we see that many different definitions have been made by researchers about the concept of value.

The dictionary meaning of the word value is defined as "value, price, the value of something, what makes an object useful, sought after, desired, loved" (Demir and Acar, 1997, p.54).

Value, "The abstract measure to indicate the importance of something, the value that something is worth." (TDK, 2015).

Value; "a social group or society accepted by the majority of its members as correct and necessary in order to ensure and maintain its existence, unity, functioning and continuation; Generalized basic moral principles or beliefs that reflect their common feelings, thoughts, goals and interests are called "(Genç & Eryaman, 2008).

The criteria that are used to describe the human and the cultural structure in which humans develop, guide individual and social behaviors, and continue from the cradle to the grave are called values (Yeşil and Aydın, 2007).

The acceptance of values by the society and their transfer from generation to generation are important in terms of creating a social order. Sociologically, value refers to the basic rules that are accepted by most of the members of a social group in order to continue their own life and that are adapted to the whole society, showing their common feelings, ideas, goals and interests (Kızılçelik, 1994, p.99).

In short, values are the way of understanding that guides our behaviors and helps us to question and evaluate them (Dombaycı & Ülger, 2015).

Shirtless and Cüro listed the unique features of values as follows:
• It is assimilated by the individual and society and transferred to future generations.
• It has a structure that unites people.
• It is the set of criteria accepted according to the interests of the individual and society.
• They are general evaluations that include consciousness, feelings and emotions.
• It is the one who shapes and directs the behavior of the individual according to the environment. Values have unique rules within themselves (Gömleksiz & Cüro, 2011).

Values Eeducation
After the multidimensional and affecting changes and developments in the last century of human history, the importance of value education has increased considerably in order for individuals to communicate effectively and beautifully and to find solutions to the problems in a manner specific to the rules accepted by all societies around the world (Kale, 2007: 316).

For these reasons, the subject of values education has been one of the most emphasized subjects in recent years. Because the elimination of the factors underlying all the negative situations experienced will be possible by giving the concept of values education to people properly (Türk and Nalçacı, 2011).

Individuals with good values and personality have an important place in the bright future of societies (Dilmaç, 2007, p.8). It is not a spontaneous event that an individual brings good values to his behavior. Giving good values to the individual is possible by passing through a certain education filter.

The most important tool for this is schools.
(Kurtulmuş, Tösten and Gündaş, 2014).
The aims of Baysal values education are:
 - Raising people with good character,
 - Reinforcing core values,
 -To ensure that students acquire values in accordance with their mental, affective and psychomotor development,
 - To give students the opportunity to apply the values they have learned,

He stated that it means to establish a connection between home and school environments through values education (Baysal, 2013).

Kale identified the most important features of values education as follows:
1. To inform humanity about universal and national values and the status of these values,
2. To establish a connection between different cultures in a democratic manner and with a general perspective, with a common understanding and value judgments,
3. To evaluate all values with the criteria of improving the living conditions and available opportunities of human beings, 4. Making use of universal values in life based on existing problems Kale (2007: 319).

Values Education in Social Studies Lesson Teaching
Social Studies: "It is a teaching program that combines the knowledge and methods obtained from social and human sciences in order to raise effective citizens who can make informed decisions and solve problems in changing country and world conditions in almost every respect" (Öztürk, 2012, p.4).

The definition of Social Studies accepted by the National Council of Social Studies (NCSS) is as follows:
"Social studies is a field of study that fuses social and human sciences to develop citizenship competencies.

It provides a systematic and coordinated study of content within the school program that it appropriates from social studies, anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as the humanities, mathematics, and natural sciences.

The primary purpose of social studies is to help young people develop their ability to make informed and logical decisions in a culturally diverse democratic society in a mutually interconnected world" (Öztürk, 2006, p.24). Social Studies course is values education itself.

Because it is important in terms of examining past experiences, dealing with different cultures and human communities, and bringing together many disciplines (Kan, 2010).

Looking at the 7th grade Social Studies Curriculum in 2005, it is aimed to gain students a total of 20 values (Çelikkaya, Filoğlu, & Öktem, 2013). These values are; "Being fair, giving importance to family unity, Peace, Independence, Scientific, Diligence, Solidarity, Sensitivity, Honesty, Aesthetics, Tolerance, Hospitality, Freedom, Respect, Giving importance to being healthy, Love, Responsibility, Cleanliness, Patriotism, Benevolence determined as ".

The 2005 program was updated in 2017 and the number of values decreased to 18 by subtracting some values and adding others. 16 of the 20 values included in the 2005 curriculum were also included in the 2017 curriculum. Among these, the value of being fair is called the value of justice. In addition, the values of tolerance, hospitality, cleanliness and giving importance to being healthy were removed from the program; equality and savings values are added. Thus, it is aimed to bring a total of 18 values to students (Yılar & Tomal, 2018). 12 of these values will be given in the 7th grade.

Table 1. Secondary School 7th Grade Learning Areas and Direct Values

LEARNING AREAS	VALUES TO BE GIVEN DIRECTLY
Individual and Society	Freedom, Responsibility
Culture and Heritage	Sensitivity to Cultural Heritage, Aesthetics
People, Places and Environments	Freedom
Science, Technology and Society	Confidence, Scientific, Freedom
Production, Distribution and Consumption	Solidarity, Integrity, Diligence
Active Citizenship	Democratic Attitude, Peace
Global Connections	Peace, Respec

History of Values Education in the World and in Turkey
When we look at the history of values in the world, many studies have been carried out on values education in North American countries until the end of the 19th century.

Mothers and fathers, teachers, religious service institutions and many other institutions were affecting the society in which they lived in terms of moral and virtue values.

Starting from the 20th century, ways of educating people in line with the rules and values of the society began to be sought, and important results were obtained regarding these issues (Balcı, 2008).

In the post-1960 world, traditional methods began to be questioned, and new values were developed in many fields such as gender, religion, individual lifestyle and values.

In this period, the value approach strategy also changed and new methods such as explaining values, value analysis and moral reasoning strategies were brought to the fore (Balcı, 2008).

When we came to the end of the 20th century, many groups in the society started to work on returning to the value strategies that were applied after the new methods failed.

The strategy of instilling value and being a role model was brought up again and put into practice. Finally, with the support of universal organizations such as the United Nations, universal values have been spread to the world (Balcı, 2008).

The first education of the child starts in the family and that education is moral education. Ibn-i Sina, one of the important Islamic scholars who specialized in medicine and whose books were taught as textbooks in Europe for 500 years, emphasized the social reasons for good moral education, and for this reason, the right behavior of the child is correct with a nice speech, not in a coercive and oppressive way. he indicated that behavioral orientation is necessary. (Ozkan, 2011).

Approaches in Values Education
Many approaches have been adopted in values education from past to present. Values education is implemented in educational institutions in a planned, programmed and systematic way (Şahin, 2013).

Today, a lot of progress has been made regarding values education. The main purpose of values education approaches is to make the individual adopt the existing and necessary national and universal values and to enable them to apply these values in social life. With the approaches that have emerged recently, it is aimed to gain the values not only at the cognitive level but also emotionally in the individual. Values are not given only at school, but values in all areas of society will be more efficient in teaching and applying values (Balcı, 2008).

According to Balcı, there are 4 basic approaches in the education of values:
1. Teaching the values directly to the truth
2. Explaining values to the individual
3. Analysis of value
4. Making moral reasoning (Balcı, 2008).

Teaching Values Directly
It means instilling values into students (Topkaya, 2016). The approach of teaching values directly, which is the most used approach from the past to the present; It aims to guide people's behaviors, feelings, attitudes and outlook on life through advice and conversations.

With this approach, literary products such as poems and stories about historical heroes are constantly repeated and memorized, and values are taught to students in a forced and oppressive way (Balcı, 2008). According to this approach, education is the transfer of all the knowledge that cultures have brought from ancient times to the next generations (Çiftçi, 2003, p.365).

Explaining Values to Individuals
In this approach, the individual becomes aware of the values in life by doing and living, and prefers the values to be applied or accepted. This approach is the exact opposite of the direct teaching approach. According to this approach, the student does not have to say the answer the teacher wants, but rather the answer that he has adopted and internalized. So the student is free. He takes decisions in the light of his own developmental characteristics. The student is never pressured and never forced.

Analyzing Value
This approach is a planned and programmed situation, and it is a method in which metacognitive thinking styles are used continuously in the process, which enables the individual to make decisions as a result of logic and reasoning, analytical thinking, criticism and questioning, and aims to assimilate value more logically and transform it into behavior (Balcı, 2007). 2008).

In this approach, values related to social themes are emphasized (Topkaya, 2016).

Making Moral Reasoning
This approach focuses on two opposing situations and provides solving the problem and the emergence of moral situations. In this approach, two stories are given in which socially moral situations are strong.

Values Education in Terms of Educational Philosophy

One of the indispensable questions in the philosophical field throughout the history of thought is "What is philosophy?" question and to seek an answer to this question. Many definitions of philosophy have been made and still are. The word philosophy is the Arabic translation of the Greek word "Philosophia" (Love of Wisdom). Philosophy is the act of thinking and evaluating everything natural and unnatural (Topdemir, 2009).

When we look back on the past, many thinkers have lived and put forward philosophical systems that are related to each other or completely opposite to each other.

Human communities have also adopted and internalized those ideas that suit them, these ideas have become an important factor in social life and have drawn various paths for humanity. For this reason, it is said that every philosophical idea has a unique approach (Yaşaroğlu, 2019).

Values Education According to the Idealist Approach
Although idealist philosophers have dissimilar views among themselves, they reach a consensus on unchanging values when it comes to education (Yaşaroğlu, 2019).

Students should be taught the values living in school and how to live with these values. Cultural heritage must be transferred. Values and facts are absolute and unchanging. It also gives importance to tradition (Gökalp, M. 2020).

Values Education According to Realist Approach

The realist approach is the opposite of the idealism approach. It is based on belief in the existence of matter. According to the realist understanding, people can discover the order in the universe with their minds and determine its execution and rules (Yaşaroğlu, 2019).

Values Education According to Spiritualist Approach

The most important element in this approach is religion. He has a divine perspective. Its main purpose is to reach happiness in the hereafter, which is the world after life. God is the source of everything in the universe. The transmitter of values is not man, but God. Values are composed of religious subjects. From an educational point of view, educators have important moral and ethical behavior patterns. Teachers are people who set an example and role model (Yaşaroğlu, 2019). E.g; Considering the benevolence behavior, the source of this value is God. Human beings who have adopted this value have also been the source of happiness in the hereafter at the level of happiness in the universe.

Values Education According to the Naturalist Approach

In this approach, values are located in nature. Values are part of the natural cycle.
A person who continues his life in accordance with the order of nature is considered to have adopted moral values. The works that show the nature in the best way are the works that are beautiful (Yaşaroğlu, 2019).

Values Education According to Pragmatist Approach

Pragmatism emerged in America in the 1800s under the leadership of John Dewey.

The essence of this approach is based on the interpretation of an idea by looking at its consequences. In pragmatist philosophy, values occur around interaction with the social environment (Yaşaroğlu, 2019).

Values Education According to Existentialism Approach

According to this understanding, freedom is the foundation of everything. The most valuable thing is the person himself.
It has a democratic perspective.

Humans are free to adopt values. E.g; The value of benevolence should not be taught to the student by pressure. The teacher transfers the value to the student, and the student accepts this value if he or she adopts it.

METHOD

In this section, explanations about the research model, the universe and the sample, the information collection method used in the research, the development of the information collection tool, the collection of data and the studies done in the analysis of the data are given.

Research Model

Qualitative research method was used in this study, which includes teachers' views on values education in social studies lesson teaching. Qualitative research, on the contrary of being superficial, is research that seeks answers to questions such as why, why and how by investigating deeply (Yıldırım & Şimşek, 1999).

The data in the study were obtained through focus group interview. Focus Group Interview is a special group interview technique that is prepared in a systematic way in order to determine the feelings and thoughts of the predetermined community on the determined subject in detail. The data obtained with this method are interpreted and evaluated, and the researches related to the determined subject are guided according to these evaluations (Yıldırım & Şimşek, 1999).

Working group

The study group of the research consists of 30 Social Studies teachers working in secondary schools affiliated to the Pendik District Directorate of National Education in the 2020-2021 academic year. In this study, criterion sampling method, one of the purposive sampling methods, was used. Purposeful sampling allows detailed research in cases where there is too much information (Yıldırım & Şimşek, 1999).

Data collection tool

In the focus group interviews, a semi-structured interview form consisting of five open-ended questions prepared by the researcher was used to determine the views of teachers on values education in the teaching of Social Studies course.

The questions to be asked to the participants were prepared in advance, expert opinion was sought, the content of the interview questions and the number of questions were determined with the expert opinion.

The questions in the data collection tool are given below.
1. What does values education mean to you?
2. Which methods and techniques do you use to gain values in social studies course? What kind of events do you organize?
3. What do you think about the proficiency level and quality of the values education and activities in the social studies program? If not, what deficiencies do you see?
4. What kind of problems do you experience in gaining values in social studies course?
5. What do you think are the most important values that the social studies course brings to the student?

Data Collection
In the research, "semi-structured interview form" was applied to secondary school Social Studies teachers in order to determine the teachers' views on values education in the teaching of Social Studies course. A meeting was held with the teachers to be interviewed at Pendik District Abdullah Acar Secondary School on 07 April 2021. First of all, social studies teachers were informed about the purpose of the study. Teachers' consent to participate in the interview was obtained. The interviews were recorded with a voice recorder. The interviews were completed in a friendly atmosphere, lasting 3 hours.

Analysis of Data
The data obtained as a result of the research were evaluated by subjecting them to content analysis, one of the qualitative data analysis techniques. First of all, without making any changes on the audio-recorded interview data, the data were dumped and the data was transferred to written format.

In order to increase the validity of these interviews, some of the teacher's views are included one-to-one. Pseudonyms were used and transferred to the study in this way in order to give honest and safe answers to the questions of the teachers' opinions, which were given one-to-one. 30 teachers participating in the research were coded as S1, S2, S3, ….

Demographic Characteristics of Participants
Regarding the personal information of the teachers participating in the interview, 16 of the teachers who participated in the interview were female and 14 were male.

According to these findings, the number of female teachers participating in the interview is higher than the number of male teachers. When examined in terms of marital status, 19 of the teachers who participated in the interview were married and 11 were single. This situation reveals that the number of married teachers participating in the research is higher than the number of single teachers. Considering the service duration information of the teachers, 7 with 1-5 seniority range; 9 with a seniority range of 6-10; 10 with a seniority range of 11-15; 3 with a seniority range of 16-20; It is seen that there is 1 teacher with a seniority range of 21 and above. When the teachers' views on all subjects were evaluated together, it was seen that they talked about some subjects more frequently and some subjects in a similar way.

FINDINGS AND COMMENT
In this section, the findings consisting of the answers given by the teachers participating in the interview were tabulated under the main themes, presented by giving the frequency values, and the interpretations of the findings were included.

Findings Regarding the First Sub-Aim
About what values education means according to social studies teachers; the continuation of our culture and its transfer to generations, adapting to the society and getting used to the rules of the society, living in harmony with the people, forming the personality and character, teaching the good, the truth, helping each other, loving the homeland, teaching how to behave in the society, teaching the rules of being an ideal individual, teaching the future of the country. Opinions were expressed in the main headings of providing education, teaching moral virtues, transferring national and spiritual elements in a planned and programmed way.

Table 3. Teachers' Views on the Question of What Values Education Means

Opinions	Participant Code	f	%
The Continuation of Our Culture and	S1,S5,S6,S10,S22, S25,S26	7	23,33
Transmission to Generations	S8,S13,S24	3	10
Adapting to the Society and Getting Used to the Rules of the Society	S4,S16	2	6,67
People Living in Harmony	S15, S19	2	6,67
Building Personality and Character	S7,S17,S20,S27	4	13,33
Good, Truth, Solidarity,	S11,S21	2	6,67
Teaching to Love One's Homeland	S2,S12	2	6,67
Teaching What Behavior to Show in Society	S3	1	3,33
Teaching the Rules of Being an Ideal Person	S9,S28	2	6,67
Ensuring the Future of the Country	S14,S18,S23,S29,S30	5	16,66

According to Social Studies teachers, according to what values education means, teachers' views on the continuation of our culture and its transfer to generations; S1 "Value education is very important both in the past and today. Considering the current conditions, its importance has increased even more. Value education aims to learn our national culture and spiritual world, to internalize it, to transfer it to life and to show it in our behavior. Values education starts in the family, but is given in a certain system at school. This increases the efficiency of value education. Because children will find more suitable environments to practice these values at school, in the circle of friends, in the classroom environment." S5 "It is the transfer of elements that ensure the continuation of our culture, such as tradition, tradition, language, from generation to generation." S6 is "transferring our national identity to future generations."

S10 "Values education is to ensure the continuity of the society by transferring the responsibilities that our culture has given us to the new generations." S22 "It is the task of handing down the values that make us who we are to future generations." S25 "I think that values education is important for the future of the family. It is also important for the future of the country that there are generations that adopt national and spiritual values.

S26 "transferring spiritual culture to generations." According to Social Studies teachers, according to what values education means, teachers' views on adapting people to society and getting used to the rules of society; S8 "It is the process of getting used to the values that enable people to live knowing the social rules." S13 "Values act as a seed for every person born into the world to adapt himself to society. Especially families and educators sow these seeds. The seed grows and becomes the future of society. The fact that the society is connected to each other in unity and solidarity depends on the solid and proper planting of these seeds." Q24 "It is the most vital teaching of human life." According to Social Studies teachers, according to what values education means; S4 "Values have a great place for me.

I put a lot of emphasis on it in my classes. In my life, I approach this subject in a very self-sacrificing way. Values education is a very broad concept. From a universal perspective, the coexistence of all humanity is very important for a peaceful world without conflicts. Because values are our attitudes and judgments that make people human. The individual who gains these attitudes and value judgments will reflect this to his/her environment and will be an important step in laying the foundations of a beautiful world." S16 "It is teaching the rules that make the society live in harmony and form the feelings of the society." According to the Social Studies teachers, the opinions of the teachers titled the formation of personality and character in the views of the teachers according to what values education means;
S15 "Values education is to gain the personality and character traits necessary to continue living in harmony with people." S19 is "training people to gain personality and character."
According to Social Studies teachers, according to what values education means;
S7 "is the job of teaching what is good and what is right." S17 "Values education is the whole of education that teaches goodness, truth, peace, tolerance, love of one's homeland, respect, mercy and helpfulness." S20 "For me, values education can be defined as the acquisition of national values. It is the job of teaching to love your homeland, to love your flag, to love your country, to love and respect Atatürk." S27 "It is the training given and applied in order to distinguish between good and bad." According to Social Studies teachers, according to what values education means, teachers' views on teaching people what behaviors to show in society; S11 "It is to teach the behaviors to be shown in the society to the students."
S21 "Values education is the set of rules that show how people behave in social life."

According to the Social Studies teachers, the teachers' views on teaching the rules of being an ideal individual according to what values education means; S2 "The rules of being an ideal individual." S12 "is the tendency to form the ideal person." According to Social Studies teachers, according to what values education means, teachers' views on the future of the country in their opinions; S3 is "teaching the important values that ensure the future of the country." According to Social Studies teachers, according to what values education means, teachers' views on teaching moral virtues in teacher views; S9 "It is the job of teaching moral and virtue principles to people." S28 "I think that values education is an education in which the morals and virtues that people need to acquire in order to be happy are given."

According to Social Studies teachers, according to what values education means, teachers' views on teaching national and universal elements in a planned and programmed way;
S14 "It is the planned and programmed transfer of values." S18 "is a planned, programmed, systematic value transfer situation." S23 "They are national and universal behavioral criteria."
S29 "Giving values to students within a certain system and program." S30 "Value is what changes students' perspectives on life and prepares them for life." have expressed.

Findings Regarding the Second Sub-Aim

It has been observed that teachers apply different methods and techniques in values education practice activities in the Social Studies course. In addition to cooperative learning and group work, it was found that many approaches, methods and techniques were used, including brainstorming, role playing and drama, watching movies and videos, preparing a board, problem solving, station, thinking with six hats.

Table 4. Methods and Techniques Used in Gaining Values in Social Studies Course

Opinions	Participant Code	f	%
Team work-	S3,S4,S13,S15,S17, S18,S20,S21,S28,S30	10	33,33
Cooperative Learning	S6,25	2	6,67
Brainstorming	S2,S8,S14	3	10
Role Playing and Drama	S11,S16,S19	3	10
trip	S10	1	3,33
Exhibition	S5,S9,S12	3	10
Case study	S1,S27	2	6,67
Watching Movies and Videos	S24	1	3,33
Board Preparation	S7,S22,S29	3	10
Argument	S23,S26	2	6,67

Opinions of teachers using group work-cooperative learning method;
S3 "values cannot be learned alone. Values gain meaning when a person enters into a relationship with society. That's why I have children do group work as much as I can. Thanks to the groups, the spirit of unity and solidarity increases, and cooperation and solidarity increase. The child experiences respect for his friends, responsibility, sense of work, excitement of success and can observe his friends. Perhaps a teaching beyond verbal expression is taking place." Q4 "I call this question a group work method. He learns to be tolerant, respect for others, responsibility. This method is very functional, especially in terms of teaching respect." S13 "I attach more importance to learning by doing in this type of learning. Mostly group work. Value is better gained through social learning.

By sharing and collaborating, the student observes the behavior and internalizes the value better. In this way, we can give all the values." P15 "I usually have group activities done in order to give children the value of responsibility. I give different responsibilities to each of the children in their group work and I enable them to fulfill these responsibilities by acting together." Q17 "I use group activities. I guide them by being a model. When children work in groups, they show respect, tolerance, taking care of each other, pride in doing things together, taking responsibility, throwing away their introversion. Countless, actually. I think group work is the most effective method."

S18 "group work has an important place in such matters. It is an important practice in matters such as cooperation, solidarity, acting together, and allowing the other while talking."
S20 "It can be group work. It is ensured that important behaviors such as respect for each other, contributing to something together and putting effort are learned." S21 "I mostly have group work done in my lessons in order to gain values. I believe that children learn best by doing things in their natural environment. Our spiritual values and human values are better adopted by such methods. They learn different perspectives beyond learning in the

works done together. Aaaah, he acts that way too or I did it, but he can control himself so that if I act this way, I will be loved more." S28 "group work is a method that I use a lot in value education activities. It is very easy to acquire values such as listening, learning other views, being respectful to those views, and gaining effective communication skills with this method.

It's a useful method." S30 "It is a group activity technique that I frequently use cooperative learning method. It's a good technique for its liability value."

Opinions of teachers using the brainstorming technique;
S6 "Brainstorming is a technique I use a lot. Because in this technique, children can see values through their eyes and look at them from different angles. For example, what is patriotism? I write the question in the middle of the board. Students take turns getting up and writing down whatever the concept means to them. Lastly, we make a poem of all that is written, and in this way I try to teach the different feelings of patriotism."
Q25 "I often use brainstorming."
Opinions of teachers using role playing and drama techniques;
S2 "I use drama and role playing techniques in some subjects. For example, we had a drama called "BOSPHORUS WAR" made during the week of the Çanakkale Wars on March 18, last year, in order to convey national values. Both the audience and the actors were so motivated that they almost lived the event and went back to those days."
S8 "Role playing and dramatization are very effective in these matters. For example, I try to make them empathize with what a visually impaired individual is going through by playing a role and dramatizing them." S14 "I try to use techniques such as role playing and drama."

Opinions of teachers who use the trip technique; S11 "I try to use the excursion method whenever possible. Travel method adds a lot in concretizing values. The child does not forget the places he has visited." S16 "I use excursion technique." S19 "Actually, the excursion technique is perfect for teaching values. This technique is very important in providing historical and cultural sensitivity, but we cannot make use of it much due to the limitations of opportunities, the waste of time in correspondence and permission processes, and taking responsibility for children. If it were possible, most parts of this course would be done with excursions." Opinions of teachers using the exhibition technique; S10 "I attach great importance to exhibitions in these situations. Exhibits add a lot to learning about national and cultural values. For example, we went to an exhibition about the War of Independence. Students showed great interest. The old cultural clothes, the lifestyle, the life both after and in the middle of the war affected them very much. Children love and learn too." Opinions of teachers using the case study technique; Q5 "Our lesson is full of examples from life. It is very effective in associating current issues with our lesson. As children question, they learn the truth better." Q9 "I am using a case study." Q12 "I mostly use the case study method.

Our history is full of so many events and important personalities to be exemplified. Our course is a very suitable course for this. Everything is from life. For example, the theme of justice was associated with the Ottoman sultan Suleiman the Magnificent. While explaining the subject, we explain the value of justice with examples from the life of Suleiman the Magnificent and make inferences." Opinions of teachers using film and video techniques;
S1 "I use the film and video technique very often. I show movies from life. Sometimes, I have movies and videos that I find on the internet about the subject watched. It works great emotionally. The child is affected. Films, especially on patriotic subjects, are very effective. He loves it with children." S27 "I use the film and video method a lot, especially with the use of smart boards. Children learn very effectively by watching. Between film and video, I pause and make them think." Opinions of teachers using the clipboard preparation technique;
Q24" I am preparing a board about the value of each month that is most suitable for our course. Students share what is written on the clipboard with each other." Opinions of teachers using discussion method; S7 "The ideal method for values of responsibility, respect, tolerance for ideas, listening, speaking by speaking." Q22 "I use the discussion method."
S29 "discussion method. The value of respect and tolerance is important to the teaching of tolerating other thoughts. Opinions of teachers using the six hat thinking technique;
P23 "I usually use the six hat thinking technique. In six thinking hats, children learn to respect others and tolerant of ideas." Q26 "I use the six hat thinking technique. Some values are taught very effectively with this technique."

Findings Regarding the Third Sub-Objective
When we look at the opinions of the teachers about the proficiency level and quality of the activities related to values education in the Social Studies curriculum, there are four different opinions: those who say that the activities and quality in the program are sufficient, that the activities and their qualities are not sufficient, that the activities are sufficient but the quality is insufficient, and that the time given to the activities is insufficient. they have stated.

Table 5. Opinions of the Teachers on the Sufficiency Level and Quality of the Activities Related to Values Education in the Social Studies Curriculum

Opinions	Participant Code	f	%
Activities and Quality Are Sufficient	S4,S5,S9,S13,S17,S20, S22,S26	8	26,67
Inadequate Activities and Qualifications	S1,S2,S7,S8,S15,S16, S18,S21,S24,S27,S29	11	36,67
Where Activities Are Sufficient But Quality Is Insufficient	S3,S6,S10,S19,S23, S30	6	19,99
Insufficient Time Given to Activities	S11,S12,S14,S25,S28	5	16,67

Those who consider it sufficient about the proficiency level and quality of the activities related to values education in the Social Studies curriculum have mentioned their opinions as follows; S4 " In the program, activities related to values are given to us as a framework. As teachers, we have to fill in this framework and present the activities in our own way.

The teacher is someone who adds something of himself. If everything about values will be included in the program, why are we here? Let the child read. " S5 "I give the values determined in each subject as the place and time comes. We can also determine value activities ourselves on necessary issues." S9 "The activities in the program are enough for me. 5-6-7. In the 8th and 8th grade classes, the activities are regularly distributed according to the place. We shouldn't just look at it as a grade level. If we look at the overall program, we can see that it will suffice. In addition, the activities are quite good in terms of quality. We are processing them by developing them even more." S13 "I find it sufficient. It is in our hands to make the events qualified." S17 "The activities and qualifications are both sufficient, but the procedures necessary to carry out some applications are too many. Therefore, activities such as excursions and exhibitions are rarely held." S20 "The events come to us through many stages, so I think the number and quality are sufficient." S22 "I find it sufficient. Quality teachers make these activities even better." Q26 "I am one of those who find it sufficient.

The organizers of these events are within the Board of Education and Discipline. It has been deemed sufficient that it comes to us to be applied. Its application remains to us."

Those who do not consider the efficacy level and quality of the activities related to values education in the Social Studies curriculum to be sufficient have mentioned their opinions as follows; S1 "I think the activities and their qualifications are very inadequate. Because the activities are too abstract for children in this age group." Q2 "I think the activities in the books are insufficient. Some of the activities are beyond children's cognitive and affective capacities. Especially the activities given in the 5th grade seem to be given very early. The child fails to embody this at that age." S7 "insufficient. There are activities above the developmental level of children." S8 "In my opinion, both the activities and the qualifications are insufficient. It has a complex structure. For example, we describe the Battle of Çanakkale and then the National Struggle Period. The child may confuse both as a national struggle. We spend a lot of time trying not to mix them up." Q15 "I don't see enough." S16 "If it were sufficient, the level of implementation of the values would not be this low." Q18 "both activities and qualifications are insufficient." S21 "I think it is insufficient. More qualified activities can be developed." Q24 "I find it insufficient. When a child reads a book, it is not sufficient for the child, both in terms of information and inferences from the photographs."

Q27 "I think that both are insufficient." Q29 "I find it insufficient."
The opinions of teachers who say that the activities are sufficient but insufficient in terms of quality are as follows; S3 "Maybe the activities are sufficient, but I see them as insufficient in terms of quality. Events sometimes put us in a dead end. There are situations where we get confused. Sometimes I think too much about how I should give it to the child."
S6 "The activities are too many. I think the qualities are not enough." S10 "activities are sufficient, qualifications are lacking." S19 "The activities are sufficient in terms of numbers, but not very efficient in terms of quality. It is difficult to deliver some activities and content in some classes." Q23 "The quality of the event is not sufficient." Q24 "Due to reasons such as students' exam anxiety, children care more about test-like information than activities. While teaching some subjects, we sometimes hear sentences such as "my teacher, this subject is not in the exam, let's pass". The shortcomings of the system are also reflected in us. We have to proceed in order of importance." S30 " events are enough. But I can't say the same about his qualities." The opinions of the teachers who gave insufficient opinion about the time given to the activities; S11 "The time given to the activities is very insufficient.

This reduces their qualifications." Q12 "Some events are too long. Sometimes we have to skip or briefly touch on many important places in order to raise the issue." S14" There is no time left for activities to train the subjects." Q15 "There is too much crowd of topics. class hours are limited for the implementation of the activities." S18 "I actually like the activities very much. This is the best program to date. However, I am having a hard time finding the time to implement the activities. Whether I should train lessons, do activities, prepare for the exam, sometimes I have a mess. For example, I would like to take the students on excursions and exhibitions on historical subjects. But we have neither the time nor the authority to do so. Permissions are tricky. That's why I'm missing. This is the case, unfortunately."

Findings Regarding the Fourth Sub-Goal
They expressed their opinions about the problems experienced in the acquisition of values in the Social Studies course as problems arising from the society and the environment, problems arising from the family, problems arising from the family, problems arising from the teacher, problems arising from the education system and problems arising from the media.

Table 6. Teachers' Opinions About the Problems Experienced in Gaining Values in Social Studies Lesson

Opinions	Participant Code	f	%
Problems Caused by Society and Environment	S3,S7,S10,S14,S18	5	16,67
Problems Caused by Family	S1,S5,S9,S17, S20,S23,S30	7	23,33
Problems Caused by the Teacher	S2,S4,S21,S25,S28	5	16,67
Problems Caused by the Student	S13,S16,S24,S26	4	13,33
Problems Caused by the Education System	S6,S15	2	6,67
Problems Caused by the Media	S8,S11,S12,S19,S22, S27,S29	7	23,33

Teachers' views on the problems experienced in the acquisition of values in the Social Studies course and the problems arising from the society and the environment;
S3 "I see the biggest problem in gaining values as the environment.

No matter how nice behaviors we teach students at school and how well we train them, when the child puts them into practice in the society, if the child does not receive positive reactions, learning decreases. For example, when you see people who do not give way to the elderly, pregnant women and do not give priority in transportation vehicles, no matter how much tolerance and respect we teach people, it will be insufficient because there are problems in implementation. S7 "We mostly experience environmental and social problems. Responses to behavior are very important. When you do a well-intentioned and respectful job, you cannot get a positive response from the family and the environment.

For example, a child who waits for a long time in line for pita bread in Ramadan and waits for his/her time to come will show the behavior of taking the rights of others and stealing the order of others, instead of being fair when he sees those who buy pita without waiting before him." S10 "I have the most environmental problems in adding value. Especially if we narrow down the circle of friends. If friendships are built on good feelings and behaviors, values such as cooperation, love, solidarity, tolerance will develop in the child in a good way.

Good friend brings good habits. It adds good values to people. However, when we look around, such good friendships in children have decreased. Bad friendships in the environment increased. Slang words, extortion from friends, sarcastic attitudes, inappropriate actions, smoking at a young age, drugs, etc. The increase in substance use has become an interesting and usual thing. The child, who constantly sees these, unfortunately gains bad values in a negative sense." S14 "The most glaring and challenging problem for me is the negative impact of different peer groups. The attention of those who behave badly and do this behavior increases the popularity of those behaviors. Children who want to be a deviant, to be accepted by their friends, to be liked and to be liked, usually pursue negative examples." S18 "negative environment is the biggest problem. We teach equality. But she sees gender discrimination in society. He sees violence and oppression against women. These are shown to the child as normal. In this case, it becomes difficult to teach values". Teachers' views on the problems experienced in the acquisition of values in the Social Studies course and the problems arising from the family; S1 "Domestic problems take precedence over education in adding value. The increase in divorces in families also affects children negatively." Q5 "I have the most family-related problems while adding value. Especially the generation gap is one of the reasons for this situation. Families do not understand the language of the new generation children. Families are in contact with their children." S9 "Everything starts in the family.

It is necessary to see if what we teach at school is applied in the family. The child who learns love encounters violence at home. The father beats both the child and the mother at home."

S17 "Families do not spare any time for their children. everyone is either a workaholic or careless about their children. Everyone has a phone. There is no one who says whether my child wants love or does he need something. Children are not interested. I let go to the meadow, there are many who raise children in the form of my lord." S20 "family-sourced. Families are very indifferent towards their children." S23 "Family and its surroundings in one word. There are many families that do not care about their children. I hold a parent meeting once a year, most of them do not come and ask what my child is doing. Most of them do not know the development and needs of the child." S30 "Family problems also reduce the effectiveness of education. School cooperation among parents is weak. In other words, there is not much trust in the school. There is a community that disregards the function of the school. There are people who lack some values who always come to school as if they are guilty. " Teachers' opinions about the problems arising from the teacher about the problems experienced in the acquisition of values in the Social Studies course; Q2 "I think the biggest problem is in our community. Teachers are lacking in values education. In-service training should be implemented more frequently. This shortcoming makes the implementation of the values inefficient." Q4 "There is too much inconsistency between teachers. While one teacher's behavior is different, another friend of ours behaves differently. The child also acts according to the teacher. Thus, the child is confused and cannot show a fixed attitude."

Q21 "Cooperation between teachers is very lacking. The interdisciplinary method is rarely applied. The value learned in one lesson is not consolidated in another lesson." Q25 "Most teachers today are the wrong model. That's the biggest problem." Q28 "The main reason for the problems is our friends who do not set a good example. Behaviors that do not fit the identity of the teacher, dressing, smoking behavior, and attitudes like friends to students are the root of the problem." Teachers' views on the problems arising from the education system about the problems experienced in gaining values in the Social Studies course; S6 " does not end with counting problems. However, in my opinion, the biggest problem is our education system. We have an exam-oriented system and values always remain in the background."

S15 "Values education will not be adopted much as long as it is an exam-centered system. Education is always at the forefront of education." Teachers' views on the problems arising from the students about the problems experienced in the acquisition of values in the Social Studies course; S13 "In order for us to impart values to students, they must have a commitment to the school. They are so indifferent to school. In our time, school was a part of us. Few children feel it right now." S16 "Students have become very selfish. There is no more love, respect, tolerance, responsibility." Q24 "It is very important that students cannot communicate. The languages of communication have changed." Q26 "Students see school as unimportant. This reduces the value they attach to the school." Teachers' views on the problems arising from the media about the problems experienced in the acquisition of values in the Social Studies course; Q8 "We, as teachers, are faced with the reality of the media, no matter how well we train them and how hard we try. In our age, both television broadcasts and social media make incredibly empty and negative broadcasts. Violent films, films that disrupt family culture, pornographic elements, deaths and killings, the frequency of rape news, inappropriate hollow contests and marriage programs are now on the line. No matter how careful we are, children are negatively affected by such situations. Not only our children, but our entire nation is affected. It attracts children's attention. Children adopt these situations. These are the biggest obstacles to value education." S11 "Social media affects children negatively. Now their life is just there. We fail to influence the child." S12 "The media and mass media have become a big problem. In this way, we have difficulties in giving values and most of our values are lost because of such programs." Q19 "I see it as the media. The biggest problem is the media, where violence is committed almost every day." S22 "Social media-related problems are the beginning of everything. Students are going to the bottom. The virtual world is more attractive." Q27 "The media has made children very introverted.

They are individualized. It made him devoid of empathy. He mocked." Q29 "There are many problems caused by the media. Children forgot to study because of not being able to disconnect from social media. Nobody is working. Responsibilities are not done. Families also turn a blind eye to it." they said.

4.5. Findings Regarding the Fifth Sub-Goal

Teachers about the most important values that the Social Studies course brings to the students; patriotism, democratic attitude, sensitivity to cultural heritage, solidarity, respect, tolerance, freedom, self-confidence, justice, equality, respect for differences, empathy, responsibility.

Table 7. Teachers' Opinions on the Question of the Most Important Values Gained by the Social Studies Lesson to the Students

Opinions	Participant Code	f	%
Patriotism	S2,S10,S12,S16,S17,S20, S23,S24,S25	9	30
Democratic Attitude	S26,S29	2	6,67
Cultural Heritage Sensitivity	S11	1	3,33
Solidarity	S3,S27	2	6,67
Respect	S6,S14	2	6,67
Tolerance	S4,S7,S9	3	10
Confidence	S13	1	3,33
EqualityS22		1	3,33
Respect for Diversity	S1,S5,S19,S28	4	13,33
Empathy	S8,S18	2	6,67
Responsibility	S15,S21,S30	3	10

Opinions of Social Studies teachers; S1 "Respecting differences." S2 "patriotism."
S3 "solidarity." S4 "tolerance." S5 "respect differences." S6 "respect." Q7 "tolerance."
S8 "empathy." S9 "respect for nature." S10"patriotism." S11 "protecting our cultural heritage." S12" patriotism."
S13 "confidence." S14 "respect." S15 "peace." S16 "patriotism."
S17 "Love your country and be selfless." S18 "Do not empathize." S19 "Respect for differences." S20" love of country." S21 "responsibility." S22 "equality." S23 "patriotism." Q24 "patriotism." S25 "patriotism." Q26 "democracy." Q27 "solidarity." S28 "Respect for differences." Q29 "democracy." S30 "helping." expressed their opinions.

CONCLUSION, DISCUSSION AND RECOMMENDATIONS
Results
In the first question directed to the Social Studies teachers who participated in the interview, what values education meant was asked.

7 of the Social Studies teachers (23.33%) are the continuation of our culture and transfer it to the next generations, 3 (10%) people adapt to the society and get used to the rules of the society, 2 (6.67%) people live in harmony, 2' Two (6.67%) form the personality and character, 4 (13.33%) teach the good, the truth, helping each other and loving their country, 2 (6.67%) teaching people what behaviors to show in society, 2 (6.67%) teaching the rules of being an ideal individual, 1 (3.33%) ensuring the future of the country, 2 (6.67%) teaching moral virtues, 5 (16.66%) national and international education. He expressed it as teaching the universal elements in a planned and programmed way.

In the second question directed to the Social Studies teachers who participated in the interview, the most used methods and techniques in the acquisition of values in the Social Studies course were asked. Of the social studies teachers, 10 (33.33%) group work-cooperative learning, 2 (6.67%) brainstorming, 3 (10%) role playing and drama, 3 (10%) trip 1 (3.33%) exhibition, 3 (10%) case study, 2 (6.67%) watching movies and videos, 1 (3.33%) preparing a board, 3' Three (10%) expressed it as discussion, and 2 (6.67%) as thinking with six hats. In the third question directed to the Social Studies teachers who participated in the interview, their views on the proficiency level and quality of the activities related to values education in the Social Studies curriculum were asked.

Eight of the social studies teachers (26.67%) stated that the activities and qualifications were sufficient, 11 (36.67%) of the social studies teachers stated that the activities and their qualifications were not sufficient, 6 of them (19.99%) the activities were sufficient but the quality was insufficient, 5 and 16.67% stated that the time given to the activities is insufficient. In the fourth question directed to the Social Studies teachers who participated in the interview, their views on the problems experienced in the acquisition of values in the Social Studies course were asked.

Of the social studies teachers, 5 (16.67%) problems stemming from society and environment, 7 (23.33%) problems stemming from the family, 5 (16.67%) problems stemming from the teacher, 4 (13.33%)) stated problems arising from students, 2 (6.67%) problems arising from the education system, and 7 (23.33%) as problems arising from the media.

In the fifth question directed to the Social Studies teachers who participated in the interview, their opinions about the most important values that the Social Studies course brought to the students were asked. Of the Social Studies teachers, 9 (30%) patriotism, 2 (6.67%) democratic attitude, 1 (3.33%) sensitivity to cultural heritage, 2 (6.67%) solidarity, 2' respect (6.67%) respect, 3 (10%) tolerance, 1 (3.33%) self-confidence, 1 (3.33%) equality, 4 (13.33%) differences respect, 2 (6.67%) empathy, 3 (10%) responsibility.

Discussion
Considering the results of the answers given by the social studies teachers to the first question, the teachers stated that values education is very important.

It is understood that values education is important in terms of maintaining the national characteristics of our past societies that made us who we are, and gaining these characteristics for newcomers and constantly changing generations.

Another theme that the participants emphasized the most is the transfer of universal and national values in a planned, programmed and systematic way. Şahin (2013) supports this view of the research with the definition of "It is the work of transferring values in schools in a planned and programmed manner". If values are not given regularly with a certain education, they are among the dangers that are likely to face the danger of disappearance and corruption.

Social, economic, political and cultural developments and changes in our age have made it necessary to give values through education (Demircioğlu, 2008).
 The research on this subject is in line with the findings of this study. Balcı and Yelken (2013), in their study titled "Teachers' Views on Values in the Primary Education Social Studies Program and Values Education Practices", when looking at the views on the concept of value, the place of values in social life, the socialization of values by individuals, their contributions to personality development, the relationship between the individual and society. regulatory roles and values were the topics that focused on the rules regulating society.

In terms of these titles, it supports the findings of this study. Considering the results of the answers given by the social studies teachers to the second question, the teachers mostly preferred the methods in which the students would actively participate in the process.

Group work and cooperative learning were stated as the most used method and technique according to the findings. Balcı and Yelken (2013), in their study titled "Teachers' Opinions on Values in Primary Education Social Studies Program and Values Education Practices", found that the methods most used and found effective by teachers were case study, teacher modeling, problem solving, and rule development with students. and cooperative learning. In this study, it is similar in terms of finding activities that students actively participate in. It has been observed that teachers generally use similar activities. Aktepe, Keser and Şeref (2020), when the findings of the study named "Values and Values Education Practices from the Perspective of Classroom Teachers" were analyzed, it was observed that the methods and techniques used by teachers in values education were case study (32%), drama (12%), puzzle (%) 8), film (8%), painting (8%), short story (8%), poetry (4%), moral dilemma (4%), anecdote (4%), theater (4%), board (4%) and project (They explained it as 4%.

This study is similar in that there are activities in which students actively participate and that the findings of some activities are the same.

Considering the results of the answers given by the social studies teachers to the third question, it was stated that there were mostly negative opinions about the adequacy level and quality of the activities. The most stated reasons were that the activities were not suitable for the age groups of the students, that they were above the cognitive and affective capacities of the students, and their complex structure.

Aktepe, Keser and Şeref (2020), when their research titled "The Evaluation of Values and Values Education Practices from the Perspective of Classroom Teachers" was examined, on the question "Do you find the monthly activities sufficient?", 72% of the teachers did not find it sufficient, 16% said it was sufficient, and 12% They stated that they were undecided. In this study, the finding that the activities were insufficient is similar to this study. Güçlü (2015), in his research titled "Research on Values Education in Turkey", analyzed the research of İlkici (2011) and found that the current values education activities are insufficient and the content of the textbooks and the program are not suitable for values education.

Considering the results of the answers given by the social studies teachers to the third question, the most common problems are those arising from the family and the media.

When the findings of Berkant, Efendioğlu, and Sürmeli (2014), "Examination of Teachers' Views on Values Education" are examined, it is seen that students (19 sub-themes), families (16 sub-themes) and the media (3 sub-themes) are the basis of the problems experienced by teachers in values education.

From this point of view, the research findings also support the results of this research. Balcı and Yelken (2013), in their study titled "Teachers' Views on Values in the Primary Education Social Studies Program and Values Education Practices", when the findings in Table 2 are examined, the problems experienced are according to the priority order of the social, cultural and economic characteristics of the family, richness for social activities in schools. The lack of an environment, the negative effect of mass media, the fact that education is at the forefront in our country instead of education, the physical structure of the school and the lack of equipment, the negative effects of the circle of friends, the inadequacies of teachers in value education, the lack of models of teachers and the weak cooperation between teachers.

Looking at the research titles, there are similarities with the findings of this study.

Kapan and Gökçe (2017), on the other hand, in their study titled "Problems and Suggestions Experienced in the Process of Gaining Values in Social Studies Lesson", stated that the problems experienced in the process of gaining values were family-related problems, student-related problems, problems arising from the education system, not supporting children's value acquisition at home, environmental problems, respectively. It was found that the students could not allocate enough time to values education due to the intensity of the program, and that the students knew the behaviors but could not transform them into behaviors.

The findings are similar to the findings of this study.

Considering the results of the answers given by the social studies teachers to the third question, the value most gained in the social studies lesson is the value of patriotism. In their study titled "Values Education in Social Studies Lesson According to Different Perspectives", Yıldırım, Zenginli and Demirel (2017), when looking at the values gained at school according to Social Studies teachers, respectively, respect, fairness, patriotism, responsibility, honesty, helpfulness, solidarity, hard work, love. are expressed as values of peace, giving importance to family unity and sensitivity.

The findings are consistent with the findings of this study. Baş, Taşkıran, and Bulut (2016), in their research titled "The Opinions of Social Studies Teachers on Values Education", listed values such as tolerance, respect and honesty in the first place when the social studies teachers participating in the research listed the values they considered important. Çengelci, Hancı, and Karaduman (2013), in their research titled "Teacher and Student Opinions on Values Education in School Environment", according to teachers, the values that are tried to be taught to students in the school environment are in the form of love, respect, tolerance, solidarity and responsibility. The values taught in the school were seen as the values in the center of the values taught in the social studies lesson, and it was concluded that the social studies lesson is an important lesson in teaching values education. Topal (2019), in his research titled "Values Education and Ten Root Values", found patriotism as the most processed value with an average of 82.1. The findings are similar to the findings of this study.

Suggestions
In the light of the findings obtained as a result of the research, the following suggestions were made.
1. Teachers, who are an important guide in the transfer of values to students, should be supported with in-service trainings on values education activities, both as a course in higher education and after starting the profession.
2. Values education programs should be organized and developed in a way that transfers values easily.
3. It is necessary to increase the practical power of teachers by increasing the number of exemplary activities on values education.
4. Care should be taken that the values conveyed both in school, in the family, in the environment and in the media are not different from each other. All stakeholders need to be made aware of their responsibilities.
5. For values education, school-parent-student cooperation should be strengthened and studies should be carried out to increase the interest of students and parents in school.
6. It is necessary to work on increasing the quality of values education in all textbooks, not just Social Studies, and arranging values with an interdisciplinary approach.
7. Values education should be carried out in a planned and regular way within the framework of a certain system.

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The Compatibility of the Film Adaptations and Tragic Versions of the Egyptian Queen Cleopatra as a Woman with the Belief and Management System that Fed Cleopatra

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Absract
The compatibility of the film adaptations and tragic versions of the Egyptian Queen Cleopatra as a woman with the belief and management system that fed Cleopatra.

Although the perception of women in comparatively accepted religions and belief systems is the subject of another research with its wide scope, in this study, which will only be used as a tool to determine the opposite and sharpen its lines; The main aim is to try to measure how close the written and visual products created about Cleopatra can be with her possible reality. It will be one of the priority issues to examine the female queen identity of the period through the perception of gender.

In this article, the films shot in 1945, 1963, 1972 are emphasized.
Keywords: Cleopatra, Egypt, Woman, Gender, Osiris, Isis, Horus, Cinema, Tragedy.

Introduction
In the history of our flattened globe, the number of leading, leading women is very few compared to men. In my first history readings, I was very surprised because of the society I was born in; I have had many questions, including the historical information transferred. No matter how much it is read, no matter how much reading is enjoyed, Egypt still preserves its own mystery for some of its readers, because a lot of questions that arise from the readings remain unanswered.

In this article, these questions, which are almost like the corridors of the pyramids, will not even be mentioned, and it will be emphasized whether the time has come to create a new perception of Cleopatra by comparing the current perception of Cleopatra with the perception of Cleopatra presented by history, by giving the right to the information in the transmitted history. It has already come by the author of the article and if a new world is to be created, one of the most important female sources to be inspired is Cleopatra. Honestly, I don't like to use it at all as I remember the birth of this inspirational idea. Instead, it would be better to construct the history of the planet, to give the strong female identities in this history, as they should be, and to stay away from the word inspiration. In the light of all this information, starting with digital platforms, but without draining it, it will raise the general majority, but never commercial; The time has come for new perceptions of Cleopatra. As Cleopatra in history deserved…

Ancient Egyptian Religion
"Polytheistic belief system of ancient Egypt from the 4th millennium BCE to the first centuries CE, including both folk traditions and the court religion. Local deities that sprang up along the Nile Valley had both human and animal form and were synthesized into national deities and cults after political unification c. 2925 BCE. The gods were not all-powerful or all-knowing, but were immeasurably greater than humans. Their characters were not neatly defined, and there was much overlap, especially among the leading deities. One important deity was Horus, the god-king who ruled the universe, who represented the earthly Egyptian king. Other major divinities included Re, the sun god; Ptah and Aton, creator gods; and Isis and Osiris. The concept of maat ("order") was fundamental: the king maintained maat both on a societal and cosmic level. Belief in and preoccupation with the afterlife permeated Egyptian religion, as the surviving tombs and pyramids attest. Burial near the king helped others gain passage to the netherworld, as did spells and passwords from the Book of the Dead"
(https://www.britannica.com/summary/ancient-Egyptian-religion).

Cleopatra VII
"Cleopatra VII Thea Philopator was the queen of Egypt for 22 years. Although she was a queen for quite a long time, it was not a simple task for her; she had to go through various issues before she finally became ruler of Egypt. Cleopatra was born in Alexandria, Egypt around 69 BCE. In 51 BCE, her father, King Ptolemy XII, died after his

long reign as king. 18-year-old Cleopatra and her 10-year-old brother, Ptolemy XIII, were married off and became the new rulers of Egypt, but they faced difficulties with each other afterwards for the next few years.

In 49 BCE, Cleopatra was forced to leave Egypt and move to Syria by her brother's advisors. While she stayed in Syria, she formed an army in an attempt to try to take over Egypt again. Cleopatra was aware that she would not be able to win the war against her brother alone, so she went to Julius Caesar for help and became allies. After a four month battle, Cleopatra and her other younger brother, Ptolemy XIV, who was only 13 years old, took their throne back in Egypt. As for Ptolemy XIII, he had to leave Egypt. His death, however, was not entirely clear, but it was believed that he drowned in the Nile River). "Cleopatra, (Greek: "Famous in Her Father") in full Cleopatra VII Thea Philopator ("Cleopatra the Father-Loving Goddess"), (born 70/69 BCE—died August 30 BCE, Alexandria), Egyptian queen, famous in history and drama as the lover of Julius Caesar and later as the wife of Mark Antony. She became queen on the death of her father, Ptolemy XII, in 51 BCE and ruled successively with her two brothers Ptolemy XIII (51–47) and Ptolemy XIV (47–44) and her son Ptolemy XV Caesar (44–30). After the Roman armies of Octavian (the future emperor Augustus) defeated their combined forces, Antony and Cleopatra committed suicide, and Egypt fell under Roman domination. Cleopatra actively influenced Roman politics at a crucial period, and she came to represent, as did no other woman of antiquity, the prototype of the romantic femme fatale (https://www.britannica.com/biography/Cleopatra-queen-of-Egypt).

Figure 1
https://www.britannica.com/biography/Cleopatra-queen-of-Egypt

Cleopatra in Literature and Cinema…
«Tragedy examples of Cleopatra The definition of tragedy, on the one hand, is the unity of place-time-event transferred from Aristotle. While surrounded by the rule of law, the word tragic was adapted to the worldview of the age. When we look at three different works written on the same subject and genre, it is always interesting to see the compatibility, difference, (Parla, 2009:29) rebellion and novelty relations of individual literary texts with the genres they belong to. As an example, let's look at that most seductive, tragic story, the Cleopatra tragedies written in the sixteenth and seventeenth centuries.Between 1533 and 1678, three Cleopatra tragedies were written between the beginning and the climax of the Neoclassical trends.1. Etienne Jodelle's Cleopatre Captive (Captive Cleopatra, 1533)2. William Shakespeare's Antony and Cleopatra (Antonius and Cleopatra, 1606-1607)3. All for (Parla, 2009:29).

Figure 2
https://www.google.com.tr/search?q=%22liz+taylor%22+%22c
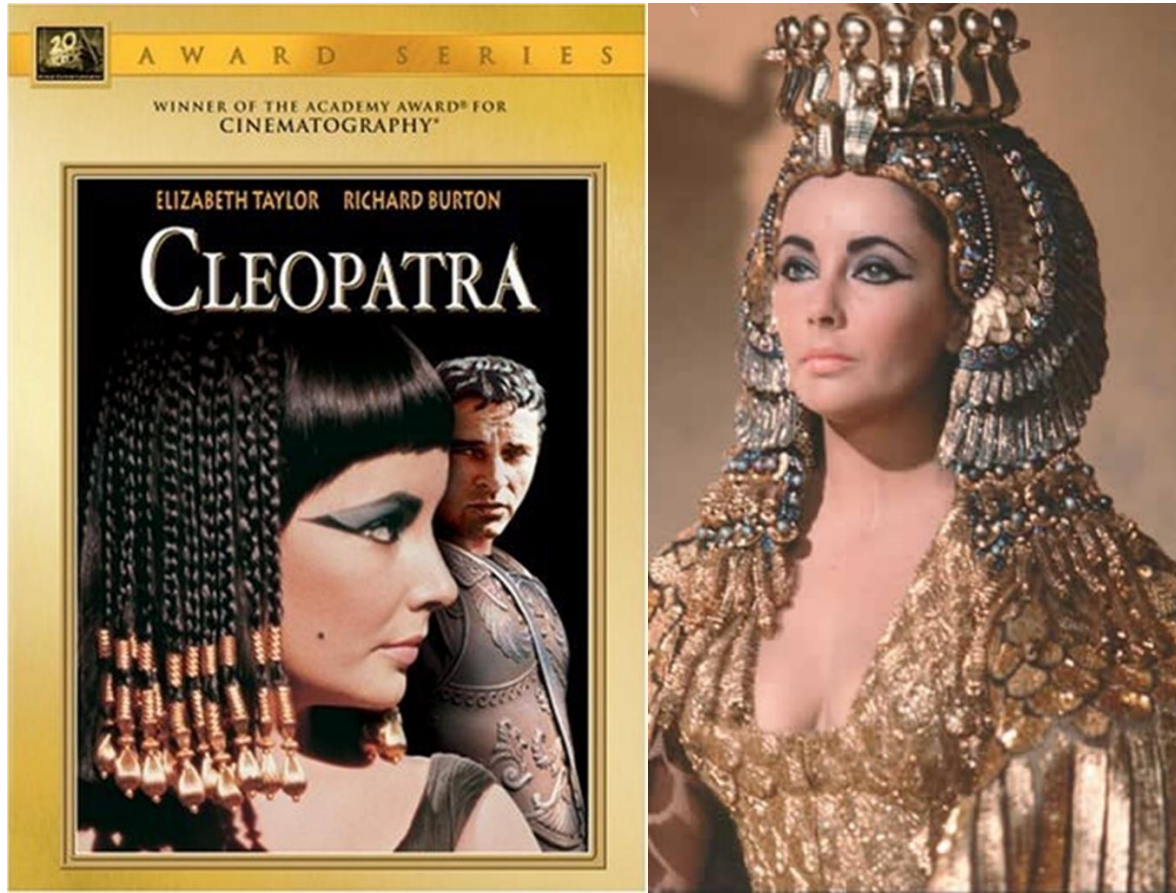
Love by John Dryden (1678).The source of all three is Plutarch's book Vitae parallelae (Parallel Lives). Jodelle's Cleopatra Captive is the first tragedy based on the classical model when staged in France; It was a huge hit, and Jodelle was acclaimed as the contemporary genius of classical tragedy. Jodelle's tragedy begins after Antony dies and Cleopatra is captured by Caesar. The play, which consists of long dialogues with the bridesmaids of Cleopatra, (Parla, 2009:30).

Figure 3: Cleopatra (1963)
https://www.youtube.com/watch?v=nX62Vk-D7FA
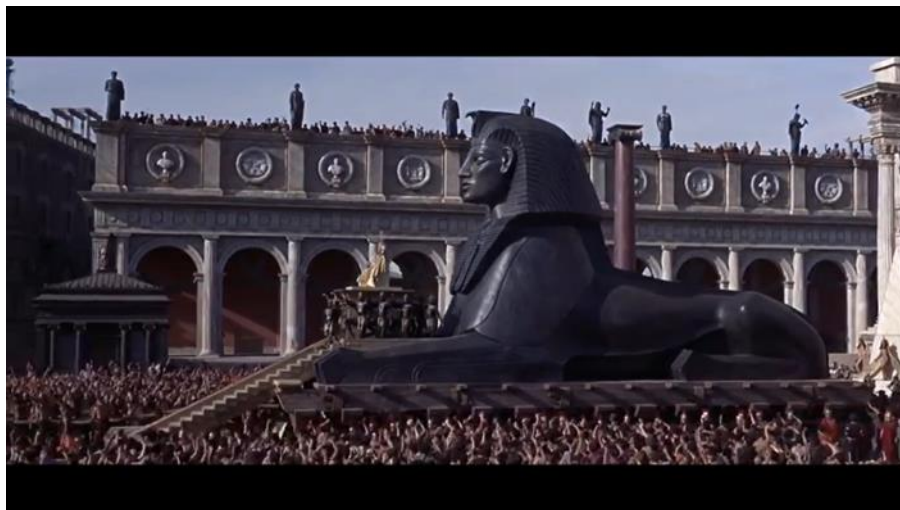
Figure 4: Cleopatra (1963)
https://www.youtube.com/watch?v=nX62Vk-D7FA

who chooses to commit suicide rather than experience the dishonor of captivity, is quite still and boring. Dryden, who, like Jodelle, aims to follow neoclassical rules, starts his game after the Battle of Actium, in which Antony was defeated. Thus, both authors fulfill the requirement to limit the event to twenty-four hours.

Only Shakespeare does not follow this rule. In Shakespeare's Antony and Cleopatra, the events spanned (Parla, 2009:31).

more than ten years and expanded to cover the history of an entire period, but we also ignore the fact that Jodelle and Dryden deprived their plays of the magnificent historical picture that Shakespeare had drawn in order to comply with the classical rule of time unity. There's no way we can. Instead of the historical dimension in Shakespeare, Dryden puts the romantic dimension. The full title of the game is Everything for Love: It's Worth the World. (All for love: The World Well Lost)» In Jodelle, on the other hand, its historical dimension has been replaced by a religious dimension. In Jodelle's personification of Cleopatra, the Egyptian queen is not an ominous woman but a repentant sinner. Before us is a Christian who is coming to terms with the sin of his forbidden love. At the beginning of the play, Antony's spirit appears on the stage and summarizes from Plutarch and tells the development of events up to that point. When the stormy love of Antony and Cleopatra is told (Parla, 2009:32). with the voice of a ghost, that love loses all its glory at the beginning of the play. It is lost in the share of the story.» In Shakespeare's Antony and Cleopatra, we see that not only the classical-space-time-event unity is ignored, but also the shrug of the parable is shrugged, because in Shakespeare's play, passion is at the forefront and before us we meet with ambition, passion, love and jealousy until our last breath. There is a living Cleopatra and Antony. Cleopatra is a unique creature that combines myth and reality in a game loaded with dramatic suspense from start to finish (Parla, 2009:32). The whole world speaks of the Egyptian queen. This woman, who seduced Antony and made him forget all kinds of social responsibility and political ambition, is like any other woman in love when he is with Antony.» Everyone has a different image of Cleopatra. For Philo she is a gypsy whose lust can only be satisfied by Antony. According to Antony, the serpent of the Nile is as dangerous a magician as it is beautiful according to Pompey. Enobarbus depicts him as a symbol of perfection even in his most imperfect state. In the passage in which he expresses his loyalty and love to Parla, 2009:32). Antony, passion and death

Figure 5: Caesar and Cleopatra (1945)
https://www.youtube.com/watch?v=roxlpFwzhOM

stand together; Even the oath of allegiance is an oath befitting the ominous prayer.» When John Dryden says that he rewrote the same subject by following Shakespeare, he added the moral to the story.» He also implied that he reformed Shakespeare's work by complying with the rules of depth and tragedy: « The protagonists represented are the famous heroes of a forbidden love; accordingly they are doomed to an unhappy end". Parla, 2009:32). Antonius and Cleopatra's sins were not due to necessity or mortal unconsciousness; All of them were deliberate sins committed intentionally, when he said, "Shakespeare, who thought of Dryden's heroes of classical tragedy who sinned unconsciously or by playing the gods, and therefore knowingly and willingly preparing their endings, portrayed his heroes as a part of the tragedy genre.» It is understood that he did not find them very suitable as the protagonists.» Parla, 2009:32). To correct this flaw, Dryden constructs All for Love in a tension between love and lust. In Dryden's play, Antony is a noble torn between love and responsibility. Cleopatra, on the other hand, is the faithful and emotional mistress who put her in these situations, but because she sees the man she loves in this situation, she suffers endlessly, has to pour these (Parla, 2009:32). pains into herself because it is not legitimate, and sees the rank of the legitimate wife of destiny very much to her. Thus, the head of Cleopatra, drawn by Dryden as a victim of fate, remains bowed throughout the play. Dryden makes an addition that does not exist in Plutarch, bringing the two women: the legitimate wife Octavia and the mistress Cleopatra against each other. While Octavia addresses Cleopatra as "the disgrace of womanhood" and insults her, Cleopatra looks down and apologizes. Dryden may have (Parla, 2009:33). adapted fiction and personification to the conventions of classical tragedy, but the play, compared to Shakespeare's, is melodrama, not tragedy. As can be seen, attempting to create works within the determinative type rules is mostly second class. It is a dangerous undertaking that produces works of art. Masterpieces often appear to have been inspired not by their creators' obedience to the rules of genre abstracted by critics, but rather their questioning of those rules». (Parla, 2009:33).

Figure 6: Caesar and Cleopatra (1945)
https://www.youtube.com/watch?v=roxlpFwzhOM
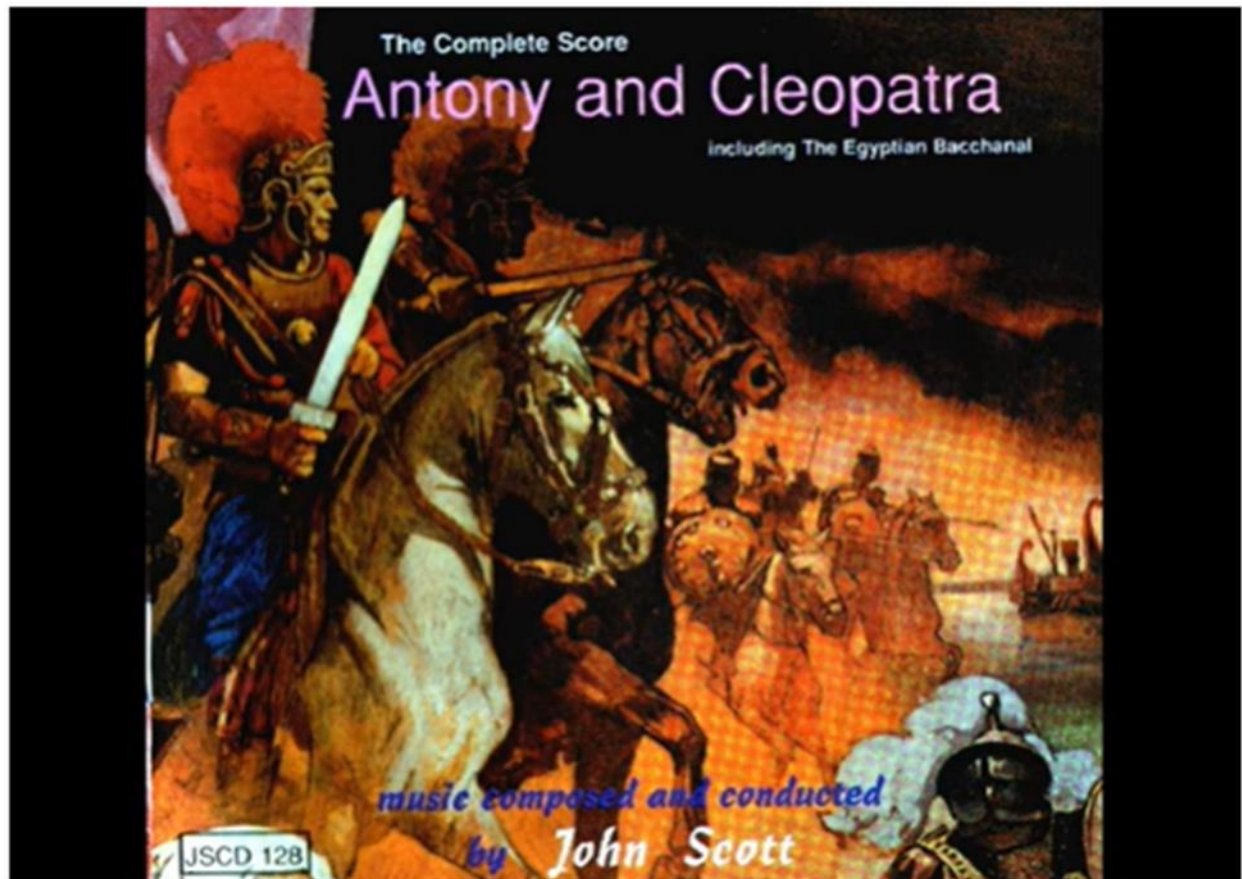
Figure 7: Antony and Cleopatra (1972)
https://www.youtube.com/watch?v=Mtze8V_IFPQ

Conclusion and Recommendations
Looking at the 1945 film Cesar and Cleopatra, the way the script is handled is a girl who believes in reincarnation, cares too much about cats in this sense, and is even confused. So much so that he can not even understand that

the man he confronts is Julius Caesar. Her astonished transition from childhood to womanhood and even queenship is thanks to Julius Caesar, whom she did not know for a long time. It is full of comedy elements and is far from the real strong female icon.

The 1972 version, based on William Shakespeare's work written in violation of the rules of tragedy, can be said to adhere to the source in which it is written above in which ways he pierced the tragedy.

The fact that there is such a woman who has truly lived in the history of the planet also offers a vast treasure trove of material necessary for human development on a massive scale.

In her silent film 1917, she is more represented as a nude female figure: a woman of love on the way to her wishes. Among the productions, Antony and Cleopatra, 1972; also stands out with its music. Her gold dress looks gorgeous on Elizabeth Taylor in a 1963 adaptation. In this film, the indications of the world of faith that Cleopatra nurtured during her upbringing and the way she used all these things are also witnessed.

If repeated, In the light of all this information, starting with digital platforms, but without draining it, it will raise the general majority, but never commercial; The time has come for new perceptions of Cleopatra. As Cleopatra in history deserved…

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https://www.youtube.com/watch?v=nX62Vk-D7FA
https://www.youtube.com/watch?v=roxlpFwzhOM
https://www.youtube.com/watch?v=Mtze8V_IFPQ

The Effect of Coming from the Common Language Branch on the Formation of Thought that Turns into A Cultural Code: The Korean Language Example through South Korean TV Series

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Absract

Researching and examining the similarities between the languages connected to the common language branch in the formation stage of the thought that governs human attitudes and attitudes, through cultural codes; One of the side implications of this research, which aims to present the similarities with examples and to bring them to a conclusion, is the issue of whether religion or language is dominant over the comparatively human, attitude and thought that determines his attitude. Therefore, the language-thought-religion triangle will be discussed especially in the results section.

Keywords: Language Family, Common Language Branch, Body Language, Confucius, Korean Language, Religion, Thought Formation

Introduction

There is a lot of polemic about the birth of natural languages. One of these areas of discussion is that languages are affected by the geographical conditions in which they were born. When we act on the language-thought axis, we know that generally accepted religions and belief systems can be effective in the formation of thought. Confucius says that languages are the mirror of a society. If there is a corruption, it is first in the language itself; In other words, we can see it in language usage. Before the thought is expressed, it is fed by a knowledge basin, the transfer of teachings, written visual indicators, which will become culture and will pass into the cultural code. Thought basins vary from society to society. For example, there are countries where we see a great divergence from generally accepted religions and belief systems with the 'Age of Enlightenment' in the late 17th century and the 18th century: European countries and even the USA. When we look at religions and belief systems, we see that complete legal rules provide the formation of healthy thoughts in cultures that apply the full legal system for their own society with the Age of Enlightenment.

The new generation has been born into such a system for centuries and the system involuntarily shapes it according to the rules of law. He is born into a family shaped by these rules. Regardless of the official religion, healthy thought production in such societies flourishes and grows within the full legal system. When we look at the societies in which the generally accepted divine religions and various belief systems form the pool of thought, among the societies that have not been able to make the full legal system work, we can say that those who have been able to establish a healthy connection with the living language and mind can also transform it into an attitude. We can detect that those who have not been able to establish a healthy connection with the living language and mind have problems in implementing those teachings that are good for humanity into daily life. What is said as memorization is not put into action; They can turn into worship that is done as a ritual and is repeated after it is done.

Geographical location, religion, language, belief systems When we look at belief systems such as Shamanism, Buddhism, Confucianism through language, we can say that they direct the thought formation stage towards control. Speak truthfully, speak thoughtfully, be respectful to the other party, etc. like... The effect of repetitions is great in human life, it can be said that the fairy tale effect is hypnotic... We can say that the belief system of South Korea is one of the cultures that control the thought environment. "Turkic languages form a language family of about 40 languages spoken in a wide area from Eastern Europe and the Mediterranean to Siberia and Manchuria and the Middle East. Approximately 170 million people speak a Turkish language as their mother tongue;[35] an additional 20 million people speak a Turkish language as a second language. The Turkish language with the highest number of speakers is Anatolian Turkish, which constitutes approximately 40% of the Turkish language group.[34] The rest of the Turkish people are concentrated in Central Asia, Russia, the Caucasus, China and northern Iraq." https://en.wikipedia.org/wiki
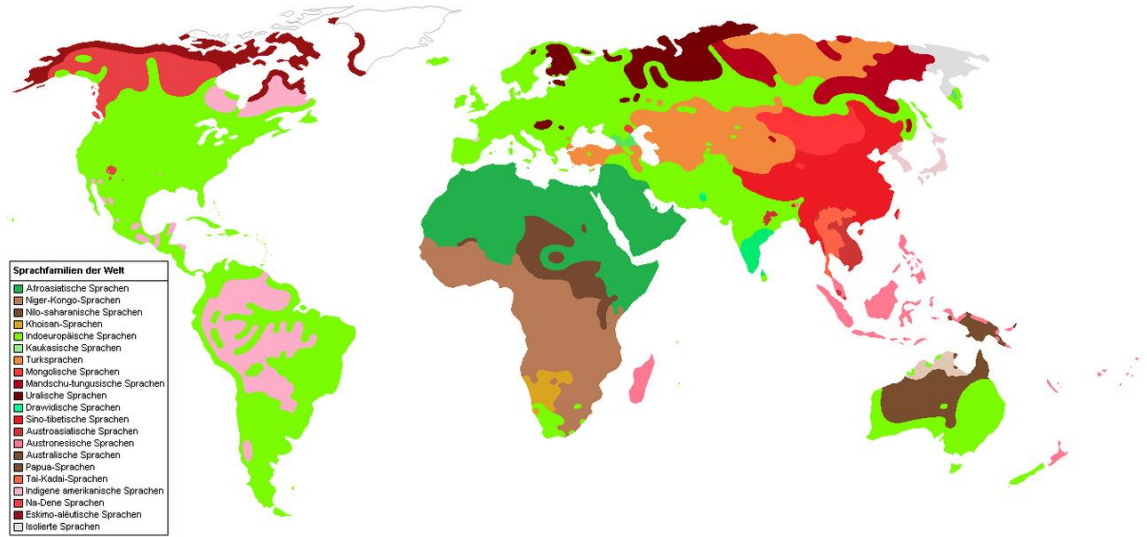
Figure 1

https://upload.wikimedia.org/wikipedia/commons/6/65/Sprachfamilien_der_Welt_%28non_Altai%29.png

We know that the ancient Turks spread over a wide area and were fed by the belief systems that fed South Korea, especially Shamanism. We obtain a lot of information about Turkish history from Chinese inscriptions. This article, which is based on the fact that both coming from such a root and belonging to the Altaic branch of the Ural-Altaic language family may have affected the formation of thought, is still at the beginning of the research, although there are some polemics. When we look at Ata's words, "An eye for an eye is a tooth for a tooth"; We can find many similarities.

Some examples of digitally released South Korean dramas that use similar language

Figure 2

https://www.dizigom1.com/homemade-love-story-1-sezon-7-bolum/

Body language, speaking by hitting the other person's body while speaking:
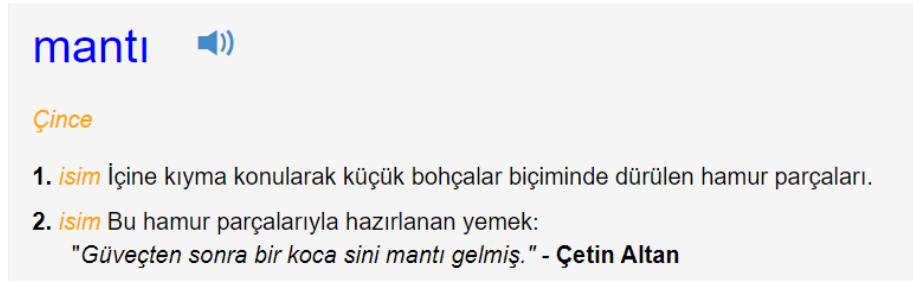
Figure 3
(TDK) https://sozluk.gov.tr/

The word «Mantı» is a word that has passed from Chinese to Turkish. In Korean, Mantı is pronounced as Mand/tu

Figure 4
https://translate.google.com/?hl=tr&sl=tr&tl=ko&text=mant%C4%B1%20yeme%C4%9Fi%20&op=translate

Figure 5
https://translate.google.com/?hl=tr&sl=tr&tl=ko&text=mant%C4%B1%20yeme%C4%9Fi%20&op=translate

Figure 6
https://www.dizigom1.com/homemade-love-story-1-sezon-7-bolum
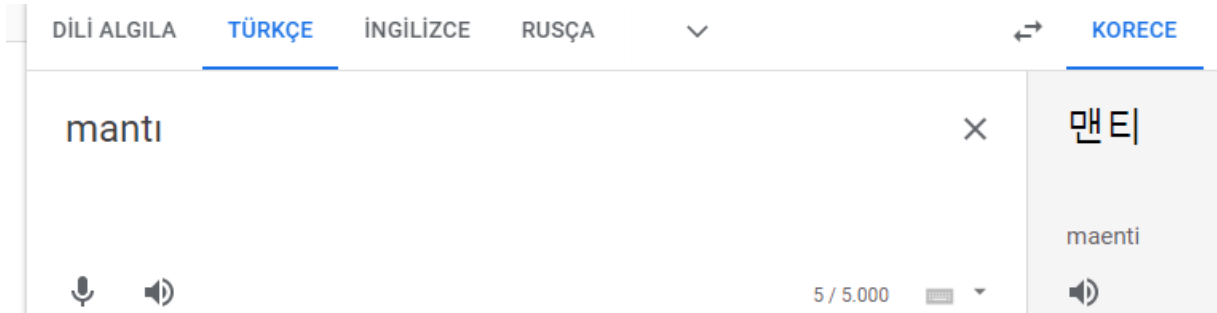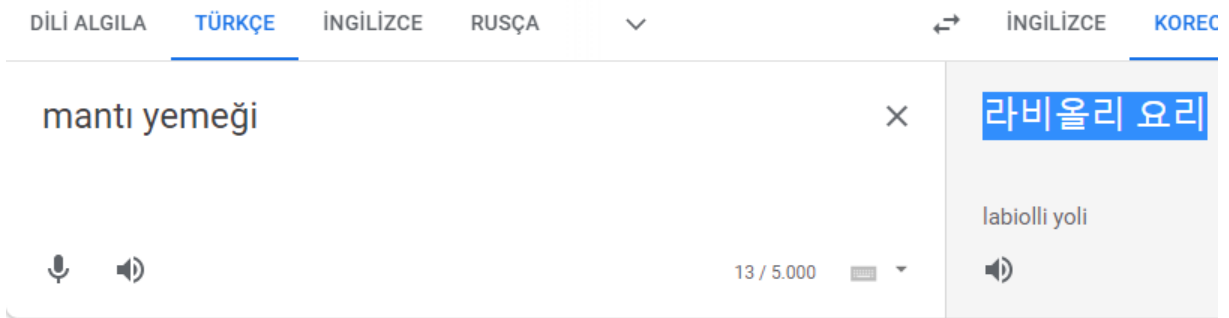
In the drama, the actor pronounces it mand/tu. Google translate pronounces it as menti. This information will be searched phonetically from other Turkish-Korean dictionaries in the article phase.

Figure 7
https://www.dizigom1.com/hometown-cha-cha-cha-1-sezon-3-bolum/

Conclusion and recommendations

The philosopher Confucius says that, contrary to popular belief, language is binding, not religion. There are many belief systems with generally accepted religions in the world. With the generally accepted religions as well as the number of people, the fact that there is a belief system perception, the mind produced from the current science, tells humanity. Considering the natural structure, weaknesses and weaknesses of human beings, and looking at history, it may impose the fact that it is preferable to concentrate on those that will contribute to world peace rather than the usable areas to the detriment of humanity. Wisely used languages can be a glue and a contributor to peace. Linguists know that language is based on formulas. The effect of these formulas on the formation of thought, whether they are read as they are written or closest to the way they are written, or that they are included in the family of agglutinative languages can also be a matter of debate. This research is produced from Netflix's South Korean series. We can see that some of the TV series in question have content that provides solutions to the problems encountered in daily life. Produced from updated scientific data; TV series that unite the peoples of the world and can contribute to world peace in this respect, as they are common human conditions that find solutions to human attitudes and attitudes and make life easier, find and hit the target point. In the digital age, we can see that the information about the lives that can hit the target so so hard in the digital age is also successfully constructed from time to time. The most impressive language uses are those produced from the stories people have internalized. This area must be transformed into a system in which the profits are shared, as well as the information transfer that will affect only the owners of the content produced in the future, commercial profit, and will make their lives easier. There are not many successful examples. It is used just enough to prey on the audience, in other   words, to make them watch. However, the cinema and TV series industry may evolve in a completely different direction and the evolution of the peoples of the world may take place.

All studies on language should be as valuable as studies in the field of science because of the relationship of language with thought. The richness of a language is like a mirror of the areas that the world of thought can reach and go. Look at the aspects of Shakespeare, Dante and thinkers that fascinate us.

 Like the name of a homemade series production, it is clear that in general the shooting is done on plateaus. A series of films that don't have much outdoor (maybe none) footage. Such series that do not require much production costs can also contribute to world peace.

Just as many cultures (Malays, American Jews, ..) enrich the English language, the words that are commonly used thanks to TV series, especially those from the same language family and language branch, can be observed to outweigh the elements acquired later, and can even be embodied by further research. The previous gain always has the possibility of dominance compared to the new. This is a feature of language. It is more permanent that enters into use first. What is permanent is also like the world of thought that the word represents. This area can of

course be slippery and changeable. See Digital Real Psycho-Semiotic Language Usages (Algül, 2021: 796-802). A use that has persisted in society for centuries can be restructured with another use if desired. One of the ways to do this may be the use of Digital Real Psycho-Semiotic Language.

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The Effect of Realistic Mathematics Education on Student Success in Teaching Set Concept in 9th Grade

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ABSTRACT
Mathematics curricula applied in Turkey are programs developed based on the assumption that every student can learn mathematics. In these programs, it is aimed that students create a mathematical solution process, express and generalize their solutions and thoughts in a meaningful way, and develop their logical inference and spatial thinking skills when they encounter real life problems. Different approaches and methods are used in mathematics teaching to serve these purposes. One of these methods is Realistic Mathematics Education (RME). RME is defined as a mathematization process that includes the stages of updating, formalizing, symbolizing and schematizing the information so that the student can access the information himself. In this study, it was tried to determine the effect of realistic mathematics education approach in teaching the concept of set on student success. This research, which tried to determine the effect of realistic mathematics education approach on student achievement in teaching the concept of set, was structured in an experimental model, and a pre-test-freeze-test control group model was used in the research. Achievement test and worksheets were used as data collection tools in the research. In this context, a study was conducted on 18 ninth grade students attending a study center in the 2019-2020 academic year, and the sample of the study was determined through the purposeful sampling method. Experimental and control groups were randomly selected from the classes in the study center. While RME is used to one of the groups in teaching clusters, traditional methods different from RME is used to another group. The data obtained as a result of the post-test used in the application were analyzed with the t-test. As a result of the research, when the t values obtained from the OBT scores were examined, it was seen that there was no significant difference between the RME-Group and GEL-Group students (t-value=-.321; p>0.05). This shows that the experimental and control groups, which were assigned impartially, were equivalent to each other according to their SBT scores. When the t-value obtained with the SBT scores of the RME-Group and Gel-Group students was examined, it was observed that there was a significant difference between the SBT scores of the groups (t-value=3.416; p<0.05). This shows that mathematics teaching with RME significantly increases students' success in mathematics compared to mathematics teaching with traditional method.
Key Word: Mathematics education, realistic mathematics education, instructional design

INTRODUCTION
Applied mathematics curricula applied in Turkey are programs developed based on the assumption that every student can learn mathematics. In these programs, it is aimed that students create a mathematical solution process, express and generalize their solutions and thoughts in a meaningful way, and develop their logical inference and spatial thinking skills when they encounter real life problems.

Teaching mathematics in accordance with the nature of mathematics also requires students to understand mathematical terms and concepts, learn mathematical modes and operations, and see the relationships between these concepts and operations. This mathematics teaching transforms the student into individuals who discover, construct mathematical operations, and make high-level classifications, and give them mathematical competence. From this point of view, it is seen that knowledge in mathematics is not disconnected and independent from the learner, and it is observed that students need to experience different learning experiences in order to be able to operate on mathematical subjects, produce ideas and make logical inferences. In this respect, students should be allowed to create their own knowledge and construct concepts in their own minds in order for students to gain high-level cognitive competencies and for teaching to be functional and meaningful. Different approaches and methods are used in mathematics teaching to serve these purposes. One of these methods is Realistic Mathematics Education (RME).

RME is defined as a mathematization process that includes the stages of updating, formalizing, symbolizing and schematizing the information so that the student can access the information himself (Altun, 2002). In RME, it is possible for students to create solutions by connecting with real life when they encounter problems, based on their informal acquisitions from their experiences through their own lives, and to access formal information in this way (Tunalı, 2010). RME is all human efforts to pose a new problem situation and solve it, to classify an

existing subject or organize a collection of knowledge, to concretize a concept, subject or process in order to better understand it, to produce a model and to rediscover it. and in this respect, it is actually a human activity (Freudenthal, 1968).

These mathematization processes, which lead to solving a problem in daily life and producing a mathematical model from this solution, are explained in two phases, horizontally and vertically (Treffers and Carr, 1997). In horizontal mathematization, the student constructs a real-life problem and formulates and solves it in a way that can be solved by mathematical operations. In vertical mathematization, the student recategorizes and organizes the information in the mathematical structure, and in this way, defines, combines and organizes mathematical formulas, orders, systems and models (Zulkardi, 2000).

RME includes the student into the mathematics teaching as an active element that discovers, organizes and reproduces the knowledge and structures at hand, and in this respect, it causes a change in student success (Demirdöğen & Kaçar, 2010; Özdemir & Üzel, 2012). Therefore, the effect of the use of RME in mathematics teaching processes on the learning achievements of students at different levels and subjects emerges as a topic that remains up-to-date. In this study, it was tried to determine the effect of RME approach in teaching the concept of set on student success. In this context, the definition, teaching and evaluation processes of RME are given below.

Realistic Mathematics Education
RME is a teaching approach or theory introduced by the Dutch Freudenthal Institute in 1971 (De Lange, 1996). Freudenthal, one of the founders of this theory and the institute, states that mathematics is a human activity that needs to be invented, not a tool to be discovered, and emphasizes the importance of relational interpretation in this activity. According to this approach, the need to do mathematics should be the basic principle of mathematics teaching processes and these processes should be started with daily life problems. By this approach, students try to reach mathematical knowledge in a learning environment that allows them to experiment, and the practice of teaching definition, knowledge and concepts, which is the first stage of teaching in traditional processes, result in the student's access to formal knowledge himself (Gravemeijer, K.P.E., Van den Heuvel-Panhuizen & Streefland, L.; 1990).

This process is called horizontal and vertical mathematization by Treffes (Treffes, 1987). While talking about a stage such as transforming students real life problems into a mathematical solution activity explaining defining the problem in a different way and using different mathematical tools for the solution mathematical system in vertical mathematization cycle or order is reviewed.

In this context, the learning processes of RME are given in Figure 1.
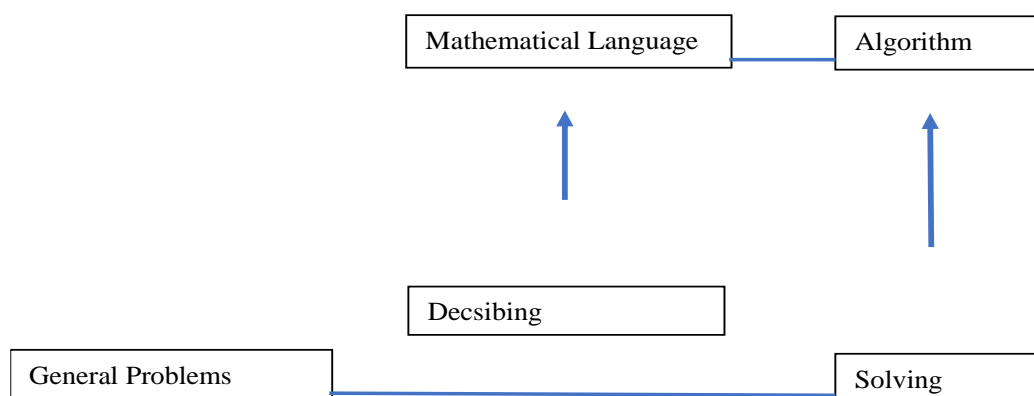
Figure 1. RME Learning Processes (Freudenthal, H. 1991).

The features that need to be focused on while teaching mathematics with RME are that mathematics is related and usable with real life, it is an open system, real mathematics teaching starts with making sense and ends with reaching formal mathematical knowledge. In this respect, the realistic expression of RME expresses not only the real world but also the reality in the mind of the student (Tomic and Nelissen (1998), cited in Uygur,2012, 12).

Real-life problems, which are frequently emphasized in the teaching processes of the approach, are pointed out on the one hand and the situations encountered in daily life should be included in the content of the problems, on the other hand, it is also explained that the problems are presented in accordance with the situations that exist in the mind of the student and are described as real (Van den Heuvel-Panhuizen, 2001).

Cluster Concept and Teaching

There are two main topics in teaching the cluster subject in 9th grades: basic concepts in clusters and operations in clusters. The achievements and sub-explanations of the subject of basic concepts in the clusters that will be taught in this study are given in Table 1.

Table 1. Acquisitions and Sub-Explanations on Basic Concepts in Clusters

Acquisitions Number	Acquisitions Expression	Acquisitions Description
9.2.1.1.	Basic concepts about sets are reminded.	a) Real-life examples of clusters are included. b) Different representations of sets are included. c) Cantor's work.
9.2.1.2.	It performs operations using the subset.	a) The concept of subset and its properties are discussed. b) Real-life examples related to the concept of subset are given. c) Problems that require combinations are not included.
9.2.1.3	Performs operations using the equality of two sets.	a) The concept of equality of two sets is associated with the subset. b) The concept of equivalent set is not given.

In this context, 6 hours are included in the content of the curriculum for the teaching of this title of the clusters subject, and these lessons constitute 3% of all mathematics teaching processes.

Research Model

This research, which tried to determine the effect of realistic mathematics education approach on student achievement in teaching the concept of set, was structured in an experimental model, and a pre-test-post-test control group model was used in the research. In this model, since the participants are measured on the dependent variable before and after the experimental procedure, the pattern is related, and since the measurements of the experimental and control groups consisting of different participants are unrelated, this model is a mixed design (Büyüköztürk 2009).

In the research, a 2x2 split-plot pattern (mixed pattern) was used. In this design, the first and second factor represent the experimental treatment groups (experimental and control groups) and repeated measurements of the dependent variable (pretest and posttest) In this manner, the pattern table showing the design of the research is given in Table 2.

Table 2. Experimental Design

Groups	Pretest	Process	Posttest
Experimental Group	Evaluation of the achievement test for the clusters unit	Mathematics teaching with RME (6 class hours)	Evaluation of the achievement test for the clusters unit
Control Group	Evaluation of the achievement test for the clusters unit	Teaching mathematics with GEY (6 class hours)	Evaluation of the achievement test for the clusters unit

Data collection tool

Achievement test and worksheets were used as data collection tools in the research. The cluster achievement test is a test developed by the researcher and is a data collection tool that has been finalized by examining the literature on the curriculum, the activities and worksheets prepared for the curriculum, and by reviewing it by field experts. After the achievement test was developed, it was applied to 9th grade students consisting of 20 students and the reliability coefficient was determined as 0.87. The content validity of whether the test meets the achievements of the curriculum was evaluated by the field experts and it was seen that the experts agreed at a rate of 0.90 in this regard.

While preparing the activities and worksheets developed for the use of the study in RME processes, a real key point was determined for the existing material on the subject of clusters and also it was tried to establish a

connection with the learning of the students in their previous experiences with this key point, by enabling the students to produce a new model with these link-making activities. Students were allowed to discuss with each other and evaluate the situation. While preparing the activity sheets, the model for designing the course materials in RME suggested by Zulkardi (Zulkardi, 2002) was used, and this model is given in Figure 2 (Gözkaya, 2015, 24).
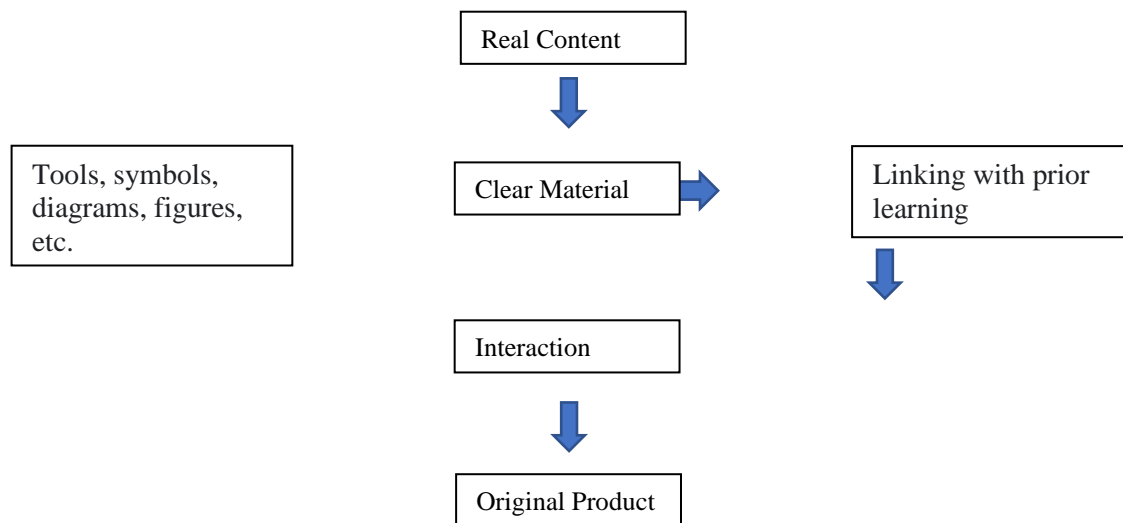
Figure 2. RME Course Material Preparation Processes

A sample activity sheet prepared in this context is given in Figure 3.

Selim will buy macaroni, cheese, minced meat and tomatoes for dinner from the market.
• When Selim arrives at the market, he sees that he does not have enough money to buy all the products.
• If Selim leaves the market without buying anything, write down the set showing what Selim bought.
• If Selim will buy only one product from the market, write down the clusters showing the products he can buy.
• If Selim is going to buy two products from the market, write down the clusters showing the products he can buy.
• If Selim is going to buy three products from the market, write down the clusters showing the products he can buy.
According to this, how many subsets can there be in a set with 4 elements?

Figure 3. Sample activity sheet

In the activity sheet given in Figure 3, a problem situation from daily life was created for the students to make sense of the concept of subset, the student should make a logical inference about the number of elements of a set with four elements, based on his experiences in this problem situation, and finally, the number of subsets of a set with n elements. It is aimed to complete both horizontal and vertical mathematization processes by reaching the generalization about how many it will be. Again, the activity fleece prepared for the concept of equality in clusters is given in Figure 4.

| Four friends are going to a cafe. The menu of the café is like in the left. People orders are as below:
Burak gets 1 fruit juice, 1 soda, 1 baklava,
Caner gets 2 soda, 1 kadayif and one ezogelin soup,
Handan gets 1 baklava, 1 fruit juice, 1 soda from
Nursel gets 1 ayran, 1 lentil soup and 1 fruit juice.
• Write down the clusters that each received while sitting in the cafe.
Are there any of these sets that are equal to each other? Please explain the reasons. | KAFE MENÜSÜ

ÇORBALAR
Mercimek 12 TL
Ezogelin 12 TL

MEŞRUBATLAR
Ayran 6 TL
Su 4 TL
Kola 9 TL
Meyve suyu 9 TL
Soda 5 TL

TATLILAR
Kadayf 14 TL
Baklava 14 TL |

Figure 4. Sample activity sheet

In the activity sheet presented in Figure 4, the students were asked to write sets about the orders they gave from the food and drinks in the cafe menu, based on the fiction that they went to a cafe as they would always do in their daily lives, and they were asked to speculate on the equality of these clusters. The activity in question is an example of horizontal mathematization processes in RME. The activities, questions or materials used in the teaching processes of RME should include horizontal or vertical mathematization (Norbury, 2004).

One of the worksheets structured for mathematics teaching processes with RME is motivation exercises prepared to create situations where students prepared for horizontal mathematization processes face daily life problems and turn it into a mathematical problem. An example of these studies is presented in Figure 5.

| Professional football in Turkey is played by the teams in 1st, 3Rd league and by the teams in the amateur clusters.
Consider the reasons if that amateur cluster teams are called clusters.
• Do these teams have anything in common? | |

Figure 5. Example motivation study

Sample questions were designed by the researcher to support students' efforts to reach formal information with the informal information they obtained from real life experiences to be used in RME processes. One of these questions is given in Figure 6.

| A star cluster is a collection of stars gathered in space. The stars in these groups have common characteristics such as their size, distance from the earth and the magnitude of their gravitational force.

Examine the Queen Constellation Cluster below. Segin, Ksora,Cih, Schedir, and Caph are members of this star cluster. Archird is not the member of this star cluster. | Segin
Ksora(Sora) Cih(Sih)
Caph(Kaf)
Archird(Arçirt)
Schedir(Şedir) |
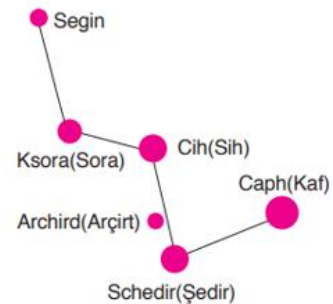
Figure 6. Example Question

In order to contribute to the student's vertical mathematization studies, examples of classification skills to organize a given data group, to see the relationships between them and to improve their organization skills were also developed by the researcher, and a study of these examples is given in Figure 7.

Sample
Our provinces on the map on the right are, Kırklareli, Edirne, Istanbul, Tekirdağ, Kocaeli, Sakarya, Yalova, Bilecik, Bursa, Balıkesir and Çanakkale.
Let show the cluster of these provinces by list, Venn diagram and common property method.
Let's call this set M.
You can set this cluster with the list method, with the provinces in curly brackets.
Let's write them and show them with commas.
M = {Kirklareli, Edirne, Yalova, Istanbul, Kocaeli, Sakarya, Bilecik, Bursa, Balikesir, Canakkale, Tekirdag}
Let Show the cluster M by Venn diagram such that including the provinces into a closed shape and putting commas after each provinces.
Let Show the cluster using common property method as follow
M = {x; provinces on the map}

Figure 7. Example Question

Working group

In this work a study was conducted on 18 ninth grade students attending a study center in the 2019-2020 academic year, and the sample of the study was determined through the purposeful sampling method. Purposeful sampling is a technique that is used in a research where resources are limited, that ensures the selection of individuals who can serve the purpose of the research in the study on the subject of interest, included in the sample, and keeps saturation in the foreground (Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K., 2015). The reason why the concept of saturation, or in other words, saturation, is used especially in qualitative research is that there is no general mathematical formula or it is difficult to determine the sample size in qualitative studies (Dongre AR, Deshmukh PR, Kalaiselvan G, Upadhyaya S., 2010). Experimental and control groups were randomly selected from among the classes in the study center. Traditional methods other than this method were used in teaching the subject of clusters to one of the groups and RME to the other in mathematics processes.

ANALYSIS OF DATA

The data obtained as a result of the post-test used in the application were analyzed with the t-test.

Results

In the research, it was primarily examined whether the experimental and control groups, which were randomly assigned, were equivalent to each other according to the Preliminary Achievement Test (ÖBT) results. For this, independent t-test analysis, which is a parametric test, was applied. The data related to the test in question are given in Table 3.

Table 3. Data on OBT Scores Regarding Group Equivalence

Grup	N	$\overline{X}$	S	T	p
RME-Grup	9	52,23	16,21	-.321	.578*
GEL-Grup	9	55,62	14,84		

*p>0.05

When Table 3 is examined and the t values obtained from the OBT scores are examined, it is seen that there is no significant difference between the RME-Group and GEL-Group students (t-value=-.321; p>0.05). This shows that the experimental and control groups, which were assigned impartially, were equivalent to each other according to their SBT scores.

Table 4 shows the findings on whether there is a significant difference between the Post Achievement Test (SBT) scores of RME-Group and GEL-Group students.

Table 4. Data on SBT Scores

Grup	N	X̄	S	T	p
RME-Grup	9	83,12	14,11	.3.416	.041*
GEL-Grup	9	72,64	13,72		

*p<0.05

When the t-value obtained with the SBT scores of the RME-Group and Gel-Group students is examined, it is seen that there is a significant difference between the post-CT scores of the groups (t-value=3.416; p<0.05). This shows that mathematics teaching with RME significantly increases students' success in mathematics compared to mathematics teaching with traditional methods.

DISCUSSION AND SUGGESTIONS

When the research findings were examined, giving the basic concepts in the clusters with RME increased the mathematics teaching success of the students compared to the traditional mathematics teaching. This finding is similar to the results of other studies on RME-based teaching increasing student achievement (Bintaş, Altun, & Arslan, 2003; Altun, 2002; Yeşildere & Türnüklü, 2007; Üzel & Uyangör, 2006). Among these studies, the 9th grade level study conducted by Gelibolu (Gelibolu, 2008) also examined the effectiveness of RME in teaching logic to students by taking the opinions of teachers and students, and it was concluded that it was more effective than traditional teaching methods.

It is necessary to look at the effect of RME on achievement of the achievements in the mathematics curriculum, such as the evaluation of the effect of RME on student achievement compared to traditional teaching methods. In this sense, in the study conducted by Arseven (Arseven, 2010), not only the success of the students but also their affective characteristics were taken into account, and in this study, in which the problem solving and attitude components of the students were analyzed together, it was found that RME was more effective than other methods in terms of fulfilling the objectives of the curriculum.

Teaching mathematics with RME enables students to develop positive attitudes towards the lesson, increases their success in mathematics lessons and improves their creative thinking skills (Cansız, 2015; Kurt, 2015; Özdemir, 2008). In RME processes, it is important for the student to be included in the problem solving processes and to make sense of the information in the way of reaching formal information from informal information. In this context, some researchers have studied the meaning-making dimensions of RME and have reached the conclusion that students attribute meanings to unsolvable problems, are flexible in problem-solving situations, and can create compelling thinking stories through RME (Reusser and Stebler, 1997; Verscaffel and De Corte, 1997).

The effectiveness of teaching with RME undoubtedly depends on the quality of the teaching material used. In this manner, various studies have been carried out on how the course design should be and the features that should be included in the materials in the teaching processes with RME (Meyer, 2001; Van Reeuwijk, 2001). Among these studies, the materials developed for using in the RME processes must have the necessary features, such as starting learning by giving a real-life key to the student, connecting the students with models, tables and diagrams due to the long learning process, enabling students to develop and present their own solutions, and structuring and interconnecting mathematical concepts. sorted as.

Based on all these findings, it has been concluded that the application of RME in teaching environments is an achievement, but the preliminary preparation stage must be carried out efficiently in order to make the application correctly. From this point of view, it is thought that it will be beneficial to provide training to educators and teachers who will practice in areas such as course design, material development and creating key problem situations related to real-life situations.

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The Effect of Web 2.0 Tools Enriched Social Media Supported Science Instruction on 6th Grade Students' Use of Social Media and Students' Views

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ABSTRACT
The aim of this study was to examine the effects of the online science course, which is planned with Social Media Supported content enriched with Web 2.0 tools, on the use of social media by 6th grade students and to determine the students' opinions. The sample group of the study consisted of 15 6th grade students, 8 are in the experimental group and 7 are in the control group. Embedded mixed methods research design was used in the study. In the quantitative part of the study, a quasi-experimental design with pre-test post-test control group was used. For the quantitative data of the research, The Usage Purposes Scale of Social Networks (UPSSN) was used. Qualitative data were obtained through Social Media Tools Use Cases Questionnaire (SMTUCQ) and semi-structured interview form. Quantitative data were analyzed with SPSS 26.0 program, and qualitative data were analyzed with content analysis method and column charts. The findings show that, the experimental group and the control group UPSSN pre-test post-test total scores were not significantly different after implementation (p>.05), however, experimental group's mean rank value increased while the control group's mean rank value decreased. The difference between UPSSN pre-test post-test scores of the experimental group students was found to be statistically significant (p<.05). It was observed that 'Social Media Supported Instruction' does not have a negative effect on the students' use of social media, directs them to use social media for scientific purposes, and increases their communication skills. It was observed that the students' views on the use of social media tools in the course were positive. It can be said that the use of blog has a positive effect the creativity skills of the students, especially as it provides free space for students, give them the opportunity to manage, and create products by using their imaginations. Suggestions were made for the findings of the study.
Keywords: Social Media, Social Media Supported Learning, Blog, Instagram, Web 2.0 Tools, E-portfolio, Online Learning

ÖZET
Bu çalışmanın amacı, Web 2.0 araçlarıyla zenginleştirilmiş Sosyal Medya Destekli içerikle planlanan çevrimiçi fen bilgisi dersinin 6. sınıf öğrencilerinin sosyal medya kullanımına etkisini incelemek ve öğrenci görüşlerini belirlemektir. Araştırmanın örneklem grubunu deney grubunda 8, kontrol grubunda 7 olmak üzere 15 6. sınıf öğrencisi oluşturmaktadır. Araştırmada karma yöntem araştırma desenlerinden iç içe desen kullanılmıştır. Araştırmanın nicel kısmında ön test son test kontrol gruplu yarı deneysel desen kullanılmıştır. Araştırmanın nicel verileri için Sosyal Ağları Kullanım Amaçları Ölçeği (SAKAÖ) kullanılmıştır. Nitel veriler, Sosyal Medya Araçları Kullanım Durumları Anketi (SMAKDA) ve yarı yapılandırılmış görüşme formu aracılığıyla elde edilmiştir. Nicel veriler SPSS 26.0 programı ile, nitel veriler ise içerik analizi yöntemi ve sütun grafikleri ile çözümlenmiştir. Bulgular, uygulama sonrasında deney grubu ve kontrol grubunun SAKAÖ ön test son test toplam puanları arasında anlamlı bir fark olmadığını (p>.05), ancak deney grubunun sıra ortalama değerinin arttığını, kontrol grubunun sıra ortalama değerinin ise azaldığını göstermektedir. Deney grubu öğrencilerinin SAKAÖ ön test son test puanları arasındaki fark istatistiksel olarak anlamlı bulunmuştur (p<.05). 'Sosyal Medya Destekli Öğretim'in öğrencilerin sosyal medya kullanımlarına olumsuz bir etkisinin olmadığı, sosyal medyayı bilimsel amaçlarla kullanmaya yönlendirdiği ve iletişim becerilerini artırdığı görülmüştür. Öğrencilerin derste sosyal medya araçlarının kullanımına ilişkin görüşlerinin olumlu olduğu görülmüştür. Özellikle blog kullanımının öğrencilere serbest bir alan sağlayarak hayal güçlerini kullanmalarına ve ürünler ortaya çıkarmalarına olanak vermesi sebebiyle öğrencilerin yaratıcılık becerilerine olumlu etkisi olduğu söylenebilir. Çalışmanın bulgularına yönelik önerilerde bulunulmuştur.
Anahtar Kelimeler: Sosyal Medya, Sosyal Medya Destekli Öğrenme, Blog, Instagram, Web 2.0 Araçları, E-portfolyo, Çevrimiçi Öğrenme

INTRODUCTION

Throughout the centuries in the history of mankind, different ways of accessing information have been sought (Baran, 2014). In the information age we live in, the need for interpersonal communication and information exchange is increasing rapidly. In this direction, the need for resources in education has also arisen. These requirements are easily met with the resources offered by technology to society. Especially the 21st bringing with it changes in the economic and social sphere in the century the age we are in is called the age of technology (Akolaş, 2009; İşman, 2011). One of the functions of education is to prepare students for real life. To perform this function, there was a need to conduct studies to create educational scenarios that will adapt to changes over time. Thus, to make the learning and teaching process more efficient, student-centered, highly interactive, and collaborative learning environments have been created. In our current era, it is necessary to use information technologies effectively for societies that can be described as rich and advanced in terms of information to exist (Hussain and Safdar, 2008). It can be realized through education that individuals acquire skills to use technology to maintain their existence and keep up with the society in an environment where technology is used (Alkan, 2019). Therefore, educational technologies are an indispensable disciplinary field to adapt to today's conditions with both changing communication elements and developing technology and to take part in the category of developed countries.

While web-based distance education has become a preferred teaching model in line with its advantages, it has also become mandatory to use it in emergency scenarios in education. The first case in the world appeared in China in December 2019. The Coronavirus (COVID-19) effect, which affects the world globally and occurred in an unexpected time frame, has spread all over the world in a short time. On March 11, 2020, when the first case emerged in Turkey, pandemic was declared all over the world. After this date, on March 23, 2020, with the COVID-19 pandemic process, distance education platforms were presented as a solution to this urgent need (WHO, 2020; Özdoğan and Berkant, 2020). During pandemic instead of face-to-face, the education was carried out with an Web-based distance education model. There have been uncertainties during the pandemic process, including as how long the educational changes will last and what will happen next. As a result, technology-based options that can maintain continuity in education have been developed by educators. Several solutions have been developed for using the Internet as an educational tool at every level of education, from primary school to higher education (Gürleroğlu and Yıldırım, 2021). Web-based distance education has become mandatory with the discontinuation of face-to-face education worldwide during the pandemic process and online platforms are used that allow students and teachers to communicate audio and video simultaneously (synchronously) and share screens (Keskin and Özer Kaya, 2020; Telli Yamamoto and Altun, 2020). Online technologies have been gathered to ensure the continuation of the educational process, which was interrupted by decommissioning educational activities. This situation is expressed as "Emergency Distance Education" (EDE) (Sezgin, 2021; Baran and Sadık, 2021). In this direction, the use of technological tools in the distance education process has been started. Online educational platforms, in other words, virtual classroom implementations that provide online chat and video conference services such as Google Meeting, Google Hangout, Zoom, and Skype are also preferred by instructors.

With the development of Web 2.0 tools in the globalizing world, the integration of technology into education is accelerating day by day. Before the development of Web 2.0 tools, web 1.0 tools were created in a 'read-only' format for searching and reading information which were allowed only to communicate simply and create Internet sites. Web 2.0 tools have brought the information to the 'read-write' format, so that users can take an active role in creating content. These tools allow users to access and create any text, video, audio, and music files (Adıgüzel, 2012). The development of social media tools could not be prevented by the active user community socializing online. New social platforms emerge each day and the development of existing ones continue. Many social media tools, especially Facebook, Twitter, YouTube, Blog, Wiki, Google, WhatsApp, Instagram, are used with great interest by students.

In this age, it has become quite easy to access information and the information has ceased to be just truths learned from teachers or books. Social media and the Internet have become sources where individuals can access generally accepted truths. With the diversification of ways of accessing information, it is of great importance for individuals to have the ability to obtain accurate information, interpret it and know how to use it in daily life. In this case, it is not enough for individuals to be only knowledgeable. They should be individuals with 21st century skills such as Innovative thinker, questioning, criticize, able to decide, solve problems, and actively learn (Olkun and Toluk, 2003; Şimşek İşleyen, 2020). However, in today's conditions, with the traditional teaching method, it becomes difficult for individuals to acquire 21st Century skills such as problem solving, critical thinking and life skills, learning remains only at the level of knowledge, and students are dragged into a rote attitude. Thus, information that cannot be structured in the mind is not permanent and cannot be used in daily life. Alternative learning models are presented to the traditional teaching method, which is insufficient in science teaching. With the development of Web 2.0 technology, the social media channel used by the wide masses has also been included in the education

(Akgündüz, 2013). The fact that social media supported learning model will meet the expectations of the 21st century has led development of this model (Polat, 2016).

Social networks have become one of the most important tools for communicating today. These networks have been defined as "social" because they strengthen the communication of friends and colleagues on the Internet and ensure the formation of connections between members (Zaidieh, 2012). Social software provides holistic learning (social) and individual learning (cognitive) with the help of traditional email, chat and modern wikis, blogs (Kundi and Nawaz, 2010). Social media tools are emerging as a solution that can be used in emergency situations, and it is considered appropriate to use them in distance education, which has become widespread with the pandemic process (Baytiyeh, 2021). Social media tools video, photo such visual shares and announcements are made, and it is used to exchange information about students to maintain school-family communication. In addition, tools such as WhatsApp, Facebook, Twitter and Instagram create an active environment that allows teachers to share and discuss learning, teaching, and design ideas with each other (Conole and Culver, 2010; Kaban, 2021). Computer games, websites, blogs, e-mails are also among the social media tools. Social media tools such as Wiki, YouTube, Twitter, Instagram, Google, LinkedIn, Pinterest, Tumblr, Vine, Flickr, Myspace are also widely used at the present time (Öztürk, 2015). Blogs can be used for educational purposes thanks to activities such as the teacher's involvement of students by creating a blog page, the ability of students to share, including visual and written, to transfer comments and create a discussion environment. Students can reinforce what they have learned with the taken notes about the courses (Akgündüz, 2013).

Ensuring students' motivation, encouraging meaningful and individual learning is one of the key points of learning process. With the year 2020, the world views of the learners have changed along with the understanding of learning. In this case, using social networks and Web 2.0 tools with students is important in terms of increasing motivation, enabling interaction and collaboration. As a result of these changes, there is an increasing interest in educators to use social media and integrate it into education (Barnes, 2019; Baytekin and Su Bergil, 2021). When social media tools are used in the learning process, they enrich the learning environment and enable students to become individuals with 21st century skills such as creative, active, cooperative, peer interaction, researcher, and questioner (Zaidieh, 2012; Özmen, Aküzüm, Sünkür and Baysal, 2012; Grover, 2014; Uyanık-Aluktun and Elmas, 2019). Social networks offer opportunities to enrich educational environments thanks to their features such as affordability, entertainment, speed, flexibility, repeatability, and easy accessibility (Cheong, 2002; Dobrzanski, Florian and Brytan, 2007; Zaidieh, 2012; Grover, 2014).

The use of social media tools in education positively affects the students' learning (Ajjan and Harsthone, 2008), improves, accelerates, facilitates communication (Acar ve Yenmiş, 2014; Neira- Piñeiro, 2015; Yaylak, 2017), it increases their success and motivation, positively affects their attitude (Barış, 2011; Şahin, 2012; Akgündüz, 2013; Çakıroğlu, 2013; Alan, 2014; Sarsar, Başbay and Başbay, 2015; Kelleci Öztürk and Tetik, 2015; Özgür, 2016; Koç and Ayık, 2017; Gürdoğan and Bağ, 2020; Baytekin and Su Bergil, 2021).

It is an undeniable fact that social media and Internet technologies have become a need in the cultural, economic, and social fields in our age. Social networks, which some educators consider as a threat, are becoming increasingly popular among young people. Many schools prefer to use useful tools by banning websites. However, the effectiveness of social media on students should be considered by educators. Educators need to find ways to use social media tools effectively that have become a part of the life of today's students by establishing a balance between forbid and freedom in Internet use, and to support and enrich teaching with social media tools (Murray, 2008; Sarsar, Başbay and Başbay, 2015). Cassidy (2013) stated that it is important not only to teach students to use technology safely and correctly within the framework of certain rules, but to enable them to use technology meaningfully by living by doing. Initially, teaching the correct and effective use of popular social media tools in the personal and educational life of individuals ensures the use of technology for useful purposes. For teachers the use of tools such as social media in primary school lessons is considered as an element that threatens security. However, it is important not to use the student's real name and surname, but instead to use only their first name or a nickname in order not to violate privacy. In addition, the approval of students' posts by the teacher and not allowing inappropriate posts to be shared is another way to ensure privacy (Cassidy, 2013). At this point, it is important to determine the limits and nicknames of using Social Media tools by creating a 'Social Media User Guide' related to using social media tools in the teaching process. Thus, teachers can take precautions against possible violation of privacy and use for negative purposes.

The aim of this study was to use more than one social media tool interactively, unlike other studies in this field, and to realize the teaching of science through multiple social media in this way. So that the aim was to examine the impact of the science course enriched with Web 2.0 tools processed with social media-supported content on the students' use of social media and to obtain students' opinions. For this purpose, in this study, "What is the

effect of the Web 2.0 Tools Enriched Social Media Supported Science Instruction on the students' use of social media and what are the opinions of the students?" question has been investigated.

In this direction, the following sub-problems have been identified as:

1. What is the effect of the Web 2.0 Tools Enriched Social Media Supported Science Instruction, processed with social media supported content, on students' use of social media?
2. What is the effect of the Web 2.0 Tools Enriched Social Media Supported Science Instruction, processed with social media-supported content, on students' purpose of using social media?
3. What are the opinions of the experimental group students about science course enriched with Web 2.0 tools processed with social media supported content?

This study will contribute to the literature by actively participating the students in the learning process by creating and using more than one social media tool interactively, and thus realizing science instruction through multiple social media. It is thought that this sample implementation will guide teachers and researchers to enable students to use these tools for educational purposes.

METHODOLOGY

In this study embedded mixed method research was used. In an embedded design traditional qualitative and quantitative data collects and analyzes. This design allows the collection of qualitative and quantitative data simultaneously or sequential; it is a design in which one of these data types supports the other. In the embedded design process, the researcher collects both quantitative and qualitative data within the scope of a single experiment and analyzes them separately. Qualitative and quantitative data examine different research questions (Creswell, 2017). In the quantitative part of the study, a quasi-experimental design with the pre-test post-test control group was used. The model with a control group consists of two groups, one experimental and the other control group, which are determined randomly. Measurement tools are applied to both the control and experimental groups before and after the implementation (Büyüköztürk et al., 2008). The research model of the study is given in Figure 1.
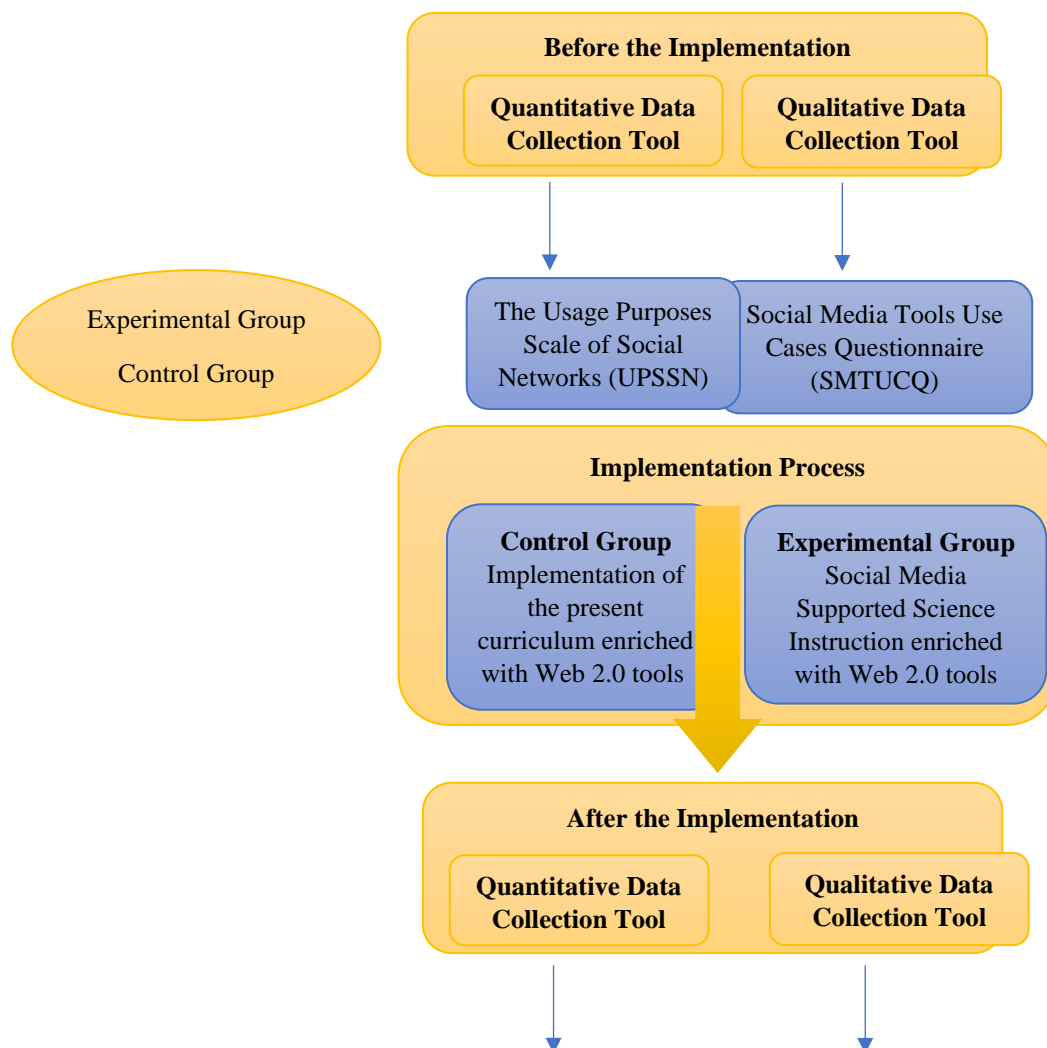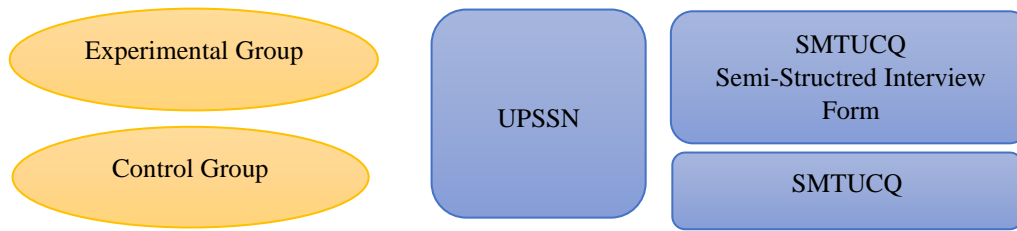
Figure 1. The Research Design

STUDY GROUP

The study group in this research consisted of 15 6th grade students, 8 are in the experimental group and 7 are in the control group who studied at a public school in Istanbul.

DATA COLLECTION INSTRUMENTS

For the quantitative data of research, The Usage Purposes Scale of Social Networks (UPSSN) was used. For the qualitative data of research Social Media Tools Use Cases Questionnaire (SMTUCQ) and Semi-structured Interview Form was used.

SOCIAL MEDIA TOOLS USE CASES QUESTIONNAIRE (SMTUCQ)

To determine the students' use cases of social media tools, 6-question 'Social Media Tools Use Cases Questionnaire' was developed by the researcher. Four of the questions were asked as closed-ended and two of them were asked as open-ended. The first 4 questions were about which social media tools the students used, the time they spend on social media, and the purpose of using social media. In the last 2 questions, it is aimed to determine the students' opinions about the use of social media and how to use it.

THE USAGE PURPOSES SCALE OF SOCIAL NETWORKS (UPSSN)

The 'Usage Purposes Scale of Social Networks' developed by Usluel, Demir and Çınar (2014) was used to determine the students' usage purposes of social networks. Usluel, Demir and Çınar (2014) the reliability coefficients of each factor were found to be, .78 for the "research" factor, .86 for "cooperation", .67 for "initiating communication", .87 for "communicating" and .82 for "maintaining communication". Kayış (2010) stated that the Cronbach alpha reliability coefficient being between ".6 and .8" is sufficient for the scale to be found reliable. Cronbach's Alpha value was found to be .92 for the entire scale.

SEMI-STRUCTURED INTERVIEW FORM

The 'Opinions about the Social Media Supported Science Instruction' form was developed by the researcher to determine the opinions of the students about the implementation carried out. The form consisting of 9 open-ended questions was transferred to the digital platform and sent to students to fill out. An expert opinion was obtained for the semi-structured questions prepared. In the form, the opinions of the tools used, the difficulties encountered in the implementation and the ones that want to be changed, the advantages and disadvantages of the implementation and the questions about the student's views on learning were given.

IMPLEMENTATION PROCESS

The implementation period of the study was 12 hours and 6 weeks with preparations, and it carried out in 3 phases: (1) preparations before implementation, (2) introduction to social media tools and (3) implementation process.

In the Preparations Before Implementation process, an email address was created to register for the social networking sites to be used. The blogs and Instagram account were both created using this email address for the implementation. This section of the implementation information was given about the creation of social media tools and how they will be used in the learning process.

In the Introduction to Social Media Tools process, the experimental group students were informed about the use of social media in learning process with the 'Social Media Usage Guide' and examples were shown. Thus, students learned the rules of use of social media. In the implementation, each student created their own blog account and shared their posts on their own page. Thus, it was ensured that the students had an "e portfolio". To ensure confidentiality, each student shared the post and story on the page with a nickname that they determined for themselves or using only his name. The use of surnames of students was not allowed. Sections, titles and the contents of the blog is given in Table 1.

Table 1. Sections, Titles, and Contents of Blogs

Sections	Titles	Content
Part 1	About Me	Students; ➤ Names ➤Hobbies ➤ Where they see themselves after 20 years (Professions, Achievements)
Part 2	My Thoughts of the Subject	At lesson;➤ Learned ➤Topics found interesting ➤Topics found boring
Part 3	My tasks	➤ Given research topics ➤ Assignments
Part 4	Results of My Experiment (Event)	Made;➤ Experiments results ➤Test results
Part 5	My Collaborative Works	➤ Works done as groups
Part 6	Interesting facts	➤ Information found interesting ➤ Information to be shared with others

The contents that can be shared on the Instagram account of the class are determined as follows:
➤ Banners ➤ Scientific information ➤ Experiments ➤ Images ➤ Videos ➤ Activities in the lesson ➤ Scientific posts about daily life ➤ Questions.

The study was carried out in the spring semester of the 2020-2021 academic year and was carried out in the 6th grade science course "Conduction of Electricity" unit. In the implementation, the MEB Science Textbook (2019) was used in accordance with the 5E model in the implementation of online courses in both experimental and control groups, and the lesson plans were enriched with Web 2.0 tools. The lessons prepared according to the 5E model were started with interesting questions at the engagement, and experiment videos were watched on YouTube in the lessons sometimes. Web 2.0 tools were used to enable students to be active at exploration phase. Especially in the exploration and elaboration phases of the courses, the attention was paid to using interactive tools such as Web 2.0, group works and encourage research. To improve cooperation, groups were created online, and students were allowed to conduct research. For this purpose, the "Breakout rooms" feature of the Zoom application was used. Students were randomly separated into groups that there were equal numbers in each group. The researcher visited each room and guided the students. Students who wanted to ask questions had the opportunity to ask their questions by requesting the participation of the teacher. The students presented the posters they had prepared with their groups by sharing the screen. Web 2.0 tools were frequently used during the evaluation phase of the course. With the use of Web 2.0 tools in the experimental group of the study, the use of social media tools by students for educational purposes was ensured. In the control group, the existing Science Curriculum continued to be used by using only Web 2.0 tools. The experimental group and the control group implementation, the social media tools used, and the Web 2.0 tools used are given in Table 2.

Table 2. Experimental and Control Group Implementation, Social Media and Web 2.0 Tools Used

Group	Implementation	Social Media Tools Used	Web 2.0 Tools Used
Experimental	Social Media Supported Science Instruction enriched with Web 2.0 tools	• Blog • Instagram • YouTube • EBA	• Wordwall • Learning Apps • Canva • PhET Colorado Simulation • Google Forms • Prezi (Only in Experimental Group) • Quizlet (Only in Experimental Group)
Control	Implementation of the present curriculum enriched with Web 2.0 tools	• YouTube • EBA	

EXPERIMENTAL GROUP IMPLEMENTATION
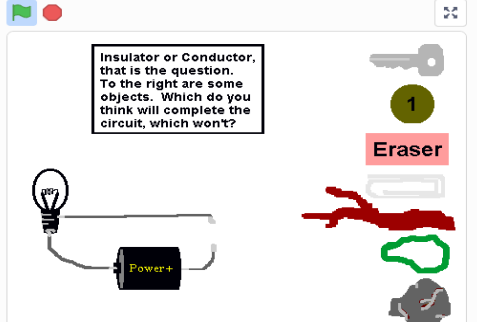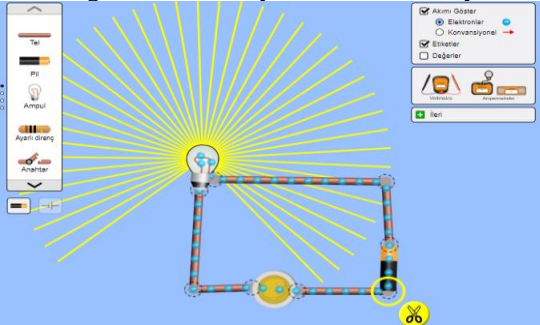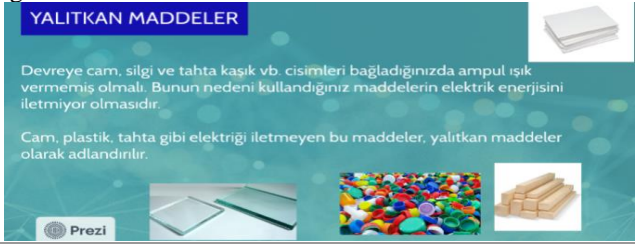
In the experimental group implementations, the courses were processed through the prepared presentations on the Prezi application using the Science Textbook, which contains activities and content based on research and questioning. In the experimental group, the social media-supported lesson plan was integrated into the 5E instructional model. In the implementation, blog, Instagram, and YouTube were used as social media tools to enable students to use these tools for educational purposes. The scores obtained from the Web 2.0 tools during the lesson, the posters they prepared as groups, images of the activities and experimental setups they created, and the results of them were shared on blogs. The images what they learned in the lessons, images of scientific content and posters they prepared were shared on Instagram.

The first lesson plan of the social media supported science course, designed with the 5E learning model enriched with Web 2.0 tools, is given in the Table 3.

Table 3. The Plan of the First Lesson, Carried Out in Practice

Unit	Unit 7 / Transmission of Electricity
Subject	Conductive and Insulating Materials
Recommended Time	160 minutes
Objectives	F.6.7.1.1. Classifies substances according to their states of conducting electricity using the electrical circuit he designed. F.6.7.1.2. Explains the electrical conductivity and insulating properties of substances with examples for which purposes they are used in everyday life.
Topics and Concepts	Conductive substances, insulating substances, areas of use of conductive and insulating substances.
Tools and Equipment Used	Phone, computer or tablet, Internet, Camera, and necessary materials for taking notes
Social Media Tools Used	Zoom, YouTube, blog, Instagram. There is a predetermined Zoom application ID, password, and link that the class can login to meet online. During the lesson, the teacher shares the screen to be seen the digital materials by students.
Used Web 2.0 Tools	Prezi, Edu Media, Scratch, Wordwall, PhET Colorado Simulation
Engage	The Prezi presentation is shared via Zoom application. https://prezi.com/p/gghrrbindlyy/?present=1 The video of the transportation of electricity to our homes is shown to the students and it is ensured that they remember their existing knowledge and attract their attention to the subject: ● Based on the video you watched, by what ways and how is electricity produced? ● How does electrical energy come to our homes? ● Can the metal wires inside the electric stove be made of plastic? Why? ● What features should the cables carrying electrical energy have? The students discover conductive and insulating substances with given the question above "I wonder what kind of material the electrical cables could be made of?"
Explore	Each student opens the Scratch application and experiments in an interactive way. Before the experiment, students are asked to guess whether the substances will conduct electricity. Substances are tested sequentially in the electrical circuit. Substances that conduct and do not conduct electricity are discovered. https://scratch.mit.edu/projects/1607546/

Students are separated into groups equally by using the "Breakout rooms" feature of the Zoom application. They conduct experiments as a group through the PhET application. The link of the application is sent to all groups. Before the students start the experiment, the teacher gives information about how to conduct the experiment. During the students' experiments, the teacher helps the students by visiting the rooms.

The experiment process as follows:
- Electric circuits are built by students. The teacher guides the students currently.
- Students try each substance in turn.
- Substances that conduct and do not conduct electricity are classified.

The following questions are asked:
- What substances did the bulbs light up when you contacted the test leads in your circuit?
- How many groups do you divide the substances you use in your electric circuit according to whether they conduct electricity or not?

https://phet.colorado.edu/sims/html/circuit-construction-kit-dc/latest/circuit-construction-kit-dc_tr.html

Explain	The presentation is continued through the Prezi. After the experiments, the teacher asks the students for answers to the questions and a discussion environment is formed. Questions asked in the engagement phase are answered. It is mentioned which substances conduct electricity and which do not. The properties of conductive and insulating substances are mentioned.
Elaborate	An interactive game is played on the 'Wordwall' site for students to reinforce the information they have learned. The classification of conductive and insulating substances is shown in tabular form. https://wordwall.net/tr/resource/11364994/yal%C4%B1tkan-m%C4%B1-de%C4%9Fil-mi

Evaluate	The form 'Did It Transmit Electricity? Or Didn't ?' created on "Google Forms" is sent to students in order to evaluate them. Students fill out the form together with their peers in the group. The answers are sent to the teacher and checked. The form created by PhET Colorado within the scope of inquiry-based activities was shared with the students. https://forms.gle/Pk8qERboBty4i9Ky6

Figure 2. A sample page of "Results of My Experiment"
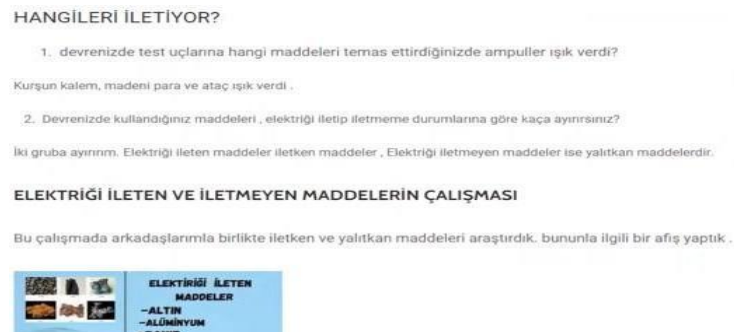
Figure 3. A sample page of 'My Collaborative Works'

Figure 4. A sample page of Alpha's Blog

Figure 5. Images of the story shared by Science Man
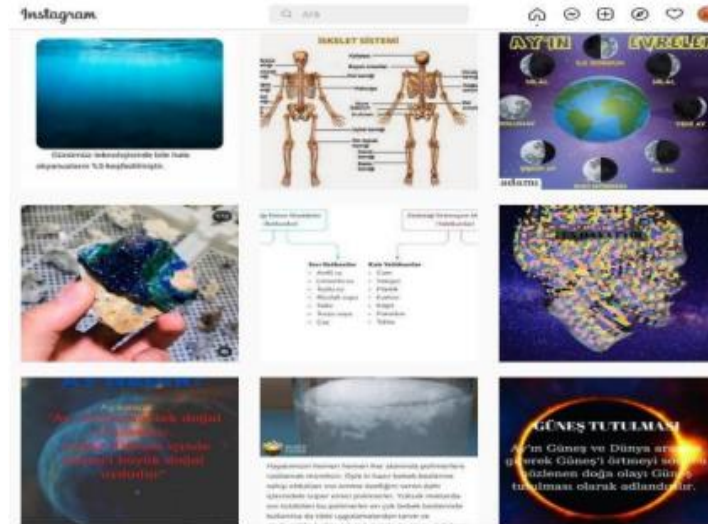
Figure 6. Images of the Students' Instagram Posts

CONTROL GROUP IMPLEMENTATION

In the control group implementations, Science Textbook containing activities and contents based on research and questioning was used. The book was shared on the screen via Zoom application. In the control group implementation, posters were prepared, group studies and presentations were made by students. Platforms such as YouTube, EBA have been used. The lesson activities and the Web 2.0 tools used in the lessons were similar to the experimental group. However, social media tools such as blog and Instagram were not used. Therefore, students did not create social media accounts and did not share on any social media tool.

DATA ANALYSIS

The findings obtained from the Purpose of Use of Social Networks Scale were analyzed with the SPSS 26.0 program. The findings of the factors are shown with column chart. It is considered appropriate to use non-parametric tests when the assumptions required by the parametric test cannot be provided (Can, 2020), the number of observations is insufficient (Zar, 1999) and the number of participants is (n<30) (Sümbüloğlu and Sümbüloğlu, 2007). Accordingly, Mann Whitney-U test, one of the non-parametric tests, was used to analyze the difference between the pre-test and post-test scores of the experimental and control groups. The data obtained from the Social Media Tools Use Cases Questionnaire and semi-structured interview form were analyzed with content analysis and column charts.

FINDINGS
FINDINGS OF SOCIAL MEDIA TOOLS USE CASES QUESTIONNAIRE (SMTUCQ)

The findings obtained from the experimental and control groups of the Social Media Tools Use Cases Questionnaire are presented comparatively.
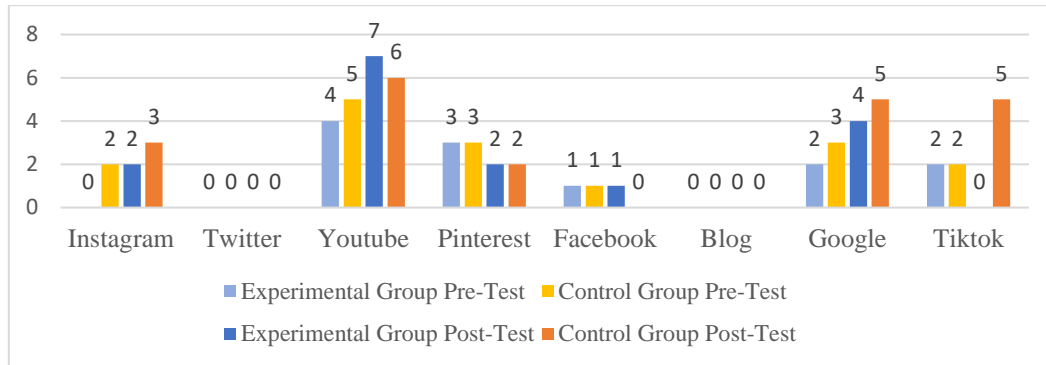
Figure 7. Findings Related to Question 1

Compared to the control group, the use of Google, YouTube and Instagram increased more in the experimental group. Compared to the experimental group the use of TikTok increased in the control group.
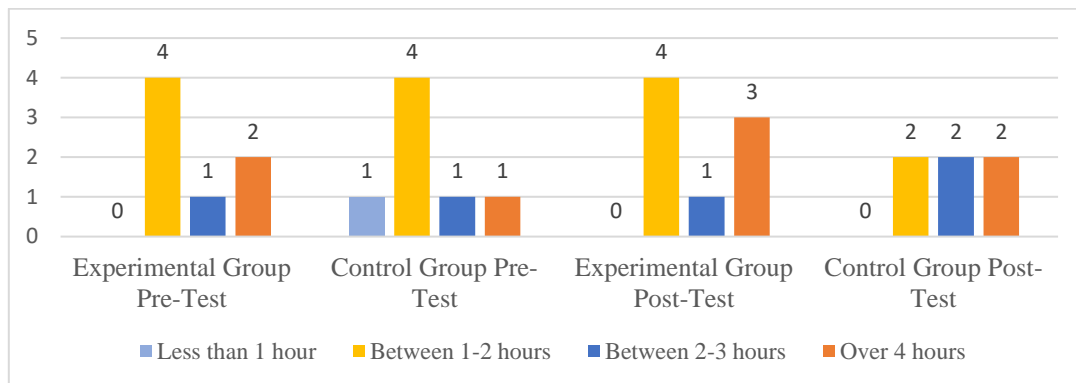
Figure 8. Findings Related to Question 2

It is seen that the control group students' daily use of social media increased in comparison to the experimental group students' daily use. No change was observed in daily use of social media in the experimental group.
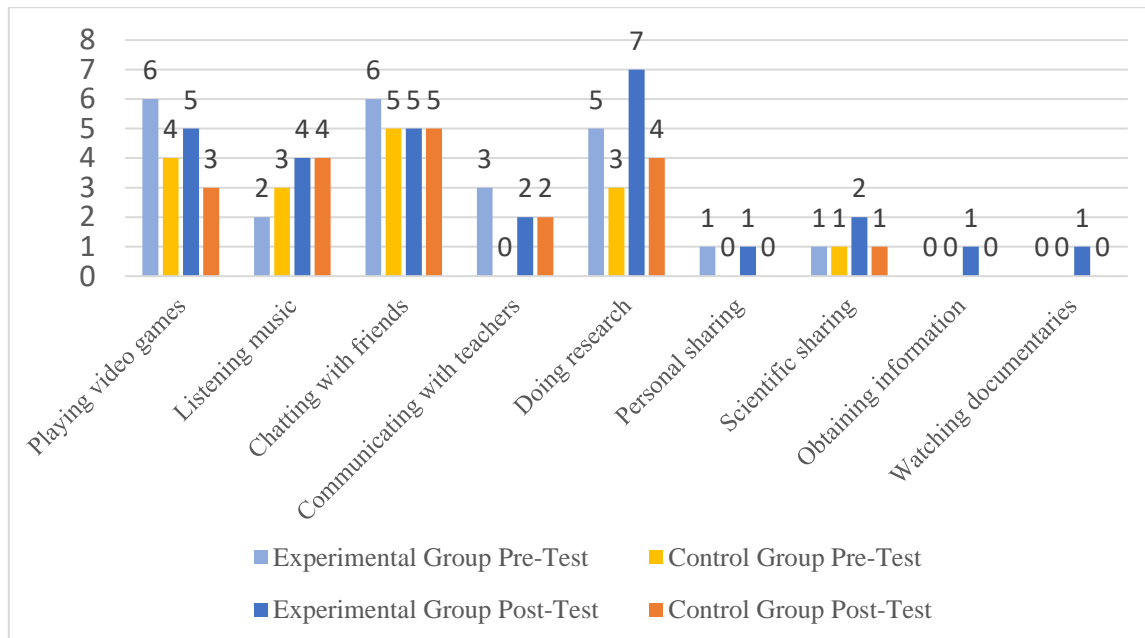
Figure 9. Findings Related to Question 3

In the experimental group, purposes of use of social media such as "Listening to music", "Doing research", "Scientific sharing", "Obtaining information" and "Watching documentary" increased, "Playing games", "Chatting

with friends", "Communicating with teachers" decreased, it is seen that the purpose of "personal sharing" has not changed.

In the control group, after the implementation, it is seen that the purposes of use of social media such as "Listening to music", "Doing research", "Communicating with teachers" increased, the purpose of use of "Playing games" decreased, "Chatting with friends", "Scientific sharing" purposes did not change.
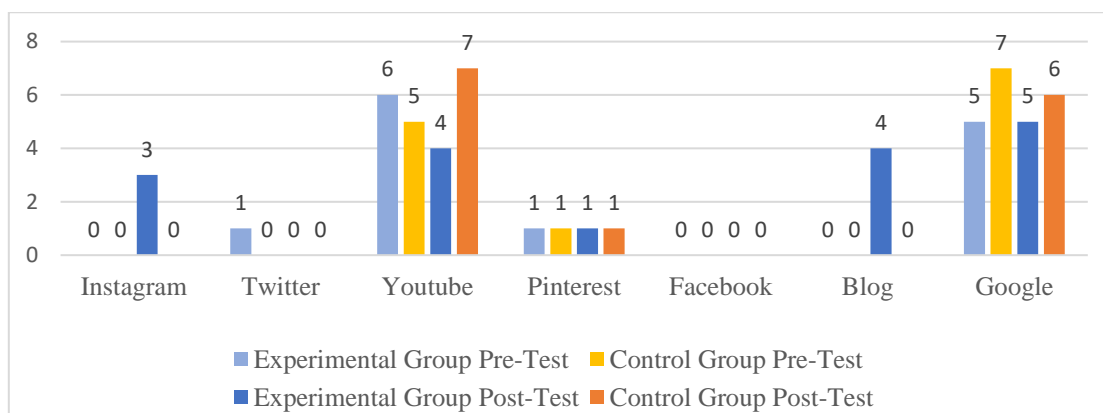
Figure 10. Findings Related to Question 4

In the experimental group, use of Instagram and blog related in with the course increased, use of Twitter and YouTube decreased, and use of Pinterest and Google did not change. In the control group, after the implementation, use of YouTube increased, use of Google decreased, and use of Pinterest did not change.

Table 4. Experimental Group Findings Related to Question 5

Theme	Codes	Pre-Test		Post-Test	
		Frequency	(%)	Frequency	(%)
Using social media tools in the lesson	Being Instructive	4	14,3	5	18,5
	Doing Research	4	14,3	7	26
	Enjoyable	2	7,2	2	7,4
	Facilitator	1	3,5	2	7,4
	Obtaining Information	3	10,7	5	18,5
	Beneficial	2	7,2	2	7,4
	Sharing	3	10,7	3	11,1
	Solving Test	3	10,7	1	3,7
	Difficult	1	3,5		
	Using Correctly	3	10,7		

Students stated that social media tools can be used in lessons thanks to their features such as being able to do research, being instructive, obtaining information, being a facilitator, being fun, useful, and sharing.

Table 5. Control Group Findings Related to Question 5

Themes	Codes	Pre-Test		Post-Test	
		Frequency	(%)	Frequency	(%)
	Being Instructive	2	16,7	5	27,8
	Doing Research	7	58,3	8	44,4

Using social media tools in the lesson	Experimentation	1	8,3	1	5,6
	Watching Video	1	8,3	3	16,6
	Distractive	1	8,3		
	Negative Effects			1	5,6

Students stated that social media tools can be used in lessons thanks to their features such as being able to do research, being instructive, obtaining information, being a facilitator, being fun, useful, and sharing.

FINDINGS OF PURPOSE OF USE OF SOCIAL NETWORKS SCALE (PUSNS)
In order to determine whether there is a significant difference between the mean scores of the pretest-posttest total scores of the experimental and control groups, the Mann-Whitney-U test was used to examine the rank mean scores.

Table 6. The Mann Whitney-U Test Findings to Determine the Differences in the Experimental and Control Groups' PUSNS Pre-Test Post-Test Total Scores According to the Experimental and Control Groups Variable

	Group	N	Rank Average	Sum of Ranks	U	P
PUSNS Pre-Test Total Score	Experimental	7	7.50	52.50	10.00	.199
	Control	7	7.50	52.50		
PUSNS Post-Test Total Score	Experimental	7	9.14	64.00	13	.422
	Control	7	5.86	41.00		

It was found that the PUSNS pretest-posttest total scores of the experimental and control groups did not differ significantly according to the variable of the experimental and control groups (p>.05). However, when the mean rank values of the posttests were examined, the experimental group's mean rank value increased while the control group's mean rank value decreased.
Wilcoxon signed-rank test was used to determine whether there was a significant difference between the mean scores of the pretest-posttest total scores of the experimental group and control group students.

Table 7. Wilcoxon Analysis Findings to Determine the Significance of the Difference Between the Experimental Group Students' PUSNS Pre-Test and Post-Test

		N	Rank Average	Sum of Ranks	P
PUSNS	**Negative Rank**	1	1.50	1.50	
	Positive Rank	6	4.42	26.50	.034
	Equal	0			
	Total	7			

The Wilcoxon signed-rank test, which was used to determine whether there was a difference between the pretest-posttest scores of the students in the experimental group, the difference between the pretest and posttest scores of the experimental group students was found to be statistically significant (p<.05).

Table 8. Wilcoxon Analysis Findings to Determine the Significance of the Difference Between the Control Group Students' PUSNS Pre-Test and Post-Test

		N	Rank Average	Sum of Ranks	P
PUSNS	**Negative Rank**	2	5.50	11.0	
	Positive Rank	5	3.40	17.0	.612
	Equal	0			
	Total	7			

In order to determine whether the difference between the PUSNS pretest-posttest scores of the control group students was significant or not, the difference between the pretest and posttest scores of the control group students was not found statistically significant (p>.05).
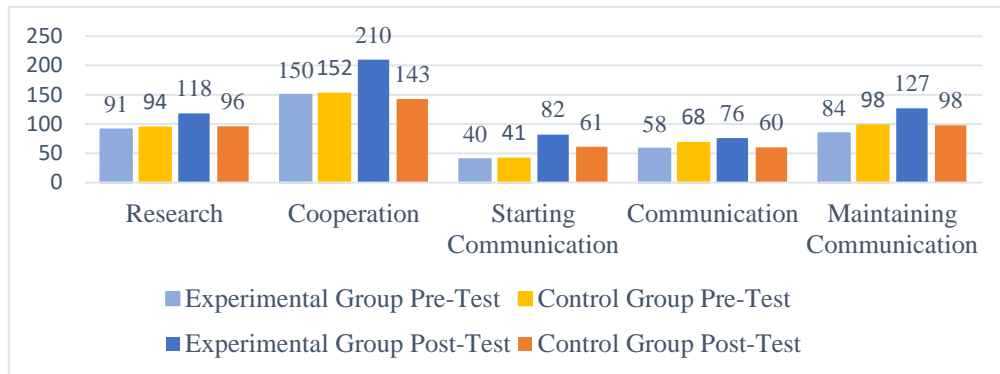
Figure 11. Comparison of Pre-Test and Post-Test Factors in the Experimental and Control Groups

It is seen that the post-test scores of all factors increased in the experimental group. In the control group, it is seen that the post-test score of two factors increased, two factors decreased, one factor did not change. When the "research" factor is examined, it was found that the post-test of the experimental group increased by 27 points; the post-test of the control group's post-test increased by 2 points. When the "cooperation" factor was examined, it was found that the post-test of the experimental group increased by 60 points; the post-test of the control group's post-test decreased by 9 points. When the "Starting Communication" factor was examined, it was found that the post-test of the experimental group increased by 42 points; the post-test of the control group's post-test increased by 20 points. When the "Communication" factor was examined, it was found that the post-test of the experimental group increased by 18 points; the post-test of the control group decreased by 8 points. When the "Maintaining Communication" factor was examined, it was found that the post-test of the experimental group increased by 43 points; the post-test score of the control group did not change.

FINDINGS OF THE SEMI-STRUCTURED INTERVIEW FORM

The semi-structured interview form consists of 9 open-ended questions as follows: Question1 "Which one or ones of the social media tools used in science course did you like the most? Why?", Question2: "What difficulties have you/may you encounter in the use of social media tools in science course?", Question3 "What are the things you want to add, subtract or change to the science course supported by social media tools?", Question4 "What are the advantages of using social media tools in science course?", Question5 "What are the disadvantages of using social media tools in science course?", Question6 "How did social media tools affect your learning in science course? Give example.", Question7 "What do you think about the science course supported by social media tools?", Question 8: "What are your thoughts on the continued use of social media tools in science course?", Question9: "In which other courses would you like social media tools to be used?". Each of the questions was analyzed by content analysis and students' views on the implementation; popular social media tools, attitudes towards social media tools used in the course, advantages of using them in the course, disadvantages, difficulties encountered, things to add, change and remove, and their use in courses. The codes of the themes have been created. The frequencies and percentages of the codes are given in Table 9.

Table 9. The Opinions of the Experimental Group Students about the Social Media Supported Science Lesson

Themes	Codes	Sample Statements of Students	Frequency and %
Social media tools liked by students	Blog	*"Blogs because it's so much fun to me." (Ö1)*	4 of 8 (%50)
	Google	*"Google. Because we are obtaining new information from Google" (Ö3)*	2 of 8 (25%)
	Instagram	*"Instagram. We share beautiful posts, and more people see and like them."*	2 of 8 (25%)
Attitudes towards social media tools used in the course	Fun	*"I liked the blogs the most, it was really fun, it was a lot of fun to make etc." (Ö6)*	6 of 8 (75%)
		".... I really enjoyed it, it was fun. Have fun, learn, design" (Ö5)	
	Pleasing	*"Made me someone happier." (Ö5)*	1 of 8 (12,5%)

	Nice	*"well, it's going nice."*	5 of 8 (62,5%)
Advantages of using it in the lesson	Others being able to access information	*"More people can benefit from the knowledge in science." (Ö2)*	6 of 8 (75%)
	Ability to manage	*"I liked the blog, editing, uploading a photo, like a website administrator..." (Ö8)*	1 of 8 (12,5 %)
	Using as a diary	*"Blog because I can use it as a diary (Public diary)" (Ö5)*	1 of 8 (12,5%)
	Obtaining Information	*"We are obtaining more information" (Ö4)*	7 of 8 (87,5%)
	Fast learning	*"Our learning was slower in a normal science lesson, but we learn much easier and much faster in a science lesson supported by social media tools" (Ö3)*	4 of 8 (50%)
	Facilitating the lesson	*"It made the science course easier I can understand the lessons better" (Ö1)*	8 of 8 (100%)
	Repeating lesson	*"Advantages; we repeat that learned after the lesson" (Ö5)*	2 of 8 (25%)
Disadvantages	Looking at the screen	*"Looking at the screen a lot." (Ö1)*	1 of 8 (12,5%)
	Those who do not follow can't access information	*"Most people don't follow us and can't get the information" (Ö2)*	1 of 8 (12,5%)
Add, change, and remove	Wanting to complete the blog	*"I want to add, I want to complete all of my blog." (Ö2)*	1 of 8 (12,5%)
	Wanting more people to participate	*"I think more people could have participated." (Ö6)*	1 of 8 (12,5%)
Difficulties encountered	Editing	*"In editing" (Ö4)*	1 of 8 (12,5%)
	Internet shortage	*"Internet shortage" (Ö3)*	1 of % (12,5%)
	Not knowing how to use	*"...we may encounter difficulties such as not knowing to use"*	1 of 8 (12,5%)
Opinions about its use in classes	Let it continue	*"I wish it to continue." (Ö3)*	3 of 8 (37,5%)
	Be used in distance education	*"It would be nice if it continues in distance education. But it can be difficult when school starts." (Ö2)*	1 of 8 (12,5%)
Courses that are requested to be used	Turkish	*"It can also be in Turkish" (Ö2)*	2 of 8 (50%)
	Mathematics	*"Mathematics, Turkish, Social Science" (Ö1)*	2 of 8 (25%)
	Social Science	*"Mathematics, Turkish, Social Science" (Ö3)*	3 of 8 (37,5%)
	Music	*"Music, Social Science." (Ö6)*	1 of 8 (12,5%)
	Use in all courses	*"I think such an activity should be in every lesson" (Ö5)*	2 of 8 (25%)

As can be seen in Table 9, students stated that they like to use Blog (4), Google (2) and Instagram (2) as social media tools. Students stated that the social media tools used in the lessons are fun (6), pleasing (1) and nice (5). Students stated that Social Media Supported Instruction (SMSI) has advantages such as others being able to access information (3), obtaining information (7), fast learning (4), facilitating the lesson and easy learning (8), being able to manage (1), using it as a diary (1), repeating the lesson (2) and designing (1). Some of the students expressed the disadvantages of using social media tools as looking at the screen for blogging (1) and the inability of those who do not follow to access information (1). Most of the students stated that they did not want to add, remove, and change anything about the course. One of the students stated that he wanted to complete his blog. Another student

stated that she wanted more people to participate. The students stated that they want to continue using social media tools in the courses (3) such as Turkish (4), Mathematics (2), Social Studies (3), Music (1) and all other courses (2) to be used. A student stated that it would be nice to use it in distance education.

CONCLUSION AND DISCUSSION

Although Social Media-Supported Science Instruction (SMSSI) increased the use of social media tools, especially blog and Instagram, which were used in this study, it did not have a negative impact on the daily usage time of social media. After the implementation, it was seen that the findings of the experimental group students reflect the outputs of the research inquiry-based approach, which is the basis of the Science Course Curriculum, such as conducting research, obtaining information, and sharing scientific information. It can be said that this situation is caused by the expectation that the information that students share on blogs and Instagram will be original and they will structure the information themselves by researching it. Students stated that it is important to use social media in a useful way before the implementation. They stated that they found social media to be a facilitator. It was observed that the control group students increased their daily use of social media compared to the experimental group students and used social media tools more than before the implementation. It is thought that the reason for this is, students who spend a lot of time in front of the screen for reasons such as switching to distance education during the pandemic period, have started to use social media tools more. In a study conducted by Erden (2020) investigating the impact of the COVID-19 pandemic on the use of social media, it was found that the use of social media and the duration of use increased by 47% during the epidemic process. He stated that the reason of this increase is that people are trying to get used to the process of staying at home, they want to communicate because of the need to socialize, and they want to be informed about what is happening. In a study conducted by Yıldırım and Idil (2020) in which the social media and Internet usage habits of people who are in social isolation during the pandemic process were investigated, it was found that the use of social media rates increased.

It is observed that Tiktok usage increased in the control group as opposed to the experimental group, and blog usage increased in the experimental group as opposed to the control group. The reason for this may be that the experimental group students spend enough time on social media while using blogs for educational purposes, so there was no need for a different social media tool. In this case, as stated by the students, it can be said that social media tools that offer the opportunity to conduct research, share information, and facilitate do not have a negative impact when used correctly. McLoughlin and Lee (2007) argued that social media will open the door to modern education out of traditional education. They stated that social media will allow students to produce in accordance with the requirements of the modern understanding of education, in which the student is active, and the teacher is guided, and will provide the student with the opportunity to get out of the limited environment and manage the learning process effectively. Toğay, Akdur, Yetişken, and Bilici (2013) conducted a study in which they took university students' opinions by providing a social media-supported learning environment during a semester, they reached the conclusion that the social media supported education facilitates the learning process of the students and is effective in their learning, and the use of social media tools would be beneficial in improving the education process.

It is thought that the control group students used Tiktok to make use of their spare time. In the study conducted by Kızılkaya (2022), it was determined that university students' use of Tiktok, which has been frequently preferred recently, is based on reasons such as "it is easy to use and produce, to communicate, to have fun, to relax, to be appreciated, to express oneself and to spend time". As a matter of fact, with the increase in the time students spend on social media and the use of Tiktok in the control group, it is believed that they spend more of their leisure time on social media and using Tiktok.

After the implementation, it was stated that social media tools were used for the purpose of conducting research in both experimental and control groups. The reason for this may be the use of Web 2.0 tools in the course process and the adoption of the research inquiry approach based on the Curriculum of the Science Course. Web 2.0 technology allows students to be active in the educational process and create an interactive environment, as well as increase students' motivation (Deperlioğlu and Köse, 2010). On the other hand, motivation emerges as an important factor that increases the effectiveness of the learning-teaching process. Highly motivated students are eager to learn, and it becomes easier for them to take action for something with interest and desire (Akbaba, 2006). In accordance with the data obtained from the Usage Purposes Scale of Social Networks (UPSSN), it was found that the pre-test post-test total scores of the experimental and control groups UPSSN did not differ according to the group variable. The difference between the averages of the UPSSN pre-test and post-test total scores of the experimental group students was found to be significant ($p < 05$).

In accordance with the data obtained from the pre-test post-test scores of the sub-dimensions of the UPSSN, it was observed that the final test scores of all the sub-dimensions belonging to the experimental group students increased

after the implementation compared to before the implementation. In the control group, the sub-dimensions of initiating research and communication improved after the implementation, the sub-dimension of maintaining communication did not change, and the final test scores of the sub-dimensions of cooperation and communication decreased. It is thought that the answers given by the control group students in SMTUCQ are related to the development of the sub-dimensions of initiating research and communication. In the answers given in SMTUCQ, it is seen that the increase in communication with teachers and purpose of research coincide with the development of the sub-dimensions of students' initiation of research and communication. The reason for this may be the use of Web 2.0 tools in the courses taught in the control group and the processing of courses according to the Curriculum of the Science Course, which is based on a research-based inquiry-based approach. It is stated in the research that Web 2.0 tools increase the social interaction between teachers and students (Altıok, Yükseltürk and Üçgül 2017; EFTA, 2018). Therefore, it is thought that it is associated with the increase in the sub-dimension of communicating. According to the data obtained, it was observed that the sub-dimensions of initiating research and communicating developed in both the experimental and the control groups, more in the experimental group. Unlike the control group, it was observed that the sub-dimensions of cooperation, communication and maintaining communication improved in the experimental group. Ajjan and Harsthone (2008) stated that social media increases interaction with school and other individuals, success, and their interest in learning. The findings obtained and the results in the literature are similar. As a matter of fact, it was observed that the sub-dimensions increased much more in the experimental group than in the control group. It can be said that communication skills and research skills, which are among the 21st century skills, have improved with the use of Web 2.0 tools in both groups and the inquiry-based approach based on the Science Curriculum. In the study conducted by Gündüzalp (2021), it was found that students have opinions stating that the use of Web 2.0 tools in the courses is beneficial and increases communication. Students also stated that Web 2.0 tools have positive contributions to their collaboration skills. In this study, which was conducted with the support of social media, it was observed that the cooperation skills of the experimental group students improved more compared to the control group students. Therefore, it can be said that Social Media-Supported Instruction improves cooperation skills. It is also thought that the students' cooperation with their peers while creating their blogs is a positive factor in increasing their collaboration skills. Kaya (2013) stated that to increase cooperation, students should create a product and interact with each other. In this study, students have interacted with each other while creating, editing, and writing on their blogs. As stated by Deperlioğlu and Köse (2010), wikis also allow users to create a common product with the cooperation of users. People with similar interests who come together in an online networking environment collaborate to create different products. With the use of these and similar networks in education, it is possible to develop cooperation skills. In his study, AlYoussef (2020) stated that the beneficial use of social media for educational purposes have strengths such as ease of use, resource sharing, cooperation, and communication. It was observed that themes such as communication, socialization, access to information related to the benefits of social media (Çelik, Çelik and Aydın, 2019) emerged strongly in the experimental group students after the Social Media-Supported Instruction (SMSI). Zaidieh (2012) stated that social networks will be revolutionary useful tools if they are used as required by science.

It was observed that the opinions and attitudes of the students towards using social media in the lessons were positive. During the process, the researcher teacher observed that the motivation of the students was high. The positive attitudes expressed by the students confirm these observations. It was also observed that the students' positive opinions about blogs were more than their positive opinions about using Instagram. However, they did not express negative opinions about the use of Instagram. Students have stated that they want to continue using the blog even after the implementation of the study is completed. Students' creative expressions for blogs have come to the fore. It can be said that the reason for more use of blogs is that they offer the opportunity to do many actions and the students feel more independent to produce. On the other hand, it may have an effect that students take responsibility by creating blogs and create a product on their own. It has been seen that SMSI encourages students to produce and develops creativity skills. Erol and Taş (2012) concluded in their study that increasing the frequency of using tools including social media such as blogs, wikis, web design tools, animation editing, and simulations improves the creativity skills of students. Deperlioğlu and Köse (2010) stated that blogs allow students to share information in a free space since they are multifunctional such as interacting, viewing, and commenting.

Based on the findings in this study, social media tools that offer the opportunity to research, facilitate the sharing information and ideas did not have a negative effect when used effectively and correctly in the learning process. SMSI has revealed the beneficial aspects of social media in the implementation process. The purposes of using social media have had a positive effect in terms of "research", "cooperation", "initiating communication", "communicating", "maintaining communication" sub-dimensions. Students generally expressed positive opinions about SMSI and wanted it to continue to be used in other courses as well.

SUGGESTIONS

According to the results obtained from this Social Media-Supported Instruction (SMSI) study, based on the researcher's experience, the following recommendations have been presented for implementation and researchers:

- In this study, students used the blog and Instagram accounts individually. Implementations where students can use these tools by collaborating can be realized.
- Social media tools, especially blog and Instagram, can be used both in distance education and face-to-face education. Also, SMSI can be adapted to blended learning environments where face-to-face and online education will be combined.
- If there are misconceptions about the topics by examining the students' blog pages, they can be identified, and the necessary studies can be planned to correct.
- More comprehensive studies on SMSI can be carried out by expanding the working group and the keeping the implementation period longer. The results can be examined according to the age variable by carrying out implementations at the high school and university levels. Different social media tools such as Twitter, Facebook can be used.
- The effects of SMSI on students' 21st century skills such as creativity skills, problem solving skills and effective communication skills can be investigated. Different variables can be focused on, such as students' levels of curiosity, motivation, research skills, and academic achievement.
- Students have expressed opinions expressing that they are happy to see their shares and follow their accounts. The psycho-social dimension of this situation can be examined.

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The Evaluation of Teacher Perspectives Related to Ethical Behaviors in Secondary Education Inspection

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ABSTRACT
This study has been conducted to determine the necessary expected ethical principles of educational inspectors for inspectors, school managers and teachers in inspection studies held in secondary educational institutions and also to find out the perspectives of teachers, school managers and inspectors related to how much the educational inspectors obey these ethical principles. In this qualitative study, structured interview form was implemented. Within this scope; 5 questions were posed to 25 teachers/managers working at Secondary Educational institutions under the Ministry of National Education in 6 districts as; in Nicosia district- Değirmenlik High School, İrsen Küçük Secondary School, Lefkoşa Turkish High School and Hala Sultan Theology College, in Gazimağusa (Famagusta) district- Polatpaşa High School, Canbulat Özgürlük Secondary School and Dr Fazıl Küçük Industrial Vocational High School, in Kyrenia district- Oğuz Veli Secondary School and 19 Mayıs Turkish Education College, in Güzelyurt (Morphou) district- Kurtuluş High School and Güzelyurt Turkish Education College, in İskele district- Karpaz Vocational High School and İskele Evkaf Turkish Education College, in Lefke district- Lefke Gazi High School and Cengiz Topel Industrial Vocational High School. Some themes were formed by analyzing the answers of questions and the study was shaped within the frame of those themes. As a result of the research; it has been detected that the participants had mentioned the inspections held in the institutions were attentive, fair and open to criticism. Also, it has been found out that the participants had the opinion of inspectors' attitudes and behaviors to be equal, fair, positive, constructive, empathetic, polite, literate, consistent and respectful.
Keywords: Inspection, Education inspection, Ethical behaviors

INTRODUCTION

The assessment, guidance and questioning process within the aim of increasing performance and of providing the educational and teaching activities to be held according to the law, regulations, directives and programs can be defined as inspection (Tekışık, 1985). Regards to this; inspection is the assessment and enhancing process for increasing the quality of provided services. Aydın (2011) has also states that the inspection is found in every complex organization. This is organizational and managerial obligation. The main aim of inspection is to determine the degree of reaching the organization's objectives and to take necessary precautions for better results and also to develop the process.

There are three approaches effective for determining the professional ethics principles and behavior codes. They are; pragmatist approach, rights approach and justice approach. The pragmatist approach: According to this approach, during decision making only to be created results and to be provided benefit are based on. For

instance; when an inspector makes a decision, s/he considers the maximum performance, output and effectiveness criteria (Aydın, 2011). Rights approach: According to this approach, during decision making the fundamental rights and freedoms found in universal declaration of human rights are taken into consideration. It is important to respect to the individual's fundamental rights in this approach. According to this, the ethical principles protect the individuals against the illegal and unethical implementations of the organization. Rights approach: According to this approach, during decision making the laws and rules are important to be implemented equal and fair to everyone. Therefore, both the benefit and the harms are distributed to the individuals equally (Robbins and DeCenzo, 2007). These approaches help to understand how the individuals can make different decisions by using different ethical criteria.

The ethics in inspection involves the implementers to move on within the frame of professional ethical principles. Kocabaş and Karaköse (2009) state that; the term ethics had become the most popular concepts today and is used for most professional groups. The ethics in education deals with especially the educational actions in schools. To achieve the effectiveness and quality in education is possible by being loyal to the ethical principles. Many authors in literature review have defined the ethics similarly. Therefore, the ethics is a discipline analyzing the rules, beliefs and values formed by supporting the ethical and moral life. Ethics is a philosophy discipline dealing with evaluating the human behaviors as good bad, beautiful-ugly, right-wrong and which criteria are used in this evaluation as well as how these criteria are formed (Kizza, 2007).

Conceptual Framework
Educational Inspection
The educational systems have a strategic importance for states for continuing their existence. The sub systems of education are each tools continuing to the realization of aims of the education. For that reason, the sub educational systems take actions to realize their own aims and contribute to the education's aims (Tekin and Yılmaz, 2012). An institution needs internal feedback in order to determine whether it works within the frame of its aims and also it needs the external feedbacks to determine whether their products are in the wished quality. The most important management sub systems that prevent target diversion and the collecting internal and external information of the educational system are also defined as inspection sub units (Arabacı and Akar, 2010).
In this case; it is important to introduce education as a living, improving and advancing process. This process is impossible to advance without inspection. The success criteria of educational institutions are the objectives. These institutions are established in order to realize these objectives (Aydın, 2011). As the base of educational institutions the schools' input, process and outputs should be controlled for detecting their objective achievement degree and that is why the results should be reviewed.

With a broad meaning, the educational inspection is process in which the educational process outputs are evaluated in terms of corresponding to the implementations, law, objectives, planning and current variable resources. It is also defined as a process that the ethical rules exist which aim to extinguish the unwanted behaviors as well as reaching the previously determined standards (Bahçivan et.al. 2010).

The institutions belonging to Ministry of National Education (MONE-MEB) in the scope of Turkish Educational System are inspected by "Education Inspectors". Inspectors' span of authority is determined according to "Regulation of Ministry of Education's Guidance and Inspection Presidency and Educational Inspectors Presidency". According to this regulation; "inspectors are obliged to officiate duties such as guidance, inspection, research, analysis, investigation and pre-analysis". The inspector must have the authority mentioned above in order to officiate these duties or play their roles (Taymaz, 2011). One of the greatest elements of inspection is the behaviors and attitudes of the inspector. Within this scope; it is important for him or her to act according to the ethical principles. On the contrary case; it can be seen that the subject unethical behaviors are shown.

Unethical Behaviors
The ethics is defined as body of standards related to the designed good and bad for people about societal benefit, personal characteristics, principles and duties and what could they do or not (Svara, 2007). The unethical behaviors might differentiate in terms of peculiar characteristics about physical, cultural and social environment such as social phenomenon. As can be seen in other professions, it is important for investigating behaviors of the educational inspectors and teachers as ethical. The essential point here is the universal characteristics and then the second essential point is the behavior characteristics based on what they learned through their lives and what they formed during their decision making process with self-interpretation related to professional relationships (Haynes, 2002; İşgüden and Çabuk, 2006). The inspectorship has most of the amount of responsibilities among school management and teaching (Çelik, 1999).

Research Objective

The objective of this research is to determine the ethical principles of educational inspectors to obey in inspectional studies held in secondary educational institutions expected by educational inspectors, school managers and teachers and also to find out the opinions of school managers, inspectors and teachers to what degree do the educational inspector obeys to these ethical principles.

Research Method

This research is a qualitative research and it is defined as a method of understanding the form of problem in its natural environment as questioning and commenting about the problem it analyzes (Klenke, 2016). In these researches, qualitative data gathering techniques such as interview, discourse and document analysis are generally used. Besides this; they base on examining closely the human related incidents and perceptions in their natural environment and social reality as well as having an integrative structure that can combine different disciplines (Merriam and Grenier, 2019). The qualitative research is an approach that features understanding and researching the incidents in their own environment.

Scope of Research and Sampling

25 teachers / managers working at Turkish Educational College, Canbulat Özgürlük Secondary School and Polat Paşa High School under Ministry of Education have been interviewed in this research.

Data Gathering Tools

The data gathering technique in which the sampling's feelings, opinions and knowledge are actively explained and life story are told about the research topic is called "interview". The main aim of the interview is to reach to the internal worlds of participants and find out their point of views. Through interview it is possible to reach individual's topic related experiences, attitudes, intentions, thoughts, comments, reactions and mental perceptions which can't be observed (Bengtsson, 2016).

Conducted through qualitative data gathering techniques, this study has used semi-structured interview technique. As these interviews have flexibility and standards, and they remove the limits in written tests and questionnaires as well as helping obtaining information in details, the researchers often prefer this method (Yıldırım and Şimşek, 2003; Altunay, Oral and Yalçınkaya, 2014).

As data gathering tool, the semi structured interview form and personal information form developed by the researcher is used in this study. Research data will be obtained in environments where the participants could express themselves comfortably in their own appointment time. Interview questions were asked to each participant by using the same words and same toning for meaning. During the research structured interview form was implemented. While participants were evaluated they were numbered as K1, K2, K3, K4 and K5. 5 questions were prepared by the researcher by considering the discussions in literature review for evaluating the opinions of sampling group about the ethical behaviors in secondary educational inspection. The prepared questions are:

1. There are three elements which make the educational institution as ethic. They are; attention, justice and criticism. Could you evaluate the inspection held in the institution you are working within the frame of these elements?
2. How are the attitudes and behaviors of the educational inspectors towards you? (How should it be?) (Behaving equally (gender, language, religion, racism), Being fair, Being honest, Showing empathy, Effective communication, Behaving consistently (Behaving politely and respectfully)
3. Have you ever witnessed educational inspectors to abuse their jobs? If yes, can you please explain in details?
4. Do you think the educational inspectors have sufficient knowledge about the developments in legislation and educational sciences?
5. Do you think the inspections in schools are conducted according to their objectives? If no, what are your suggestions?

Data Analysis

The data gathered by the semi structured interview form were pictured and interpreted through content analysis method. The content analysis is to combine similar data within the scope of specific concepts and themes and also it is to interpreting them by organizing them for the readers' easy understanding. The problems of the research are accepted as one each theme and questions related to each theme were asked. The obtained findings will be presented by citing direct quotes from the participants' opinions. In research data analysis, descriptive analysis techniques were used. The descriptive analysis is summarizing and interpreting the data according to

previously determined themes where the direct quotes of individuals are often used for the best reflection and it is the analysis technique where the obtained results are interpreted within the frame of cause and effect relationships (Yıldırım and Şimşek, 2003).

Findings and Interpretation

Demographic information of the participants is illustrated on the following table:

Table 1: Demographic Information

		Number (n)	Percentage (%)
Age	25-34	6	24
	35-44	16	64
	45-59	3	12
	Total	25	100
Gender	Female	13	52
	Male	12	48
	Total	25	100
Marital Status	Married	20	80
	Single	5	20
	Total	25	100

When Table 1 is analyzed, %60 of the participants is between 35-44 years whereas %24 of them is between 25-34 age and %12 of them is between 45-59 ages. %52 of the participants is female whereas %48 is males. Additionally; %80 are married and %20 are single.

The first question given was "*There are three elements making the educational institution as ethic. They are, attention, justice and criticism. Can you evaluate the inspection done at your school within the frame of these elements?*" Two themes were created for this question as positive and negative. Four categories were formed for positive theme as "attentive, fair, being open to criticism and all". Also, two categories were formed for the negative theme as "insufficient inspection" and "no inspection".

Table 2: Theme 1. "Attentive, fair and open to criticism" opinions for the inspection held in the institution

Themes	Categories	f
Positive	Attentive	2
	Fair	4
	Open to Criticism	2
	All	7
Negative	Insufficient Inspection	8
	No Inspection	2

When Table 2 is analyzed the number of the participants is 2 who believe that the inspection is attentive and open to the criticism under the positive theme. 4 participants think that the inspection is fair whereas 7 participants believe the inspection is attentive, fair and open to the criticism. When the answers for negative theme are analyzed; 8 participants believe the inspection is insufficient held in the institution whereas only 2 participants mentioned that there was no inspection. Some of the answers of the participants are:

K6: *The administrative staff and the teacher staff generally work attentively and they are fair while creating lesson programs etc. Both teachers and administrative staff are open to constructive criticism.*
K10: *I don't think the education is assessed attentively by the inspectors because when a teacher candidate is officially attained s/he is only inspected however other teachers are not inspected in the next years. I believe that the inspectors do not make very serious injustice during inspection. Also, I believe that the teachers teach students equally.*
K24: *I think the inspection is suitable for the ethical and moral values. There is an attention to justice in inspection. The criticisms are absolute for having an education according to its objective but these criticisms should be constructive and directive.*

What make an educational institution as ethic are the attentive, justice and criticism elements. Most of the participants found the inspection either insufficient or nonexistent. To evaluate the inspection was impossible for them. It is seen that the number of the participants who state that the inspection was attentive, fair and open to criticism in their institutions is more than half. Firstly; it is necessary to point the importance of justice in inspection. That is; in a study held by Turhan (2007) it has been resulted that, the higher the ethical behaviors of the school managers are, the more conception level of the social justice in schools increase. Aydın (2011) also emphasized that the inspector should be a role model with his or her personal characteristics and behaviors and also s/he should emphasize the means of communication by behaving attentively by saying "s/he should personally have the characteristics that s/he would look for in the teachers". In a study conducted by Pehlivan (1997), he found out that there were not specific differences between the high school managers and the teachers in terms of honesty, justice and respect whereas there were differences in perceptions related to some principles which form the democracy, responsibility and tolerance. In this case, the suggestions developed by Ömür (2005) in his study are important to mention. Especially, he underlined to put more effort for providing the absolute justice during the inspection process. Also it is necessary to put more effort to be more attentive and organized during the inspection process of ethical rules.

The participants were asked the question of *"How are the attitudes and behaviors of the educational inspectors towards you? (How should they be)?"* Seven themes were created by considering the participants' answers. They are; respectful, positive and constructive, educated, equal and fair, consistent, polite and lastly empathetic.

Table 3: Theme 2. Opinions about attitudes and behaviors of educational inspectors

Themes	f
Empathetic	4
Equal and fair	6
Polite	3
Consistent	2
Educated	3
Positive and constructive	5
Respectful	2

It is important to emphasize that this question was answered about how the education inspectors' attitudes and behaviors should be. According to the answers these attitudes and behaviors should be equal and fair which was stated by 6 participants. On the other hand 5 participants answered as these behaviors and attitudes should be positive and constructive. 4 stated s/he should show empathy and 3 said polite and educated and lastly only 2 participants believe that they should be consistent and respectful. The following answers are given by some of the participants for this question:

K7, the inspectors generally approach to each teacher equally but insufficient about showing empathy. *"I believe the inspectors approach to each teacher equally. I don't think there is discrimination. But, I observed that sometimes there is a lack of showing empathy. The effective communication is open to the development and I think more effective communication can be established".* Emphasizing the effective communication, K7 has the opinion of the importance of inspectors' establishing effective communication.
K12 explained how the inspectors should be by saying *"inspectors should consider the environment, school and classroom of the teacher they inspect. Also, they should be mentor and should not demotivate teachers".*
K16 state that the inspectors have positive and constructive criticism and said that *"Our educational inspector has always had positive and constructive criticism. Until now, I have never witnessed any gender discrimination and racist policy either"*

In a study conducted by Dağlı and Akyıldız (2009), the inspectors had low ethical sufficiency in terms of gender discrimination, behaving consistently and prejudice etc. And also, he had found that they had behaved on the middle level for ethics in terms of respectful language, not exceeding his or her authority, having preventive attitudes towards personnel rights or avoiding insulting behaviors related to teacher proficiency. In this case; Kayıkçı and Uygur (2010) have stated that, inspecting according to a specific standard, having empathy, catching up with improvements, foreseeing, using human relationships and communication skills, inspecting according to the conditions of the environment, giving values to the teachers, giving suggestions for improving them, behaving without prejudice and being consistent and objective are essential.

Participants were asked "*Have you ever witnessed the education inspectors to abuse their authority? If yes, could you please explain in details?*". When the answers are analyzed, two themes were determined as "yes" or "no". The theme "yes" has two categories as ego satisfaction and disrespectful whereas the theme "no" has only one category as not witnessed.

Table 4: Theme 3. Opinions about education inspectors' abusing their authority

Themes	Categories	f
YES	Ego satisfaction	2
	Disrespectful	1
NO	Not witnessed	22

When Table 4 is analyzed, nearly all the participants have not witnessed any abuse of authority of the inspectors. Only two participants mentioned that the inspectors had the attitude of ego satisfaction whereas only one participant has witnessed disrespectful behavior by the inspector." K19's answer is important which is *"I have rarely come across with the inspectors who were disrespectful, favoring people or self-righteous"*. K: 2 said *"some of them completely struggle for their ego satisfaction"* and K2 stated that "*I witnessed when a teacher is pushed. Although the teacher had no problem in the lesson, the teacher was inspected many times as being insufficient"*. It is possible to state that the inspector in this case had unethical behaviors. In a study by Uğurlu (2010); the inspectors had middle level behaviors in terms of being fair, separating private and professional life, giving importance to privacy, being objective, accepting treats, being compliant with laws, not having prejudice, basing the assessments on documents, separating private works from job, spreading fear and waking respect. On the other hand, they had had behaviors on the high level ethically in terms of behaving officially and being organized. Aksoy (1998) emphasized the importance of being sensitive to personal differences and not imposing respect and values (insisting) while determining the ethical principles.

The participants were asked *"Do you think the education inspectors have sufficient knowledge about the developments in legislation and educational sciences?"* .Three themes were created as "yes", "no" and "indecisive".

Table 5: Theme 3. The knowledge level of education inspectors

Themes	f	%
Yes	7	28
No	6	24
Indecisive	12	48

By looking at Table 5, %48 of the participants is indecisive about the education inspectors' being knowledgeable enough for legislation and educational sciences. %28 of the participants thinks they had sufficient knowledge whereas % 24 said they didn't have enough knowledge. K7 stated that *"I believe they have sufficient knowledge but I sometimes observe that there is a gap in terms of implementation"*. K10 said "*I don't think they are knowledgeable enough, they should also evaluate themselves. Also, according to the area the inspector should assess the teacher accordingly"* which is an important answer. Başar (2000) explained that the different area and categories are perceived as in the same value in scientific inspection and this situation is necessary for teachers in different areas for having assessment in equal. K25 states that "*I believe the teachers in different areas have more workload due to lack of personnel cadre. That's why there are some inconveniences sometimes in terms of catching up with the developments"*. In addition to this, Taşdan (2008) emphasizes the importance of rapid development in modern educational systems. On the other hand, the modern education inspection should help control the current progress; correct the deviations during that period and help institutions survive healthily by improvements (Aslan, 2015).

The last question was asked to the participants as *"Do you think the inspections at schools were conducted according to their objectives? If No, what are your suggestions?"* . The answers were analyzed and three themes were created as "yes", "no" and "medium level".

Table 6: Theme 4. The suitability of inspections in schools for their objectives

Themes	f	%
Yes	7	28
No	15	60
Medium Level	3	12

%60 of the participants found the inspections at schools were not conducted for their objectives whereas % 28 of the participants found they were suitable for the objectives. %12 of participants found them on the medium level. K4 has the opinion that the inspection was not suitable for their objectives by saying "*each inspector thinks the elements s/he believes important are essential also. However, s/he should assess the teacher within the frame of implementations the teacher did. S/he shouldn't force for a specific method and also s/he should not think this is a lack and shouldn't cause to think like this*". K5 stated that the inspections were held when there was a negative situation or when the teacher would be confirmed principally as saying "*In my opinion they should be conducted in specific times regularly, also when their principal confirmation time comes the teachers should be evaluated or assessed by the inspectors in the teachers' field areas*".

The suggestions about the inspections at school made by K10 are following: "*The inspectors in the same field area should evaluate the teachers. S/he should inspect more often and on time. They shouldn't approach in penalizing way but in directive way. They should direct the teachers about the changing curriculum*". K18 stated his or her opinion by saying "*Today's student profile is different from the past and the course books are sometimes not modern enough. The inspectors ask teachers implement the written theoretical information. Except this situation, I find every new inspection activities suitable which would provide education focused on both learner and teacher. However, today's teacher and learner profiles are different from the old traditional and s/he should be aware of this and even the pedagogical infrastructure should be reconfigured and inspections should be held accordingly which could be more meaningful in educational activities*".

Educational inspection plays an important role in terms of reaching the educational aims (Özmen and Güngör, 2008). Okutan (2016) conveyed that, the institutional structure of the educational inspection is composed of activities such as whether the aim is reached at institution, what should be done while reaching the objectives and the behaviors to be enhanced after the feedback given. Within the light of this information, the inspection is essential for being suitable for the objectives.

Result

This study was conducted in order to determine the opinions of teachers , inspectors and school managers about how should be the ethical principles that the educational inspectors expected to obey also to determine how much they obey at the secondary schools with educational inspectors, school managers and teachers. Within this frame; 5 questions were posed to 25 teachers/managers working at Secondary Educational institutions under the Ministry of National Education in 6 districts as; in Nicosia district- Değirmenlik High School, İrsen Küçük Secondary School, Lefkoşa Turkish High School and Hala Sultan Theology College, in Gazimağusa (Famagusta) district- Polatpaşa High School, Canbulat Özgürlük Secondary School and Dr Fazıl Küçük Industrial Vocational High School, in Kyrenia district- Oğuz Veli Secondary School and 19 Mayıs Turkish Education College, in Güzelyurt (Morphou) district- Kurtuluş High School and Güzelyurt Turkish Education College, in İskele district- Karpaz Vocational High School and İskele Evkaf Turkish Education College, in Lefke district- Lefke Gazi High School and Cengiz Topel Industrial Vocational High School. It has been found out that the opinion of the inspections held at institutional schools were attentive, fair and open to criticism is more than half of the participants. Also, it has been found that the participants stated as the educational inspectors' behaviors and attitudes should be equal, fair, positive, constructive, empathetic, polite, educated, consistent and respectful

The great majority of the participants have not witnessed that the inspectors had abused their authority. However, nearly half of the participants were indecisive about the inspectors' having sufficient knowledge in terms of legislation and educational sciences developments. In addition, more than half of the participants had the opinion that the inspections conducted at schools were not reaching their objectives.

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The Examination of Views of Students on Football Courses Delivered through Distance Education: The Case of Bayburt University

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ABSTRACT
Technological developments nowadays, the development of the internet and the Covid-19 pandemic led to an increase in distance education applications. Courses in formal and informal education including physical education and sports courses, partially, were delivered through distance education. In the face-to-face education process, physical education and sports teachers do not have courses that are suitable for distance education. However, it is enabled for physical education teachers who cannot utilize athletic activities due to pandemic, to deliver their courses through online distance education, related institutions have provided them with many online materials and various online seminars (webinars) in which numerous tools for effective delivery of physical education courses are introduced have been organized. However, studies on the current efficiency of these applications have yet to be conducted. Therefore, in the present study, it is aimed to identify the views of students on the delivery of football course applications through distance education among all of the physical education and as sports courses which have an essential importance in terms of encouraging the physical, social, spiritual, and mental developments of an individual as a whole. This research which aims to reveal the views of physical education and sports students in Bayburt University on football courses delivered through distance education is qualitative research. In the present study, the phenomenological method was used and some interviews were conducted through focus group discussion method in order to thoroughly comprehend the cases or facts that students think they acknowledge but not precisely absorb. The semi-structured interview form which had been developed by the researcher and used as a guideline during the focus group interviews was used in the study. As a result, when the views of the students on the football courses that were conducted through distance learning were grouped, it was concluded that the theoretical components, such as football, as well as practical work, were combined to the point that the processing of courses with distance learning in courses where distance learning reduces the efficiency of the course.
Keywords: Distance education, football, football education

INTRODUCTION

For centuries, people have been achieving the information and competencies that will maintain their daily lives through education and conveying these experiences and accumulation through the information conveyance. The development of information and communication technologies in the current century affects educational processes, as well. Thanks to the increasing interest in internet usage every day, the use of the internet in educational activities has become inevitable.

Developments in information technology facilitate and influence distance education applications. Distance education is an educational method in which interaction between those who plan and implement educational work and those who study is provided from a specific center through deconstructed teaching units and various environments when there is no opportunity to conduct classroom activities face-to-face due to obstacles in traditional learning-teaching methods (Alkan, 1987). Distance education, which emerged as an education system

model in which students and teachers who do not share the same environment carry out learning and teaching activities with communication technologies and classical postal services, is defined as an education that is carried out when teachers and students are physically in different places (İşman, 2003; Uzunboylu and Tuncay)., 2012). It is seen that distance education was started to be applied by the letter education system in the early 1700s, and by the early 1900s, education was evolving towards another direction with the development of technology and the audiovisual tools used in school (Mutlu et al., 2000). Technological developments nowadays, the development of the internet and the Covid-19 pandemic led to an increase in distance education applications. When the applications of distance education processes are regarded, it is seen that distance education was born as a system that was developed to provide education equality for individuals who cannot provide access to education. In this context, distance education is involved in life as a phenomenon the importance of which is increasing day by day in terms of equality of opportunity in education, usage of technology in education, and the advantages in regard to time and location (Bayram et al., 2019).

In the course of time, individuals have faced various natural disasters and epidemics and have tried to survive and maintain their lives by putting integration mechanisms into action against these conditions. Today, the effect of the pandemic which was caused by the Covid-19 virus, which is one of these conditions, in life is known by everyone.

Covid-19 is a disease that emerged in the city of Wuhan, China towards the end of December, was officially defined on January 13, 2020 and spread all over the world. (Republic of Turkey Ministry of Health, 2020). Due to this pandemic, formal and non-formal education activities and sports activities have come to a standstill in many countries around the world. Since it has become difficult for individuals who have to stay physically at home due to the pandemic to receive face-to-face education, distance education applications, albeit temporarily, have become mandatory in the education processes. Upon the closure of schools in all countries where the disease has been seen during the pandemic process, one of the priorities has been to ensure the uninterrupted continuation of education. In this regard, countries have started to use distance education applications supported by technological infrastructure (Can, 2020). Educational measures have been taken against this pandemic disease by the Ministry of National Education (MEB) in Turkey. In this context, schools have been suspended since March 16, 2020 and it has been announced that courses will be conducted through distance education applications (MEB, 2020). In this process, teachers and students have undergone an adaptation process.

Nowadays, the spread of information has increased with the development of technology compared to previous years. It is seen that the increasing use of internet with the developing technology and the interest in the media also affect the developments in education in human life. While the necessity of people to stay at home during the pandemic period increases this situation, it is seen that the use of distance education applications has become widespread.

Distance education has been implemented in Turkey as the education is interrupted by the pandemic, and the courses have been carried out by the Ministry of National Education through 3 television channels, namely Education Information Network [EBA] and TRT EBA Primary, secondary and high school. Upon the decision that distance education will continue, educational activities have been carried out through both EBA and online applications (Çetin, Yılmaz, Ilhan, 2021).

As in all fields, it is seen that distance education applications have advantages as well as disadvantages. Distance education has benefits such as being able to provide education to large groups, requiring a low budget, providing student freedom, individual and independent learning, not requiring a limited and an indoor area, and providing personal learning responsibility. There are limited aspects such as difficulty in interaction and communication with students, inability to do group and collective activities, not allowing observation, being dependent on communication technologies, inefficiency in gaining skills and attitudes related behaviors, and not being able to benefit from applied courses at the desired level (Kaya, 2002).

In addition to the difficulties which arise the lack of the sufficiencies and competencies of teachers and students in the process of distance education applications, the difficulty of delivering applied courses such as physical education and sports and music and visual arts in the online environment also affected the process.

In the face-to-face education process, physical education and sports teachers do not have courses that are suitable for distance education. However, it is enabled for physical education teachers who cannot utilize athletic activities due to pandemic, to deliver their courses through online distance education, related institutions have provided them with many online materials and various online seminars (webinars) in which numerous tools for

effective delivery of physical education courses are introduced have been organized. These studies have also been supported by social media campaigns with the slogan" Just Keep Exercising" (Özcan, Saraç, 2020).

Although it is mandatorily possible to deliver the physical education course which is exercise-oriented, in the online environment through distance education, it also causes many difficulties. When considered in a contextual sense, physical education course shows different characteristics from other many courses. In addition to improving the individual physically, physical education course also improves the individual socially, cognitively and affectively (Filiz, 2019). Physical education and sports course is considered to be a course that cannot be effective in distance education applications due to the fact that it cannot fully provide teacher-student interaction. This course develops the student socially, cognitively and affectively with materials for physical education, while also providing the opportunity to exercise freely. When the course acquisitions are examined, it is seen that the course consists of dynamic education and training processes applied with individual or group activities, educational games, the use of physical education-specific materials and sports activities. In this regard, the views of teachers and their students are more important for evaluating the implementation processes of the course compared to other courses (Adnan and Anwar, 2020).

Pandemic processes have caused the social life of individuals to be affected in physical education and sports activities, and the benefit of physical education and sports courses has also been affected by these updates (Yıldız and Bektas, 2020). In a report by the European Physical Education Union, it was seen that 41% of the members had closed their schools during this period, and 15.4% stated that their schools were open but physical education and sports courses were not held. It is also expressed that weekly physical education and sports courses have also been decreased due to the COVID 19 Pandemic, and webinars have been organized for awareness-raising activities in this context (EUPA, 2020).

As it is seen, courses in formal and informal education including physical education and sports courses, partially, were delivered through distance education due to pandemic. However, studies on the current efficiency of these applications have yet to be conducted. Therefore, in the present study, it is aimed to identify the views of students on the delivery of football course applications through distance education among all of the physical education and as sports courses which have an essential importance in terms of encouraging the physical, social, spiritual, and mental developments of an individual as a whole.

METHODS
This research which aims to reveal the views of physical education and sports students in Bayburt University on football courses delivered through distance education is qualitative research. In the present study, the phenomenological method was used and some interviews were conducted through focus group discussion method in order to thoroughly comprehend the cases or facts that students think they acknowledge but not precisely absorb (Yıldırım ve Şimşek, 2016).

Research Model
This research, which tried to determine the effect of realistic mathematics education approach on student achievement in teaching the concept of set, was structured in an experimental model, and a pre-test-post-test control group model was used in the research. In this model, since the participants are measured on the dependent variable before and after the experimental procedure, the pattern is related, and since the measurements of the experimental and control groups consisting of different participants are unrelated, this model is a mixed design (Büyüköztürk 2009).

The Study Group of the Study
The study group of the research consists of 41 people randomly selected from the 2nd, 3rd and 4th grade students studying at the sports sciences school at Bayburt University.

Data Collection Tools
The semi-structured interview form which had been developed by the researcher and used as a guideline during the focus group interviews was used in the study. Semi-structured interview forms are forms in which the interviewer has prepared his/her questions in advance, but the participants are offered partial flexibility due to the possibility of different topics and views during the interview. The use of these forms in the interview allows the researcher to restructure the questions according to the course of the interview and allows the participants to discuss the subject in depth. Semi-structured interview forms also contribute to the researcher getting detailed information about a particular subject and giving the participant the opportunity to express himself/herself (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2018).

A literature review was conducted by the researcher to develop the interview form, and seven questions were gathered under the titles such as the views of the students on physical education and sports courses being given through distance education, the reasons for taking football courses, the advantages and disadvantages of taking football courses through distance education, and the sufficiency of the educator on the subject was created. These questions were examined by a group of three field experts, consisting of physical education and sports teachers, and the field experts were requested to code for the questions consisting of options 'sufficient' 'sufficient' and 'partially sufficient' . According to the coding results performed by these three teachers independently of one another, the agreement rate was found to be 0.87. For the agreement rate, the formula developed by Orwin and Vevea (2009, 187) was used as the Agreement Rate=Number of views agreed on/Total number of views. Then, it was observed that the researchers reached a consensus on all the issues by making them discuss the issues they could not reconcile. According to Miles and Huberman (1994), the consensus of experts in a study by more than 70% indicates that the form to be used in the research is reliable.

DATA ANALYSIS

Content analysis method was used to analyze the data used in the research. The purpose of using the content analysis method in phenomenological studies is to allow the findings obtained as a result of data analysis to be presented under thematic titles and by conceptualizing the data (Yıldırım & Şimşek, 2016). Thus, 41 students who were participated in the scope of the research were coded as., as P1, P2, …(participant 1, participant 2) themes were created for the answers of the participants, student views were coded as positive and negative, and frequency values were demonstrated and all of them were presented in tables. Sample student views were quoted in order not to cause any change in the expression.

FINDINGS

In this research, which aims to identify the views of students on the football courses delivered through distance education, a question was asked to the students about what the reasons were for taking football courses through distance education and what expectations they thought to fulfill by taking this course. It was observed that the answers given by the students to a question were gathered under the titles of development (academic and physical) and Interest, and the findings are presented in Table 1.

Table 1. The reasons for students to take the football course and their expectations from the course

Theme	Code	f	participant	Sample views
Development (Academic and physical)	Positive	32	P1,P2,P3,P4,P5, P6,P8,P9,P10,P15,P16,P18,P19,P20,P21,P22,P23, P24,P26,P27,P28,P30,P31,P32,P33,P34,P35,P36, P38,P39, P40,P41	P2: To master my field, to learn the fine details of football. P10: Since football is a highly adopted sports branch in our country, we have always been familiar with it. I also aim to learn theoretically and develop myself in this field and be able to play the sport I love and take a teaching position. P19: In order to learn about football and to provide more efficient and healthy information to students and individuals in the future teaching process and daily life. (because of) that it is a team sport and it has an aspect that strengthens the team spirit. P36: To improve myself and increase my condition. P40: To give students something, to teach technique, tactics, and condition.
	Negative	-	-	
Interest	Positive	6	P7, P11, P12, P25, P29, P37	P7: I took it in order to improve myself because I see it as a personal profession. P11: The reason why I chose this branch is that I am an active football player. I think it will be more efficient if I choose this course. P12: Because I like it. P25: The most common team sport. I'm sure everyone would like to take it. P29: I thought I'd see which sport I'm better at. P37: I think it's a sports activity that I like.

| | Negative | 3 | P13, P14, P17 | P13: I took it because it is a compulsory course.
P14: I had to take it because it was the main course.
P17: I had to take it because it was an optional course. |

When the table is examined, it is seen that 92.68% of the students have positive views on taking the football course and they take this course in order to improve their basic competencies in the field of football, such as technique, tactics and condition. Along with the emphasis that football is a team game that is loved and followed by large masses, it is observed that they want to be informed about the developments in this field and again are willing to convey the information they have learned to their students in the future.

Table 2 shows the answers given by the students to the question of whether they received distance education in any field during their education in the field of physical education and sports and what their experiences are in this regard. When the answers given by the students to this question are examined, it is seen that the answers are gathered in the sub-themes of quality and efficiency.

Table 2. Views of students on physical education and sports courses they have previously taken through distance education

Theme	Code	f	participant	Sample views
Efficiency	Positive	2	P9, P10	P9: As a student, I really liked distance education. P10: I think that the information I receive through distance education is more permanently kept in my mind without any distraction. Yeah, I took it. P13: Yes, I did, but I don't think it was very effective. I don't think that especially applied courses are suitable for distance education. P26: Yes, it contributed to me but I don't think it's as beneficial as face-to-face education because it's easier to get distracted and there's no one to make one-to-one contact with in distance education. P31: I think I have deficiencies in swimming because swimming is theoretical.
	Negative	37	P1, P2,P3,P4,P5,P6, P7,P8, ,P11,P12,P13,P16,P17,P18,P19,P20,P21,P22,P23, P24,P25,P26,P27,P28,P29,P30,P31,P32,P33,P34, P35,P36,P37,P38,P39,P40,P41	P3: I took it but I had difficulty in understanding my connection kept dropping.
Quality	Positive	-		
	Negative	2	P14, P15	P14: Most of our courses were delivered distance education. Although we could not feel the lack of quality so much in theoretical courses in applied courses, it was obvious. P15: I believe that the quality of the course has decreased.

When the table is examined, it is seen that students have taken many physical education and sports field courses, including face-to-face during the pandemic process, through distance education processes, but they are not satisfied with the benefit of the education they have received. During the focus group discussion, the students stated that perhaps it may be possible to acquire efficiency from the theoretical courses, but they experienced many difficulties in terms of both equipment and content in applied courses like football that is delivered through

distance education. The rate of students who have a positive view on the subject in the whole group is only 4.87%.

Table 3 shows the data on the answers given by the students to the question about the advantages and disadvantages of taking football courses through distance education.

Table 3. views of students on the advantages and disadvantages of the football course they take through distance education

Theme	Code	f	participant	Sample views
Advantages	Positive	2	P2, P16, P17, P20	P2: In terms of video and visuality P16: Due to the Covid-19 incident, we could not use the same locker room and the same area when we are sweaty. I find it advantageous in terms of health. P17: I took it. It is efficient because the courses are being recorded. P20: I find it advantageous since I learn all the details thoroughly and perform the exercise frequently in my own field.
	Negative	39	P1,P3,P4,P5,P6, P7,P8,P9,P10,P11,P12,P13,P14,P15,P18,P19,P21, P22,P23,P24,P25,P26,P27,P28,P29,P30,P31,P32, P33,P34,P35,P36,P37,P38,P39,P40,P41	P14: I didn't find it advantageous that applied courses are delivered through distance education. Applied courses should be shown and taught to the athlete. This makes it difficult to get a positive and healthy efficiency in terms of both the leader (trainer) and the athlete when delivered through distance education. This causes the athlete to complete the football course only theoretically in his/her education life. Unless he/she improves himself/herself in this field. P28: I don't think it has any advantages. P34: With distance learning, we can only learn the theoretical parts, and I don't think it has any other advantage except that.
Disadvantages	Positive	-		
	Negative	41	P1,P3,P4,P5,P6, P7,P8,P9,P10,P11,P12,P13,P14,P15,P18,P19,P21, P22,P23,P24,P25,P26,P27,P28,P29,P30,P31,P32, P33,P34,P35,P36,P37,P38,P39,P40,P41	P12: It is disadvantageous in every aspect, it cuts no ice with you even if Ronaldo came and delivered the course himself unless you don't touch the ball physically P13: Since it will be an applied course, it is more beneficial to understand it by trying and seeing it live. Since none of these things will be possible in distance education, I consider it as a disadvantage. P14: Football course is a branch that should be described, taught and applied face-to-face. And in this context, it is uncontroversially obvious that football courses delivered through distance education are useless for the students. As long as the student does not or cannot put the theoretical course, he/she has taken into practice, he/she will never get the desired efficiency. P15: It is disadvantageous because in an online setting, we cannot observe the mistakes which were made in the pitch. P16: After all, it is always more beneficial to see the necessary things which are understood better in person, in the pitch. We have seen that this will not be very positive with distance education. P20: Because it is a team sport, we cannot do

| | | | | what needs to be done with two or more people, as many moves such as passing offense.
P26: How to play football is not taught by describing students how to hit the ball, students have to go out on the pitch and hit the ball themselves, a lack of practice arises distance education. |

As can be seen from the table, all of the students agreed that with distance education it is disadvantageous to study football, and that with distance education it is impossible to practice in applied courses in which the goal is to acquire psychomotor skills in educational processes in this way. However, when the answers are regarded, it was seen that 4.87% of the students stated that taking football courses through distance education is advantageous since the courses are being recorded, it offers the opportunity to watch and review later, and there is no activity that is performed crowdedly under unhealthy pandemic conditions.

When the students were asked about the problems and difficulties they experienced during the delivery of the football course distance education, it was seen that the answers students gave were in two sub-themes: physical and equipment related problems in general and the problems caused by not being able to play football actively, and Table 4 shows the answers.

Table 4 Views of the students on the troubles and difficulties they encountered in the football delivered through distance education

Theme	Code	f	participant	Sample views
Physical and hardware problems	Positive	1	P21	P21: There are no problems.
	Negative	23	P1,P2,P3,P4, P9,P10,P11,P12, P13,P14,P15,P16,P17,P18,P19,P20,P23,P33,P34, P35,P36,P37,P38	P15: We face difficulties in practicing. P19: Due to the location, there may sometimes be a problem with the power of the internet. P20: We can neither use the football pitch nor the pieces of equipment P33: We can't acquire any efficiency due to internet problems. P34: Due to the limited areas to apply (the exercises), I could not acquire any efficiency and I was insufficient on my own.
Problems caused by not being able to play football actively	Positive	-		
	Negative	14	P4,P5,P6,P7,P11,P12, ,P23,P24,P25,P26,P27,P28,P29,P31	P11: There are difficulties when describing positions and exercises and they cannot be conveyed in the desired way. P14: I took the football course face-to-face. But students who receive distance education do not get the desired efficiency which means that there is a lack of this branch in their educational life. Of course, it is up to the student to make up this deficiency. But in the Football course, students can't go one move ahead of theory than a course unless they go out on the pitch and experience the dust of that grass of the pitch on their own. P25: Adaptation cannot be achieved, team cohesion cannot be achieved, cannot be applied, cannot be experienced. P31: I can't improve my techniques.

When the table was examined, it was seen that the students stated that they lost their excitement due to the reasons such as not being able to play team games, practicing on the field, and not being able to pass and shoot when they took football courses in distance. It is seen that the share of these students among the students who

participated in the focus group interview is as high as 35%. Again, it was observed that 57.5 of the students stated that they had technical or hardware problems while taking football courses with distance education and that they could not follow the courses sufficiently.

Table 5 shows the data regarding the answers given by the students to the question of what kind of differences they think there will be in terms of course acquirements (the knowledge and skills you acquire at the end of the course) if they have taken the football course face-to-face.

Table 5. views of students on what their acquirements will be if they take the football courses face-to-face

Theme	Code	f	participant	Sample views
Applicability	Positive	27		P4: We could have reflected the information we had learned on the field. P5: Theoretically, we could have reflected and understood the information we received even more clearly in the pitch through application. P10: I think that I will continue my sports life in front of our professors and trainers with a more well-established technique thanks to their contributions. I think that we may have shortcomings due to the time out in terms of practicing the information we have learned through distance education. P15: I can analyze better whether the exercises are wrong or right when we apply them in the pitch. P16: What we were described and what we were required to do would have been kept better in our minds. It would be easy to remember later. P20: Since I will perform it on-site and with the necessary pieces of equipment, I will have a chance to teach more carefully the rules of how to play when I become a teacher in the future. P23: We make sure ball coordination is well. P25: I think it would make a huge difference; team sports are more effective (when delivered) practically. P26: Learning gets faster thanks to practicing.
	Negative	-	-	

When the table was examined, it was observed that all of the students expressed the opinion that it would be better to take this course face-to-face than to take it in distance. It has been stated that it is more appropriate to deliver football courses face-to-face in views that emphasize that application-based teaching is necessary for such courses because football is a team game and requires hand, eye, and ball coordination.

Table 6 demonstrates the views of the students on the sufficiency of educators in football courses which were delivered through distance education.

Table 6. views of students on the competence of educators of the football courses that they take through distance education

Theme	Code	f	participant	Sample views
Equipment and competence	Positive	37	P2,P3,P4,P5,P6, P7,P8,P9,P10,P11,P12,P13,P14,P15,P17,P18,P19, P20,P21,P22,P23,P24,P25,P26,P29,P30,P31,P32, P33,P34,P35,P36,P37,P38,P39,P40,P41	P1: I didn't find them sufficient. P16: After all, how much can you be influenced from afar? I think what had to be done was done, we tried to keep pace with it as much as we could. P27: No. P28: No, because without its appl, they cannot be sufficient.

			P10: The educator tried to do his/her best. If there is a lack of sufficiency, I think it is because we are theoretically unable to work together. and because football is a branch that requires both learning and application.
			P15: Our teacher explained it so clearly and creatively that I felt as if I was practicing it on the football pitch.
			P28: No, because without its application, they cannot be sufficient.
Negative	4	P1,P16,P27,P28	
			P34: I have found them sufficient, all the exercises that I have done right or wrong have been corrected thanks to many applications that we are constantly in contact with when applying whether it be exams or exercises that need to be applied in class, I have learned a lot of extra information about football and thanks to my teacher, I latched onto this branch.

When the data obtained from the table are examined, it is regarded that 90.24% of the students find the educator sufficient, while those who do not find them sufficient do so generally not due to the qualifications, personality, or academic competencies of the educator, but due to the disadvantages of delivering an applied course in the distance education process.

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS
As a result, when the views of the students on the football courses which were delivered through distance learning are grouped, it is observed students converge on the opinion that delivering courses like football which includes not only theoretical components but also practicing through distance education decreases the efficiency of courses. This finding conforms with the research findings which were carried out by Can, Özdemir and Türksoy, Işım (2020) on the e-learning of preservice physical education teachers. In conclusion it was deduced that students have problems developing affective and psychomotor skills due to the fact that physical education and sports courses were delivered through distance education, and that their physical and psycho-social development have been negatively affected.

One of the important findings of the research is that in distance education applications of football courses, even if the teacher is sufficient a learning process that corresponds to acquisitions of the course and is qualified could not be provided. The students emphasized that they had difficulties in distance education processes due to lack of physical environment and equipment, that they could not use the pieces of equipment, and materials used in football courses and training, and that they could not fully achieve their course goals since football is a team game and stressed the need for applied courses to be conducted face-to-face. Similar results were obtained at the studies on the delivery of physical education and sports courses through distance education and it was concluded that in the case of pandemic continuing in which delivery through distance education fails, it is certainly necessary for studies to be conducted on developing infrastructure, education, curriculum, and content (Çetin, Yılmaz ve İlhan, 2021).

Despite acknowledging that there are many different studies on the implementation of distance education applications in education processes during the research about the topic, there are only a few to serve as a resource for sports literature. Hence, it is thought that it will be beneficial to increase the number of studies in this field and to conduct studies on developing video, digital content, appropriate pieces of equipment, animation or simulation applications in cases where it is mandatory to deliver these courses through distance education.

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The Opinions of the Candidate Teachers of Art Education about Preparatory Body Exercises

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ABSTRACT
Students in the field of painting work long hours and in inappropriate postures. In this qualitative study, it was aimed to evaluate the experience and awareness of art education teacher candidates about performance-based musculoskeletal disorders and their views on preparatory physical exercises. Semi-structured interviews were conducted with 22 senior students studying at Trakya University, Department of Art Education. As a result of the thematic analysis, twelve sub-themes emerged under five major themes (i.e. "Exercise experience", "Physical pains", "Effects of exercise", "Breath awareness/ Breath hold, "Spent time"). Complaints of neck, low back pain, and then backache and holding breath are common among art education teacher candidates. More research is needed to raise awareness of musculoskeletal pain of students in the field of painting, as well as to prevent such disorders, and to plan and implement ergonomic processes.
Keywords: Posture, Musculoskeletal disorders, Art education students, Preparatory physical exercises, Breath awareness.

INTRODUCTION

The painting process starts with an idea and materials are organized according to the expression of that idea. Every touch left on the surface is serious work and requires long hours of work. Even though Picasso's drawings, which consist of simple lines, seem to be made in a short time, they are actually the final result of long hours of practice. Artists are self-employed individuals who utilize the upper body's mechanical movements to stimulate their passions (Getchell, 2019, p.3). Apart from working long hours, repetitive movements (brush strokes, pencil drawing, etc.) are quite common in painters. Intense and long-term painting in similar positions also causes some health problems that affect the physical, emotional states, performances of people in this field. Zaza et al. (1998) reached a consensus that PRMD (Performance-related musculoskeletal disorders) is a personal, chronic and obstructive health problem that affects the artist physically, emotionally, occupationally and socially (as cited in Ünal, 2016, p.6). In the notes of Baron Trasmondo, who is thought to be the first person to mention PRMD in a painter, it was stated that intense painting work caused visible deformation in Raphael's right thumb bones (De Quincy, 1835 as cited in Ünal, 2016, p.3). "Repetitive motion injury" proposed by Matt Middlesworth as an alternative definition to musculoskeletal disorders (Middlesworth, 2015, p.7 as cited in Getchell, 2019, p.13) is quite common among painters, just like Raphael. "The repetition that causes the considerable breakdown and regeneration of sarcomeres within the overworked muscles. Consistent breakdown of muscle fibers can lead to deformities and flaws in regeneration, leading to debilitation or weakness" (Middlesworth, 2015, as cited in Getchell, 2019, p.14). Another example that can be given to the negative effects of the wrong posture or long hours of painting without breaks on the body is the fact that Michelangelo's work constantly looking up while painting the ceiling of the Sistine Chapel caused his back to hunched, his head to stand back, and even the fact that he had to read the letters he received by leaning backwards because he couldn't hold his head upright (Nardini, 2011).

Painting is a very intense occupation and requires focus. However, the more intensely a person works, the harder it can be to notice his body. Even his breathing becomes irregular while he is working, and he often holds his breath. Illustrator John Vernon Lord explained this process this way: "I find I am holding my breath for ages dreading the drawing going wrong. Sometimes I actually get dizzy from lack of oxygen. I also grit my teeth too tightly" (Lord, 2005, p.34).

Work-related musculoskeletal disorders such as repetitive movements, working in inappropriate postures, lifting weights, fixed body positions and long hours of uninterrupted work have been the subject of research in different job groups. Musculoskeletal disorders are a chronic and debilitating problem; these injuries can result in pain and disability that affects daily life and the ability to work in certain careers. In order to prevent these problems from affecting the individual, it is important to recognize the causal factors of these disorders (Buckle, 2005, p.164). In addition to work-related musculoskeletal disorders, there are many studies on performance-based musculoskeletal disorders and even prevention of these disorders in musicians and students studying music in the field of art. However, studies in the field of painting are quite limited. This may be because the general audience often sees the finished artwork, not the artists' or art students' performances in the painting process (working time, posture). In occupational musculoskeletal disorders, the risk levels of visual artists are not mentioned much or they are not included in the priority risk group. Despite working longer hours than many occupational groups, the vast majority still earn less. They have spent longer education and labor than other workers, but their earnings from artworks do not increase with educational time, age, experience factors. This shows that human capital theory is not valid in art labor markets (Towse, 1996, p.98). Getchell emphasized that visual artists are deprived of preventive research, management, education and evaluations for musculoskeletal disorders. The reason for this is also related to low income. Visual artists do not have the source of income to create a program for the prevention of workplace injuries (Getchell, 2019, p.5).

Aim
The aim of this study is to evaluate the experiences, awareness and opinions of candidate teachers of Art Education about performance-based musculoskeletal disorders and preparatory physical exercises.

METHOD

Study Design
In this study based on qualitative method, phenomenology design was used.

Participants
The participants consisted of 22 senior students (14 females and 8 males) studying at Trakya University, Department of Art Education.

Data Collection
The data which was used in this study were collected in 2022. The study was carried out with 22 senior students studying at Trakya University, Department of Art Education. The reason for this is that senior students have attended all art studio classes and it is predicted that performance-related musculoskeletal pain complaints will be more pronounced. In face-to-face interviews, a semi-structured qualitative interview form was used to collect information about the experiences, awareness and preparatory body exercises of the students. "Do you exercise (physical) in your daily life? (Pilates, yoga, fitness, cardio, etc.)", "Do you exercise (warm-up/stretching/etc.) before you start painting?", "What is your opinion about the preparatory physical exercises that can be done before you start painting? (Should these exercises be done or not? Why?)", "What is your opinion about the effects (or possible effects) of doing preparatory physical exercises before you start painting?", "Do you have breath awareness? Do you hold your breath in daily life? Do you hold your breath while painting? Do you do breathing exercises?", "Do you experience discomfort such as pain, burning, stinging, stiffness in your neck, shoulder, back, low back, arm, elbow while painting or after painting?", "How much time do you spend on average per a day at your computer, tablet, or phone? Do you pay attention to your body posture while using these technological devices?", "What is your longest uninterrupted working time while painting?", "Do you prefer to work standing or sitting while painting? When you change your sitting position or draw different points of the painting, do you adjust your painting according to your eye level?" questions were asked. All interviews lasted approximately 15-20 min. The answers were audio-recorded with the permission of the participants and then transcribed verbatim for data analysis. As there is limited research on this topic, this study was designed to collect baseline data on the topic. Prior to data collection, the study was approved by the Trakya University ethics committee. All participants were informed about the aim of the study, their names or identities would be concealed and that there were no risks or discomforts that could be associated with the study.

Data Analysis

Thematic analysis procedures defined by Yıldırım and Şimşek (2013) were used in data analysis. Transcripts were read from beginning to end without any prior coding. In the second step, the data was coded. The coding of the data was carried out according to the concepts extracted from the data from the coding formats that Strauss and Corbin (1990) (as cited in Yıldırım and Şimşek, 2013, p.261) divided into three. Later, these codes were grouped under sub-themes that make up the overarching themes.

Limitation of Study

This study has several limitations. The use of devices (e.g. laptops, tablets, mobile phones) and even the posture of studying from books were not taken into account. The question was asked only about the time they use technological devices and whether they pay attention to their posture while using them. The study group consisted of senior students studying at Trakya University, Department of Art Education and these students had mainly studied painting in their studio classes until their last year. Physical posture characteristics, activities, hobbies, weight, and health problems (although recorded in the interview) were not considered among students attending different art studio courses or students in different age and gender groups (although recorded in the interview).

RESULTS

Most of the study participants were women. As seen in Figure 1, five main themes and 12 sub-themes emerged as a result of the thematic analysis. The findings related to the themes and sub-themes are given below with the literal expressions of the participants.
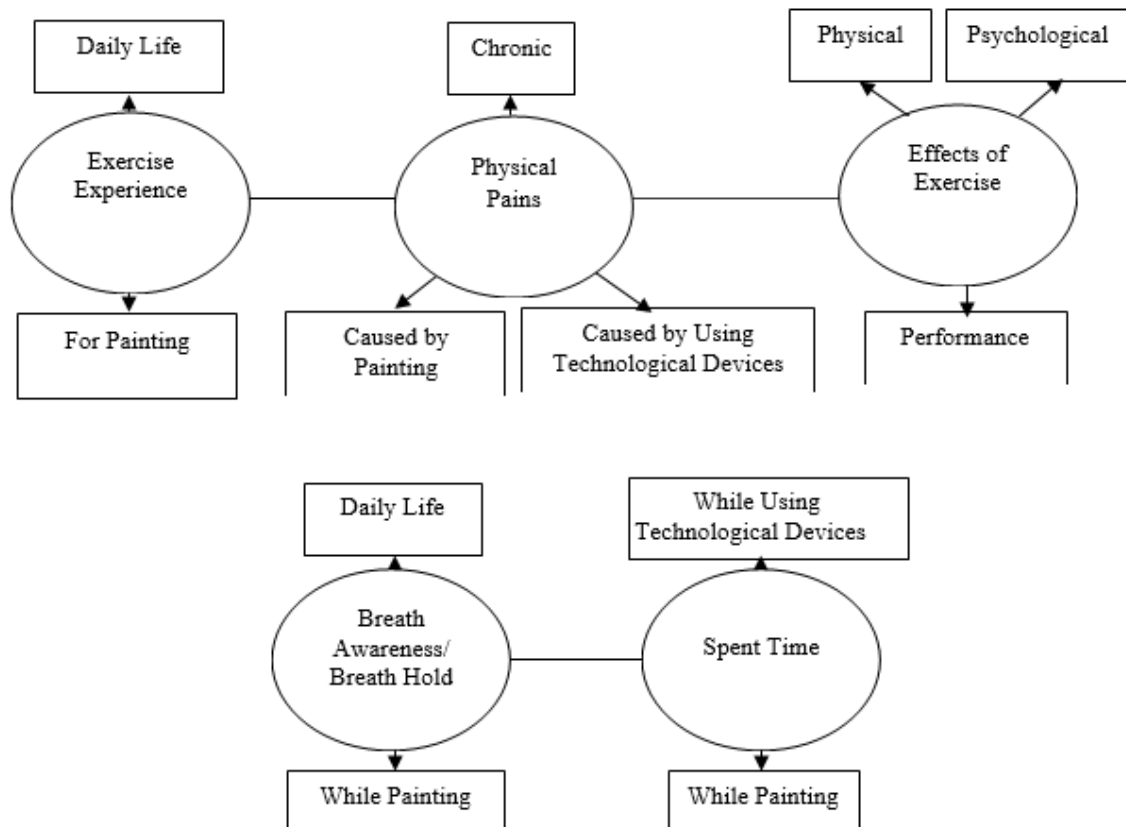
Figure 1: Main themes and sub-themes

Exercise Experience

This major theme, which identifies how the participants exercise experience, consisted of two sub-themes: "daily life" and "for painting". The statements of the participants regarding these two sub-themes are given below.

Daily Life A total of five participants stated that they exercise regularly in their daily life. One of these participants does fitness and lifts weights. Another does walk as well as neck and shoulder exercises. The other three participants do fitness, swimming and neck exercises. One of the two participants who regularly performed neck exercises, P.1. (male) explained that he did this in order to minimize the problems arising from his professional work: "Because I have trouble painting, I do neck exercises, especially because I draw, because I

focus on the desk with my neck bent, and because I use a computer". In the same way, P.2. (male) said that he started exercising with some diseases:

> I walk for almost 1 hour a day regularly. Even though I can't do it every day, I do neck-shoulder exercises and culture-physical movements 4-5 times a week. I worked at a desk for many years, worked as a public officer and went to the doctor. I have had dizziness. I have a similar situation when painting and I go to the doctor. There are exercises he gave; I have applied them, and I have seen a lot of benefits. As neck and shoulder exercises.

Thirteen of the participants stated that they had experience of exercising or that they sometimes exercised but did not do it regularly. Among the reasons for not being able to exercise; There are expressions such as not being able to find time due to school intensity, not making it a habit, being lazy, having to take a break as a result of an accident outside of sports, and not being able to adapt afterwards. Many participants, such as P.3. (female), who said: "I try to do as much as possible. But not regularly. Sometimes I do, sometimes I don't, but it is not very regular", stated that they could not make exercise a habit. P.4. (female), who connected the reason for not being able to exercise to the intensity of school, said:

> I was doing it before my classes started, but because it is so busy, I can't spare a lot of time. I mostly do it in the summer and during breaks. I do yoga and meditation. It allows me to stay in the moment and get away from some stress, overthinking and getting stressed and getting away from them.

As P.5. (female) said, four of the participants: "No, I don't. I did not do any exercise" stated that they did not do any physical exercise in their daily life.

As can be understood from the participant statements, the majority of the participants do not exercise regularly in their daily life.

For Painting Fifteen of the participants were like P.4. (female): "No, I don't", stated that they had never exercised before they started painting. Seven of the participants as physical exercise; They stated that they did stretching movements, neck exercises, leg stretching, arm and finger stretching exercises to relax their arms, hands and wrists. P.6. (female) explained her pre-painting exercises as follows: "I usually do. I'm trying to do more body stretching. I do it physically, such as opening legs, stretching arms and fingers, in order to relax and express it better". Some participants, such as P.1. (male), who said, "I sometimes do neck exercises before I start painting and sometimes by taking a break when there is pain", explained that they do this type of work when they feel the need to take a break while painting, as they did before they started painting.

Although fifteen of the participants didn't do physical exercises for painting, twenty-one of the same participants said that the exercise they would do before painting would have a positive effect in terms of physical and/or psychological and/or performance. Saying that one of the participants didn't exercise for painting, P.4. (female) explained the possible effect of the exercise she would do before painting on her posture as follows:

> I think it will help. Sometimes I realize that when I paint for a long time, I slowly go forward and go into bad posture, my hump comes out, my shoulder hurts. When I'm done painting and trying to get my body straight, I can't straighten out. So before I start painting, it would be good for me to exercise. Or I think it would be better if I stood a little straighter and did it consciously. I think it would be beneficial to do preparatory body exercises.

P.7. (male) said that although he knew the cause of the pain, he did not know what to do:

> I have been in this field for eight years, if we include high school. This is the first time I have expressed this pain. We talk to our friends all the time. We know why it hurts, but we never thought about what we should do to reduce the pain. Or we didn't have a solution for each other. The effect can be seen even if it is done for a long time, maybe even for 10 minutes before painting. We need to be in this awareness, on my own behalf.

As can be understood from the participant's statements, fifteen participants out of seven do not exercise before painting. Despite this, twenty-one participants are aware of the importance of physical exercise before painting.

Physical Pains

Three sub-themes related to the main theme of "Physical pains" emerged. These are expressed as "chronic" and "caused by painting" and "caused by using technological devices". The statements of the participants regarding these three sub-themes are given below.

Chronic Two of the twenty-two participants in the study made statements about some discomforts caused by previous accidents and working at a desk for a long time professionally. It was understood that the pain caused by these disorders was related to the neck and shoulder, and although these pains existed before the painting process, it turned out that working in a similar position and for a long time was effective in increasing these pains. While P.2. (male) was painting, he stated that he suffered from pain like the pain he experienced while working at a desk:

> I worked at a desk for many years, I also worked as a public officer and went to the doctor. I have had dizziness. That's when I learned it was an occupational disease. I learned that it is due to inactivity in people who work at a desk for a long time. I am now retired. I have a similar situation when painting and I go to the doctor. There are exercises they give; I have applied them and I have seen a lot of benefits. As neck and shoulder exercises. I think that if people in similar professions do it, they will benefit.

Caused by Painting All of the participants in the study stated that they experienced physical pain while painting or after painting. These pains varied according to working positions (sitting or standing), painting times, and the size and style of the painting. Twelve of the participants worked sitting, five were standing, four were both sitting and standing, and one was crouching down (Table 1). Physical pain in the statements of the participants; low back, neck, back, shoulder, arm, wrist, knee, back of neck, shoulder to neck, leg, neck and shoulder joint. (Figure 2). As seen in Figure 2, the most common places of pain were neck, low back and back. P.8. (female) attributed her low back and leg pain to standing work: "I have a lot of low back pain. Since I do it standing up, it doubles, my legs hurt a lot. I'm always in front of the picture because I go and come. I don't have any health problems either". It was seen that such pains increased due to working in the same or wrong positions for a long time. The participants stated that they needed to sit or lie down if they were standing after the pain, to stand up or lie down if they were sitting, that is, to change their position or to take a break. P.2. (male):

> It happens a lot on my shoulders and neck. Like pain. Hardness. If I have worked very hard, if I have worked 2 days in a row, if I have to finish my painting homework, maybe I will suffer from his discomfort for a week. My shoulders are stiff, and I can't. I have to take a break for a few days. I think I'm contracting my body while painting. It is a little bit due to my desire to work in detail.

Participants stated that their pain decreased when they exercised or paid attention to their breaks. P.1. (male):

> There is pain in the neck. I also prevent it with exercises. Apart from that, when we work with large canvases, there is pain in the arms, and when I use the brush in a wider area, there is pain in the arms. I somehow reduce it and prevent it by exercising, stretching, taking breaks.

Realizing that working in the same position for a long time causes increased pain, P.3. (female) stated:

> My wrists and neck especially hurt a lot. Low back pain also occurs in the process of teaching and internship experience. When I sit or stand for a long time. So, I don't have to do either one for a long time. I need to rest. I know that.

Some participants, like P.9. (Female) normalized this pain even though they experienced pain while painting: "Yes, I have a lot of pain... We paint, after all, we are painting something we stand still, our body will hurt, but I never thought about it. I took that as normal".

Table 1: Distribution of pain regions by working positions

Position	Region of Pain	n
Sitting	Low back, neck, back, shoulder, arm, wrist, knee, back of neck	12
Standing	Low back, neck, shoulder to neck, leg, arm	5
Sitting down and standing	Neck and shoulder joint, back, wrist	4
Crouching down	Low back	1
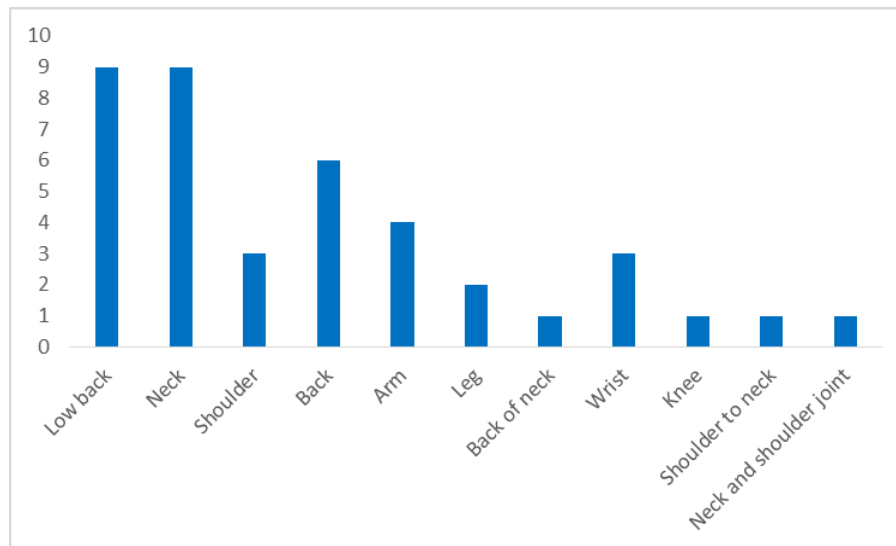
Figure 2: Distribution of the pain regions

Caused by Using Technological Devices All of the participants prefer the phone as a technological device in daily life, but the use and duration of phones, tablets, computers vary according to the purpose of work, school, and having fun. P.3. (female) said that she used a computer as long as she had homework:

> I don't have a lot of work with the computer unless I have homework. I can't take my eyes off that much anyway. I take care of the phone as much as I do my job. Not a lot. I don't pay attention to my posture when I am with such devices. I can hump. I'm on my knees when I'm on the phone. At the same time, I start to move forward on the computer. My eyes start to ache too and that's when I quit. I'm getting very close because of my eyes. It reflects on my back too.

Effects of Exercises
Three sub-themes emerged as "physical", "psychological" and "performance" related to the main theme of "effects of exercise" and participant statements regarding these sub-themes are given below.

Physical As seen in Fig. 3, the physical effects of exercising were expressed by the participants as relaxation, prevention or reduction of pain, reduction of fatigue, prevention of injuries, elimination of posture disorders, and breath control.
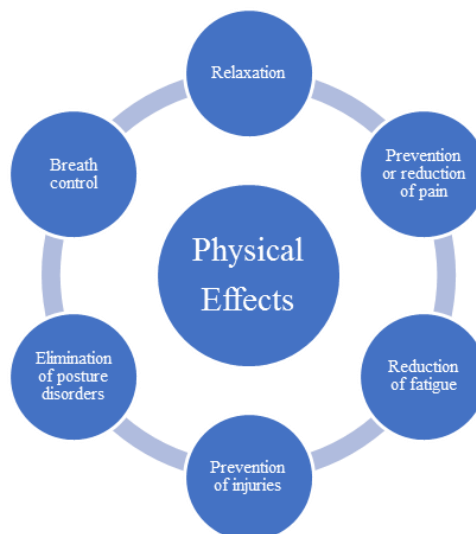
Figure 3: The physical effects of exercise

One of the participants P.10. (female) stated that exercise would count her bodily comfort as follows:

I thought it might improve my posture. Since I am not always rigid, rigidity can go away because I make a move. Maybe it will be better if done later. I don't know how much it affects my painting actually. It's more of a physical effect. It affects my physical comfort rather than my painting. It can probably be reflected in the painting as well.

P.2. (male) similarly stated that exercise would provide comfort to him as follows:

I think it will affect positively. I gain comfort. My breath will open. I think that if I do breathe exercises, hand-arm, neck and shoulder exercises beforehand, I can work more efficiently in painting. Because I get tired quickly. I think those exercises will prevent you from getting tired quickly. I've experienced it in other things as well. I think the warm-up will be beneficial.

Psychological As seen in Fig. 4, the psychological effects of exercising were expressed by the participants as motivation, feeling energetic, calming the mind and focusing.
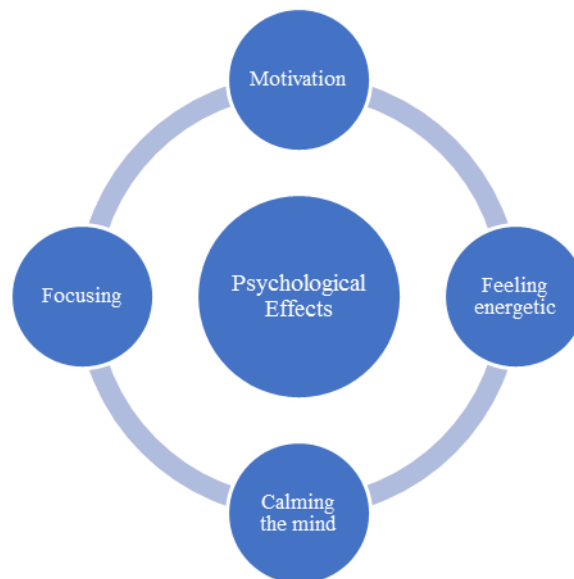
Figure 4: Psychological effects of exercise

One of the participants, P.11. (male) expressed the positive effects of exercise on focused as follows:

It has positive effects. It allows us to focus more. It makes you think against that subject. When we have pain, we think about it more. We get up from the painting and go to rest. It inevitably affects our work in a negative way.

P.6. (female) also stated that exercise helped her control her emotions:

Controlled turmoil always produces better results. Because what we call painting is to express something, and we are the mediator of it, the better we take care of the car, the farther the car can take us. Something like this. I think it's important. When I paint without doing sports or stretching, without doing a body exercise, I cannot express it fully. Because it comes out without getting it under control.

Performance As seen in Fig. 5, the effects of exercise on performance were expressed by the participants as motivation, creative
ty, working time, successful/efficient work, successful ideas and focus.

Figure 5: Effects of exercise on performance

P.8. (female) stated that doing exercises was associated with finishing her paintings in a shorter time:

> I can paint my paintings in a shorter time. If I exercise, I will sleep and I think I can perform better. Because it takes long. I leave time in between so that my back pain will pass. But this time, the finishing time of the painting is getting longer, the paintings do not dry. I have such problems.

P.12. (female) emphasized that the exercise would affect the performance positively:

> It would be mentally positive. I think it will improve performance. Because it contributes to the formation of their ideas by thinking about what they will do before they start. I think that the performance will be effective in the motivation part.

Breath Awareness/Breath Hold
Two sub-themes related to the main theme of "breath awareness/breath holding" emerged as "daily life" and "while painting", and the statements of the participants regarding these sub-themes are given below.

Daily Life Nine of the participants stated that they did not hold their breath in daily life, four of them stated that they had breath awareness in daily life and they did breathing exercises and meditation, and nine of them stated that they held their breath during stress, troubled times, lying down, tattooing (working), playing games and doing sports. In the participants who realized that they were holding their breath, the thought that it might be dangerous and fear, the need to provide breath control, trying to calm down and wonder emerge. P.1. (male) stated that he held his breath when he was very focused on something, and when he realized it, he found it scary:

> When I focus on something very intensely, I sometimes notice that my breathing becomes irregular. Sometimes it happens when I'm playing, sometimes when I'm drawing, when I'm in a very focused state, I find that I'm holding my breath. Other than that, I don't know. I only know this from my experience. When I realize that I am holding my breath, it seems a little scary that it may be dangerous, that I can continue this at other points, that it may cause problems in the future unintentionally, that there may be breathing irregularities even during sleep. I'm trying to pay attention. I'm trying to stay calm. When I go into detail and thin lines in painting, I unconsciously hold my breath.

P.13. (female) stated that she used to do breathing exercises for a while:

> I did exercises like blowing balls. I used it especially during my surgery. Then I tried again several times. Other than that, I do it to rest myself, but not very often. In daily life, I unconsciously hold my breath. I hold it in times of stress. I never hold my breath while painting. I am very comfortable with it.

While Painting Sixteen of the participants stated that they held their breath while painting, one of them stated that they used to hold it but not now. P.7. (male) said:

> I hold my breath during work. Consciously. I keep it in fine lines, single lines, where there is no margin of error. I am also engaged in tattooing. There, too, I always hold my breath in single lines and fine lines. I even hold it when I sleep. I'm used to it now. As soon as I realize that I am holding it, I release it slowly and hold it consciously. Even while you're doing it, I say you have to hold your breath here, I will now. I'm getting ready for it and keeping it that way. I don't leave it until it's finished. I think my hand will tremble if I don't hold my breath. In my daily life, there are no moments when I hold my breath.

Most of the participants, like P.7. (male), stated that they consciously held their breath to prevent hand tremors. Some participants, such as P.14. (female), said that they did this unconsciously:

> I don't pay much attention to it. If I paint in a hurry, yes, if I try to catch up, if I have a problem with time, I do it involuntarily. If I'm stuck in a part of the painting and I don't like it, then it can happen.

Figure 6: Breath-holding situations while painting

As can be seen in Fig. 6, the breath holding situations while painting was described by the participants as "fine lines, fast work, undesirable parts, color changes, figure and portrait, fabric folds, working with a fine brush, details, difficult points, important points, focusing, points where mistakes should not be made".

Four of the participants stated that they never held their breath while painting, and one stated that he did not notice. P.11. (male): "In my daily life, there are no moments when I hold my breath. I never noticed it while painting". P.13. (female) stated that he did not hold his breath while painting, although there were moments when he held his breath in daily life:

> I've done the kind of work where we blow balls. I used it especially during my surgery. Then I tried again several times. Other than that, I do it to rest myself, but not very often. In daily life, I unconsciously hold my breath. I hold it in times of stress. I never hold my breath while painting. I am very comfortable with it.

Spent Time
Two sub-themes, "while using technological devices", "while painting", emerged regarding the main theme of "spent time", and the statements of the participants regarding these sub-themes are given below.

While Using Technological Devices As seen in Fig. 7, the daily use of technological devices by the majority of the participants was between 4-5 hours and 5-6 hours. Those who used technological devices for more than 7

hours constitute 4% of the participants. Some of the participants such as P.4. (female), stated that while they did not pay attention to their bodily posture while painting, they were aware of using technological devices:

> A breakout screen time on my phone was 12 hours. Since I thought I was spending too much time, I opened the screen time app and reduced it from 12 hours to 6 hours. I pay attention to my body posture with these devices, I realize it right away, but I can't picture it.

Some participants, such as P.10. (female), stated that they noticed their postural disorders later:

> I spend a lot of time. When I'm at home, I do my drawings on the tablet now. I am working from a tablet. I spend most of my time there as I do everything from phone and tablet. There are at least 4-5 hours a day. I usually work in a lying down or semi-sitting position. I don't think about my posture when working with such devices, but then I understand, now I understand, I think that it spoils my posture, because it is a long-term thing, it has a long-term effect. I'm a bit offended right now.

It was observed that the participants who used technological devices complained of shoulder pain, back pain, eye pain, and a feeling of contraction in the hand. P.2. (male) noticed with a feeling of pain and stopped using it:

> I use it between 1-2 hours. Especially the phone. Every now and then I become aware of my body. Pain informs me. I'm being held. When I look at it for a long time, both my eyes and my shoulder hurt, and I feel that I am tensing up whichever hand I hold, and when I realize it, I immediately try to let it go.
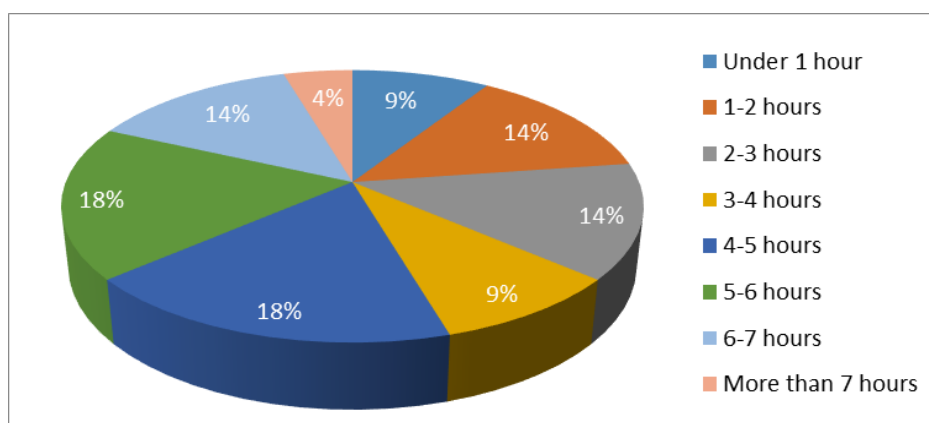
Figure 7: Technological device usage period

While Painting As seen in Fig. 8, most of the participants' painting time without breaks was between 3-4 and 4-5 hours. The number of participants working 5-6 and 7-8 hours is the same. Working hours increase during exam times, and working hours were extended with short breaks. P.3. (female) stated that she more than doubled her working time with short breaks: "The longest is 2 hours straight. But if I need to grow something, it can take 5-6 hours. With intervals of 5-10 minutes, of course". Habits such as the need for physical movement, physical pain, faltering, smoking led the participants to take a break. P.10. (female) stated that the pain caused by working without a break for a long time forced her to take a break: "It's been 4 hours nonstop. Afterwards, I must lie down because my back and neck hurt. But then I continue again".
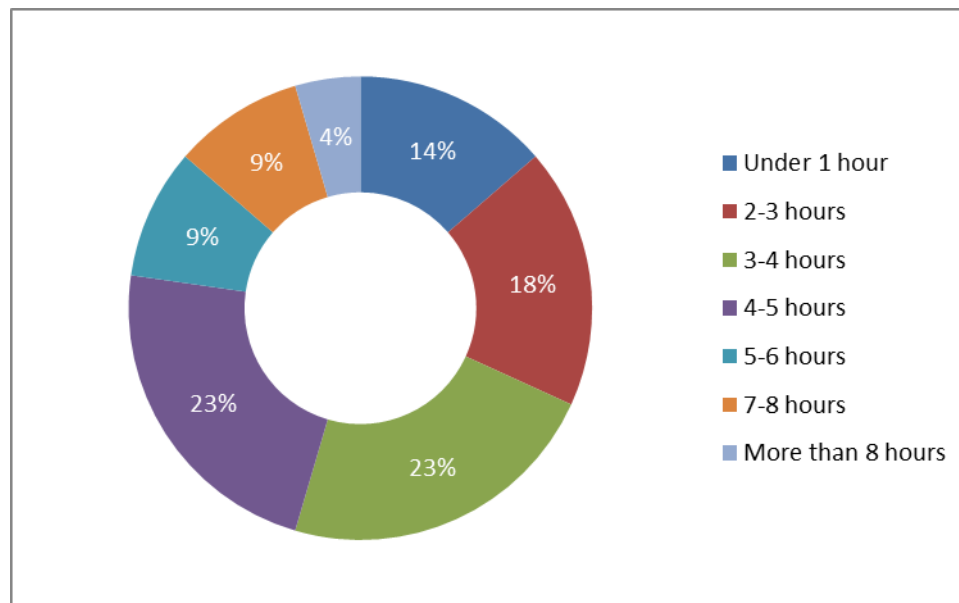
Figure 8: Longest non-stop painting time

DISCUSSION AND CONCLUSION

The aim of this study is to evaluate the experiences, awareness and views of candidate teachers of Art Education on performance-based musculoskeletal disorders and preparatory physical exercises. When the findings were evaluated, it was seen that although the majority of the participants had exercise experience, they did not exercise regularly in daily life and before they started painting. Despite this, the vast majority of the participants were of the opinion that the exercise to be done before the painting would provide benefits for their physical, psychological and performance. Pekçetin and Özgü (2018) also mentioned the positive effects of regular physical exercise on university students, not only on their physical well-being, but also on their well-being in different areas such as making sense of life and being goal-oriented. Aydın (2014) concluded that the posture and breathing exercise program applied to office workers had positive effects on reducing pain levels, musculoskeletal system complaints, and increasing the quality of life, activity and functional fitness level. According to Trieger (2005: 26), yoga works all parts of the body, protecting it from injury and stress as the body stays relaxed as you lengthen, bend and stretch muscles and joints. Postures also improve blood flow to every cell in the body, invigorate and strengthen the nervous system, and increase the body's capacity to withstand stress. As Halprin emphasized, the purpose of good structure from skeletal to muscle and muscle to bone is to allow greater stability and flexibility by expanding our ability to respond to the abilities and opportunities of the moment with spontaneity, intelligence and imagination (Halprin, 2003, pp.103-104). Professional painting is also a stressful process that manifests itself in different stages of painting, in which the body contracts from time to time until the process of finding an idea, transferring it to the surface (color selection, size, technique, etc.), training on time, believing that the work is finished and signing. This was also included in the statements of some participants. When we feel anxious and stressed, we tend to tense up our muscles. This can cause headaches, tight shoulders, neck pain (one of the most common in participant statements), and even a tight jaw. According to Trieger (2005: 19), if we do nothing to release this daily tension, this tension causes muscle imbalances. Since there are no natural outlets for our tensions, it causes our muscles to weaken, become tense and lose contact with our physical nature and the energies of life (Anderson, 2000, p.8). Bernardino Ramazzini, who is defined as the father of occupational diseases, visited the workers at the workplaces, observed the activities and working conditions of the workers and examined the stress that their work caused on the body. At the end of his studies in which he examined the relationship between certain disorders and postural attitudes, repetition of movements and lifting weights, he mentioned the importance of taking breaks between workouts, exercising and changing posture (Franco, 2014).

Musculoskeletal disorders are a chronic and debilitating problem; these injuries can result in pain and disability that affects daily life and the ability to work in certain careers (Getchell, 2019). Painters, on the other hand, use the shoulder girdle muscles with active and frequently repetitive movements. These non-ergonomic working conditions generally trigger musculoskeletal diseases (Hansen, 1991 as cited in Das et al., 2020, p.318). All of the participants stated that they experienced bodily pain while painting or after painting. These pains varied according to working positions (sitting or standing), painting times, and the dimensions and styles of the painting. Poor posture and movements during work, the load on the muscles, the speed, duration and repetition of the work, the force used in the movement, vibration and heat are important physical factors in musculoskeletal

diseases (Yılmaz et al., 2006, p.16). Das et al. (2020) concluded that factors such as working posture, daily working time, repetitive and compulsive movements, work experience, age, gender, and working under stressful conditions are associated with the occurrence of WMSDs. There is evidence of a causal relationship between highly repetitive work and neck and neck/shoulder MSDs. Most of the epidemiological studies reviewed have defined the neck as "repetitive work" as work activities that involve sustained arm or hand movements that affect the neck/shoulder muscles and place a load on the neck/shoulder region (Bernard, 1997). Chang et al. (1987) as a result of the survey they applied to 75 artists, 92% of which were painters, and the video analysis they applied to 14 students, it was found that the artists had the most complaints of low back pain, followed by shoulder and neck pain. Milerad and Ekenvall (1990) compared the neck and neck/shoulder symptoms reported by dentists and pharmacists; they accepted dentists as a high-risk group due to awkward postures and repetitive use of small hand tools, and defined dentistry as a profession "with arms pulled and without support" (Bernard, 1997). It can be said that painting students, who work in detail and use thin brushes, are similar to dentists in the bending of their bodies during the study. The findings of Kısa et al. (2021), Das et al. (2020) students of the Painting Department, Ünal (2016) academicians and students in the Painting and Sculpture Departments, Panhale et al. (2020) embroidery workers, Ariens et al. (2001) Dutch workers, are similar to the findings of Chang et al. (1987). The findings obtained from the participants in the study are similar to the literature and the area where pain was most common was the low back and neck. Hanvold et al. (2010) concluded that participants who reported neck, shoulder, and back pain at school had more than three times the risk of reporting pain at 3-year follow-up.

Half of the participants stated that they painted while sitting and that they felt pain in the low back and neck region. This is similar to the findings obtained by Getchell (2019) in a survey of ETSU visual arts students and academics. The survey revealed that most artists experienced low back pain. Sitting painting not only affects the hips and legs of the individual, but also the low back. Sitting for a long time causes serious health problems in adults. As Getchell stated, further studies should be conducted to see whether there is a relationship between sitting positions and musculoskeletal disorders among visual artists (Getchell, 2019, p.15). Alexander attributes the prevalence of many anxiety and skeletal problems to sitting for long periods of time (Drake, 2001, p.106 as cited in Özmenay, 2018, p.74). Grimmer et al. (2006) found in their study on adolescents that adolescents had a high rate of medically verifiable back pain. The results showed that the sitting position had an effect not only on the shape of the anterior-posterior curves, but also on the increasing scoliosis and asymmetries of the trunk, which is one of the first symptoms of scoliosis (Grimmer et al., 2006 as cited in Drzał-Grabiec et. al., 2015, p.855).

The other area where the majority of the participants complained about pain was the neck. According to the results of research by Côté et al. (2008), working in a static position for long periods of time, above shoulder level or in awkward positions (frequent bending or twisting of the trunk or working in uncomfortable positions), increased neck pain. Sahu et al. (2013) found that although they had similar sitting times and body movements, sculptors and potters had complaints of discomfort/pain in different parts of their bodies; Kısa et al. (2021) found a significant difference between the right side pectoralis major and minor muscles and the subscapularis muscle strength values of both sides of the painting department students who had a higher rate of neck pain, and the values of the sculpture department students. Studies showed that there was a high prevalence of musculoskeletal symptoms in the neck and upper extremities, ranging from 48-78% among undergraduate students (Kanchanomai et al., 2011). Ferreira et al. (2019) attributed the increasing use of computers and other information and communication technologies to the complaints of neck pain, which has increased in recent years among university students. Colgar (2014: 24) considered it possible that those who worked in the office five days a week or students suffered from neck disorders, and attributed to poor posture or lack of physical activity or aging. Gheysvandi et al. (2019) investigated the prevalence of neck and shoulder pain in students aged 7-12, and concluded that one-third of the students had at least one of the shoulder and neck pain problems. In addition to physical factors such as school atmosphere, too much homework, difficulty in seeing the board, and posture, they associated neck pain, excessive desk height, forward and backward sitting inclination, and shoulder pain with low desk height, which causes abnormal postures. Non-specific neck pain can be caused by stress as well as posture disorders. Because the exact cause and underlying pathology of neck disorders are often unclear, treatments focus on relieving pain and stiffness. Stretching movements are a common way to reduce the discomfort caused by pain in the neck and shoulder muscles. Stretching movements provide benefits in strengthening the neck and shoulder muscles, increase the flexibility and movement of the neck muscles, increase blood flow to the muscles, increase production energy, reduce pain, are relatively easy to do, do not require special time and space (Purwata et al., 2019, pp.31-32). Some previous studies have recommended yoga as a complementary therapy for the relief of neck-related pain. Kim (2018) concluded that there was a significant decrease in neck pain intensity in a study that aimed to test the effectiveness of yoga exercise to alleviate

nonspecific neck pain in university students who frequently used computers and complained of computer-related neck pain.

Many of the participants underestimated musculoskeletal pain and think that it was a normal condition, or they had a low awareness of musculoskeletal pain. The data obtained are similar to the results obtained by Getchell (2019) from ETSU visual art students and academics, and Ünal (2016) from students and academicians from different departments at the Faculty of Fine Arts.

One of the results encountered in the research is that the majority of the participants have breathing-holding problems while painting. We mentioned that illustrator John Vernon Lord was holding his breath because he was afraid the drawing would go wrong. It was seen that some of the participants hold their breath for a similar reason, and those who did yoga, breathing exercises or meditate were more conscious about controlling their breathing. Yoga increases the flexibility, strength and endurance of the muscles. Physical postures, breathing exercises, meditation: reduce stress and tension (Dündar, 2008, p.32). In yoga, it is possible to feel the whole body, strengthen bones and muscles, correct posture, improve breathing capacity and increase energy by using one's own body weight, posing and rhythmic breathing (Trieger, 2005, p.26). Focus is also included in participant statements as one of the reasons for holding their breath. Focusing inevitably produces muscle reactions in different parts of the body; however, there is also the possibility of causing problems. In their study, Gellrich and Parncutt (1991) attributed the common areas for tension knots or blocks in music practice to the back of the neck, wrists and hands, and that the reasons were excessive concentration, emotional involvement in music, fear of making mistakes in difficult passages, and not being studied enough. This is similar to the expressions of some participants, who put a strain on their body to prevent hand tremor.

In addition to painting, it is thought that the use of technological tools in long-term and incorrect positions will also be effective in musculoskeletal pain. According to the statements of the participants, the phone was in the first place in the use of technological devices. The majority of the participants stated that they used technological devices between 4-6 hours a day and that they experienced posture disorders from time to time. According to Al-Hadidi et al. (2019) examined the relationship between neck pain and the duration of mobile phone use, and found a significant positive relationship between the duration of mobile phone use and the duration and severity of neck pain. They attributed this pain to the static muscle load caused by long-term neck flexion, to the lack of support of the arms and to the repetitive movements of the fingers, especially when one hand was used. Kanchanomai et al. (2011) found that upper extremity symptoms were more common in undergraduate students who were engaged in computer work and used computers for a long time. They also concluded that 46% of them complained of neck pain during the 1-year follow-up, and 33% of them had permanent neck pain. In the study of Bhardwaj and Mahajan (2017), in which they mentioned the relationship between neck pain and computer use, they mentioned that computer used for four to five hours a day was an important risk factor for neck pain. Sitting with an incorrect neck posture disrupts the normal lordotic curve of the neck, leading to muscle imbalance and thus neck pain. Bhardwaj and Mahajan (2017) also stated that although long-term computer use increased the incidence of neck pain, the incidence of disability was not very high; Pacheco et al. (2018) concluded that university students' spending time in activities that required computer use and concentration could be associated with more FHP (forward head posture).

The study focused on the pain felt during and after painting and the students' views on preparatory physical exercises. Activities not recorded in the interview, hobbies, age, gender (although recorded in the interview), weight, health problems (although recorded in the interview), etc. can contribute to pain and discomfort. A convenient and small sample size was used in this study. Therefore, the results cannot be generalized to other art education teacher candidates. The research can be used in future studies to raise awareness about musculoskeletal disorders in art education students, to prevent such disorders and to train them on preparatory physical exercises, to include a lesson in art education and training programs, to plan and implement ergonomic processes.

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The Place and Importance of the Manager in School Success

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ABSTRACT
Success is also used in terms of the status or condition of meeting a set of expectations, but also in terms of realizing a goal or achieving a goal. Success in the TDK Dictionary: " The positive product of one's talent and the growing of the person depending on the growing and the growing, it is described as to finish, obtain a job in the desired format. If a school is successful; note only the academic achievement of the child, its socialization, culture, successful in communication, respect for environmental sensitivity, animal love, respect to human rights, to adopt social general pass values, and convert them to behavior, art, sports, creative and critical thinking, etc . contains. Of other words, a successful school expresses the process that is directly related to the growing of the child's versatile desired direction and nature _ There is a lot of variables that are effective in this process. As a matter of fact, the child's success in the school, the family, the teacher, the surroundings of the school, the technical and technology surroundings, the child's self- owned features and so ten. Besides, the managerial philosophy and approach of the school administrator has an important place the aim of this sense is to examine the place and importance of management in school success. Since the research is based on the source scan, it is patterned as a compilation study from qualitative research approaches. according to the findings of the study, the effective and competence of the management is a positive relationship between school success and a positive relationship between school achievement. Therefore, it has been important to exhibit the effective and adequate management of the school administration.
Keywords: education, school administrator, school success, student, teacher.

INTRODUCTION

Education and training institutions (school, university, public education center) are an important part of social development (Menteşe, 2013). Schools as educational institutions; It has to be in a multifunctional social structure that raises individuals who are open to innovations, put forward creative and original ideas, question, research, solve problems, do not escape from problems, produce alternative solutions, set their goals for the future, plan and establish their own future. Therefore, the renewal, change and development of the school plays a very important role in the formation and development of an information society. This situation can also be expressed as the expectations of the society from schools. For this reason, schools can be seen as one of the most effective institutions in playing a role in the development of society. The effective and successful management of the institution, which is so important for the success of the individual and the development of the society, is of course also an important issue for today's world. In this respect, the principal and his assistants, who are in the position of school administrators, have some duties and responsibilities (Bursalıoğlu, 2015, s. 6). In addition, it is possible to state that the legislation and society have expectations from the managers. The changes and developments experienced have also affected these expectations and therefore the duties and responsibilities of the managers. It is possible to state that the main purpose of school principals affected by this change is to target school success. In fact, it should be emphasized that what is meant by school success is student success. Although the administrator cannot directly affect the success of the student by attending the class himself, it is to affect the student's success by being effective on the student's family, the improvement of the physical conditions of the school, the motivation of the teacher who teaches the student and many other factors. School principals, who are responsible for organizing education and training activities at school, also need to educate themselves in accordance with the age.

In my study, first of all, literature review was included in order to determine "the place and importance of the administrator in school success". Afterwards, education, training, management, school management,

responsibilities of the school administrator, success, school success and the role of the administrator are given respectively, and finally, conclusions and suggestions are given.

Literature Review

Under this title, some selected national and international researches on the place and importance of management in the success of the school are included. One of the studies on the place and importance of management in the success of the school was conducted by Babaoğlan et al. (2017). With this research named "Teachers' Views on the Effect of School Principal on School Achievement", it was tried to determine the effect of the administrator on the success of the school. According to the findings obtained based on face-to-face interviews with a total of 40 teachers, including 30 teachers working in Yozgat city center and 10 teachers working in the district; In order for the principal to be effective in the success of the school, school principals; supporting employees, being competent, being disciplined and principled, being a participatory-democratic manager, being able to produce solutions to problems, being hardworking, setting vision -targets, being able to lead, directing, being positive, taking risks, being an entrepreneur, preparing the opportunities and conditions for the teacher to work, it is necessary to create a positive school climate, be strong-willed and resilient, and trust and be honest of the employees. Another study was done by İnce (2017). In his study, İnce examined some of the main factors that determine the success of the school institution in Turkey, based on a literature review, and as a result, came to the conclusion that it has a high degree of influence.

Dinçsoy (2011) aimed to examine the cultural leadership roles of school principals in making secondary schools effective schools. The sample of the study consisted of a total of 288 people, 240 secondary school teachers and 48 secondary school administrators in Afyonkarahisar city center in the 2010-2011 academic year.

According to the research findings, it has been found that the cultural leadership characteristics of school principals are effective in the effectiveness of secondary education institutions. Aksoyalp (2010) "21. In the research titled "Qualification of School Administrators in the 21st Century: Instructional Leadership", it is stated that the school administrator is at the center of the organization, provision of resources and functioning of schools in order to achieve the aims of education at a high level, and that new understandings about the new duties and qualifications of school administrators as leaders in the 21st century are revealed and based on this. It is aimed to determine the teaching leadership and scope of these qualities. In addition, according to the results obtained as a result of the study, in the 21st century, the duties of the school principal have evolved into a more comprehensive and multi-component situation, the responsibility of the administrator has increased as a result of the effectiveness of the education and training process gaining more importance since student success is based, and the administrator's responsibilities towards change according to the changing and developing world conditions. It is stated that it is necessary to exhibit a management and a supportive, facilitating, learning and teaching management. Balyer (2012), on the other hand, in his study titled "The Changing Roles of Contemporary School Principals", reveals what the roles of school principals are expected to be fulfilled in addition to their current roles. It is stated that the roles of school principals have diversified and their workloads have increased in the study, in which it is stated that the roles of the administrators have naturally changed as a result of the economic, social and political developments affected in the changing world and also as a result of globalization. On this occasion, it is expected from an administrator to fulfill many roles besides the duties they still carry out, such as the development of teachers, supervision of students and teachers, budget, finance and program development, school-parent relationship. Again, Baykul (1992) compiled the education system information in his research titled "Evaluation in the Education System". Accordingly, it was stated that education is a system and a process that exists in all systems should also be included in the education system. The importance of the stages of the elements of the education system, which is summarized as input, process, output and evaluation, is mentioned. Bıkan (2008) reveals the effect of administrators and teachers working in primary schools, primary school inspectors, on guidance, inspection and positive emotions in his research "Principal Opinions on Management and Its Problems in Primary Schools". According to the researcher, who stated that in this period when knowledge became the main source of capital and wealth, educational performance and responsibilities became more difficult, it is emphasized that the key point at this point is the school administrator. In the study, in which it is stated that the school administration should exhibit a successful management, it is stated that the school administrator should especially have a professional value system. The research was also applied to the administrators of official education institutions affiliated to MEB in Kadıköy and Ümraniye districts of Istanbul province in the 2006-2007 academic year and a total of 123 official school administrators in the 2007-2008 district of Kırklareli-Lüleburgaz. According to the results, the authorities of the administrators are not sufficient and they experience confusion of authority, so the said problem should be eliminated and their authority should be increased, the repair and cleaning works of the school buildings should be carried out by another manager under the name of the administrative manager, therefore the school principal

should only deal with the education and training works and transactions, It was stated that the ministry should carry out the necessary studies and make it compulsory for the managers to have a directorate formation . Can (2014) "The Relationship Between Middle School Principals' Leadership Styles and Student Success" In his study titled, the determinations made by school principals in order to achieve their targeted student success, the decisions they made, the solutions they brought to the problems that occurred were examined and it was stated which leadership behaviors the school principals should have. In another study of Can (2014), titled " Administrative Opinions on Educational Institutions Manager Appointment-Relocation Procedures and Criteria", it has been revealed that the manager appointment criteria , which are determined by the manager appointment regulation in educational institutions, should be evaluated in terms of manager's views. Görkem (2008) in his master's thesis named " Leadership and Teaching Leadership " explains the relationship between leadership and educational leadership, and it is stated that the school will be more efficient as a result of the effective use of behavioral roles by the education leader. For this reason, the school administrator should be a qualified leader and should be able to fulfill the instructional leadership completely. According to the results of the study, it is also stated that classical school administrators are unsuccessful compared to the administrators who lead the instruction. Gülmez (2020) offers methods and new perspectives to guide managers at all levels in his research titled "Management Theories and Contributions to Contemporary Management Thought and Practice". In this sense, considering the recent changes and developments in contemporary management and organization theories, it is emphasized that the developments in system theories, behavioral sciences and numerical sciences have deeply affected the understanding of management. Therefore, it is stated that events or systems should be handled within the framework of environmental conditions and other developing conditions, thanks to the developing modern theories. In other words, it is stated that school administrators should change their perspectives on events or systems, and they should display a management by following the developments with a more holistic perspective. Güneş's (2014) master's thesis named "The Effect of Secondary School Principals' Instructional Leadership Behaviors on the Academic Success of the School" is a study that tries to reveal the effect of the instructional leadership behaviors of the secondary school principals on the academic success of the school by taking the opinions of the school principals. In the study conducted in the population of Şahinbey and Şehitkamil in Gaziantep in the 2013-2014 academic year, the most successful 6 school administrators and the administrators of the 6 most unsuccessful schools were interviewed according to the 2013 SBS-OYP ranking. According to the results of the study, it was emphasized that the success of the school is closely related to the environment where the school is located and the socio-economic status of the families. It has also been stated that the desire of the student to be successful and the specific goals of the student, that is, the awareness of the student, are also effective in the success of the school. The purpose of Helvacı and Aydoğan's (2011) research titled "Teachers' Views on Effective School and Effective School Principal" is to determine the characteristics of effective school and effective school principal according to teachers' views. According to the research carried out on 105 teachers working in official education institutions in the province of Uşak in the 2009-2010 academic year; According to teachers, it is stated that effective school characteristics are based on the education-teaching process, school climate, school-parent relations and school-environment relations. In addition, it was specifically stated that the teachers stated that the success of the school is directly related to the success of the school administrator and that the school principal should have leadership characteristics and duty-responsibility awareness. Köktürk (2011) in his master's thesis titled "The Effects of the Success of Management in Primary Education on Teachers and Students" examined the effects of the success of the administrators in primary schools affiliated to the Ministry of National Education on teachers and students. According to the research carried out on 614 students and 61 teachers in the central schools of Zonguldak, it was stated that the organizational effectiveness of the school depends on the school management. According to this, it is stated that the school administrator should be effective and should be in a structure that can keep up with the development and change continuously. In addition, it is emphasized that the school administrator should be considered as a separate profession from the education administrator, therefore, each administrator should be an expert according to his/her competence areas. It was also revealed that the students were affected by the administration, and it was determined that the administration made more effort to set an example for the students, and that the student's achievements were followed by the administration had a positive effect on the student. In addition, it is stated that nature and environmental trips, visits to historical places and museums, which should be led by the school administration, are effective in increasing the success of the students. Özdemir (2016) examined the relationship between the managerial behaviors of the school principal and the academic achievement of the students based on the opinions of the teachers in his doctoral thesis named "The Relationship of the Managerial Behaviors of the School Principal with Academic Success". According to this research, it has been determined that the school principals' fulfilling their managerial characteristics properly increases the success of the teachers, thus increasing the level of focus on education and teaching, and the managerial success of the school principals contributes to increasing the student's success and adapting to the school. In this sense, it is suggested that school administrators should actively participate in professional societies and focus on teaching in order to improve their managerial skills. Seven and Engin'in (2008) their study titled "Factors Affecting Learning" determined the

factors affecting learning with survey questions on students. It has been stated that these factors are all parameters included in the training process. In other words, it is stated that the educational process affects student achievement by taking into account the psychological, social and physical factors. In addition, when the factors related to the learner, the factors related to the learning method and the factors related to the learning tools are taken into consideration, it is stated that the teacher and the school administrator are directly or indirectly effective in all of these factors. In addition, it has been determined that quality education can only be realized by paying attention to the factors in question, by emphasizing the importance of the parents' influence on the factors in the process in question. In Topçuoğlu's (2010) study named "The Effect of School Administration on Teacher Success in Primary Education Public Schools", it was tried to determine to what extent school administration is effective on teacher success in primary education public schools. In the study, when the developments in the world are followed, it is stated that providing a qualified education in schools is directly related to school administrators and teachers. In this sense, activities such as being an example to the society, making the school effective and efficient, being in an exemplary position to make the students they raise an exemplary member of the society, knowing and applying their professional and humanitarian duties and responsibilities in order to raise qualified and successful students increase the importance of school administrators and teachers. According to the research conducted on 226 teachers working in public schools in Istanbul, Ümraniye, Kâğıthane and Üsküdar districts, it was stated that the behaviors of the school administrators of the teachers affect the school climate positively or negatively, thus directly affecting the success of the teachers. Yılmaz (2010) applied the organizational culture scale to teachers and administrators in primary schools in his master's thesis titled "The Relationship Between School Culture and Student Success: An Empirical Research in Istanbul Primary Schools". School culture differences were tried to be determined in terms of the assumptions of the administrators and organizational practices in the school.

In one of the similar studies conducted abroad, Sammons et al. (1995) found that various analyzes were made about being an effective school in primary and high schools and the key points of these effective schools. According to the research in question, unlike many studies in which students' cognitive characteristics are shown as criteria for being an effective school, Sammons et al. It focuses more on areas related to academic effectiveness. As a result of the research, it was not concluded that any teaching technique or way is superior to the other in terms of being an effective school. However, flexibility and identifying different teaching approaches were found to be more effective than a single style. It is seen that one of Sammons' effective school criteria is the concept of professional leadership.

Hallinger et al. (1996), an experimental literature search was conducted on the relationship between the role of the school principal and school effectiveness between 1980 and 1995. According to the study, by examining the existing literature on the role of school principal, it has been stated that the role of school principal is essentially a complex and open to discussion by its nature.

Finally, in a study conducted by Andrews et al. (1987) in collaboration with Seattle School District and Washington University in the United States, on 67 elementary schools and 20 secondary schools in the region, the relationship between actual leadership and student achievement was tried to be examined. According to the findings of the study published as a result of a two-year research, it was seen that school administrators directly affect the success of the school and the student. It is stated that administrators have a vital role in terms of academic performance and success of students.

Model of the Research
In the research, articles, master's and doctoral theses, books published in the field and related studies were examined, and the subject was tried to be analyzed with the information obtained. In other words, in the literature review related to the research, first of all, the theses in the Higher Education Council, the National Thesis Center and the articles in the Dergi Park database were examined, and information was obtained about the studies that can be accessed. Then, by scanning the database of the National Library, printed sources related to our subject were determined and the needed books were obtained. In addition, efforts were made to create a rich bibliography by making use of the reports published by the Ministry of National Education on the subject. In this sense , the study was designed as a descriptive study within the scope of qualitative research, since the place and importance of management in school success was based on literature review. The qualitative research approach requires the researcher to be flexible, to reshape the research process according to the collected data, and to follow an inductive approach in the analysis of both the research design and the collected data (Yıldırım & Şimşek, 2006; Çalık, 2014). In this context, scientific studies on the qualifications that school principals should have, the inadequacies seen in school principals, the way school principals are raised, what training school principals should receive for an effective school management, and most importantly, the importance and place of

school administrators in school success will be described and content analysis (Çalık, 2014) method was tried to be analyzed by grouping them under certain themes.

THE PLACE AND IMPORTANCE OF THE MANAGER IN SCHOOL SUCCESS

Education is identical with the history of mankind. It is possible to state that the education in the early ages was limited to the behaviors necessary to protect oneself from danger and to feed for the survival of human beings. However, over time, there have been differences in the aims desired to be achieved with education according to the requirements of the age. The current aim of education, which is a phenomenon that will continue as long as human beings exist; It is possible to express it as a better quality, healthy life, being cultured and socializing. The education process, which begins with the birth of a person, continues with socialization and acculturation by being influenced by the society and culture in which he lives. As a matter of fact, societies transfer their cultures to their own individuals, sometimes consciously and sometimes unconsciously. Here is the society; The conscious transfer of customs, traditions, customs, beliefs and values is explained by the concept of education (Durmuş & Ayas , 2013).

What is meant by education in general has been stated above. However, it is also possible to state that there is no common idea about its definition as a concept. It is even possible to state that there is a definition of education as much as the number of studies. The reason for this is again expressed by researchers that education varies according to people, countries, aims and philosophies. However, when we look at the definitions of what education is; While Plato defined the individual as the act of maturing, his student Aristotle expressed it as the acquisition of moral virtues. The definition of discovering and developing one's innate abilities was made by Kant (Trans: Durmuş and Ayas, 2013). While Durkheim (Cited by Durmus and Ayas , 2013) says that education is socialization, JJ Rousseau (Cited by Durmus and Ayas , 2013) uses the phrases that education is the art of making people. Farabi, on the other hand, is influenced by his education, similar to the description of Aristotle; He drew attention to the virtuousness of the individual by saying that it is to raise healthy, just, high-intelligence, high-spoken citizens. Therefore, while it is possible to increase the definitions with education, if we look at the definition of Ertürk, who is known for his studies in the field of education in our country and whose definition of education is generally accepted, according to Ertürk, education; It is the process of making an individual acquire desired behaviors intentionally through their experiences (Durmuş & Ayas, 2013). When the generally accepted definition of Ertürk (1975) in his statement is examined; It is seen that education is a process, that his own life is essential in his behavior, that there is a deliberateness in the work, in other words, that the change in behavior is not random, that this change should cause a behavioral change in the individual, and most importantly, all of these are the basic elements of education (Karabacak, 2017).

Education can also be called socialization and acculturation. However, the planned type of socialization or learning is called formal education, while the unplanned type that develops spontaneously in the society is called informal education (Karabacak, 2013).

Education is a system. Because structures consisting of parts in contact with the other for one purpose are called systems. The elements of this system are; input, process, output and evaluation. All of the issues such as the student, the characteristics that the students to be accepted into education should have, the money, tools and equipment to be used in education, the characteristics of the behaviors to be gained, traditions and customs, and laws and regulations related to education constitute the educational inputs. The process is the activities, lessons and studies carried out to gain the desired behavior. Output, which is another element of the education system; is the occurrence of the desired behavior change in the inputs. Finally, evaluation is expressed as the act of controlling this whole process. Control process; It is also accepted as monitoring and evaluating factors such as the success of the student, the curriculum, and the effectiveness of the teaching (Baykul, 1992).

Management

Started to become scientific after the 18th century. The existence of ruling and ruled classes from the first humans to the present shows that this concept has always existed. However, the establishment of large companies with industrialization, the subsequent transformation of cities and the compulsory replacement of medieval states with modern states brought along a scientific management process both in terms of private enterprises and public administration (Topçuoğlu, 2010). Scientific management today; It is called the process of using all the resources of the organization effectively to achieve the determined goals. It is necessary to express that what is meant by the resources of the organization is the people in the organization, material resources, various tools and equipment and time. Therefore, the phenomenon called management provides coordination among organizational resources by performing actions such as directing, supervising and evaluating these resources in line with the goals of the organization (Bıkan, 2008).

It is also possible to define the concept of management in different ways with various perspectives. For example, according to the common definition made in the field of economics, management; Land is one of the functions of labor or production. Management according to political sciences; It is defined as the sultanate consisting of the rulers and the ruled. Again, while management is defined as a reputation or class in social science studies, it is defined as the art of directing and managing others in classical scientific management and doing business with the contribution of employees in contemporary management approach. Although the concept of management has various definitions with factors such as the nature of the organization, its purpose or the different perspective of the researcher, it is possible to state that there should be unchangeable elements from the content of the concept. Therefore, management; It contains identical elements such as taking action for a purpose, cooperation of employees, and being a process that reaches the goal (Topçuoğlu, 2010).

In order for management to be effective and efficient, some elements must coexist. The first of these features is the reason for the existence of both the organization and the management. Since the purpose of the management is to reach the goals of the organization by using the resources of the organization, the goal should be adopted by the management and other stakeholders of the organization. Another feature that is as important as the purpose for the management is the division of labor. Because after the objectives are determined, the activity of sharing what needs to be done among the members of the organization to those who can do it best is important in order to serve the purpose of the management. Creativity, which is another feature, means that the administration favors the members, that is, directs them. This is important in terms of ensuring the motivation of the employees. The hierarchy feature expresses the relationship between the subordinates and superiors in the organization. Democracy, group and communication features, which are also the characteristics of the management, mean that the employees of the organization and the management work together in line with the objectives and are in the process together (Paşaoğlu, 2013).

As a result, it is possible to state that with the changing society, expectations and goals also change. For this reason, various studies have been carried out considering the needs of the society in different periods of history regarding management, which is the most important unit for organizations that want to keep up with change and achieve their goals. Looking at all the research, it is possible to state that the management should be planned, systematic, organized, innovative, creative and employees should be motivated.

School Administration

Management as a science is divided into sub-branches such as educational administration, public administration, and industrial management. The concept of education management is; It is defined as the process of using and managing the resources of the educational organization in order to gain the desired behaviors to the people who form the basis of the society. Educational management has gained importance both in the world and in our country in recent years. As a result of the changes in the world and in our country, the needs of the societies have also changed, and this has led people to the studies in the field of education and management and made them care about it. On this occasion, countries such as Canada and England, especially the USA, have recorded important academic studies in fields such as education and management. Academic studies of educational administration, which has become a department taught in universities after the 21st century, accelerated and led to the emergence of various theories in this field (Can, 2014).

The application of educational administration, which is a special area of public administration, to a narrow (private) area is called school administration. Therefore, while the aim of educational administration is to operate the educational organization effectively and efficiently to meet the needs of the society and to reach the goal by using the organizational resources appropriately, the school administration is also particularly interested in the realization of the decisions and policies taken in the field of education (Bursalığolu, 2015, s. 36). In other words, the final targets determined by the states regarding education are the subject of educational administration. School management, on the other hand, can be expressed as using the resources of the school organization effectively in order to achieve these determined goals (Bıkan, 2008).

The most important element of educational administration, namely its subsystem, is undoubtedly the school. Because it ensures that the goals of the education system are conveyed to people, who are the input and output of the school, by considering the basic principles. In addition, it shows that both schools and their administrations are important for school organizations to undertake the task of raising and developing the expectations of states and societies and the ideal person they desire, since the education system has a special area where it implements the policies it determines. Therefore, the purpose and duty of the school administration is to use the resources (teacher, equipment, education program, technology) effectively and to continue the school in accordance with its purpose. This is the most basic feature that makes school management important. In addition, it is possible to state that the school and its administration are not independent from the environment, their input and output are

human, thus contributing to the development of society by developing people, trying to meet the expectations and needs of the society by adhering to the determined education policies, and being under the influence of various pressure groups (Bıkan, 2008; Köktürk, 2011).

School; It is a system under the body of public administration in which information is transferred to the individual in a systematic and planned manner with its expert staff in order to achieve the educational goals. In other words, it is the most important duty of the school to reach the goals determined by the National Education in line with the interests of the society. The school administration is also the unit responsible for administering the school within the framework of the general objectives of the central organization, namely the National Education, and the special objectives of the school. For this reason, the duties and responsibilities of the school administration are as follows;

- Its main goal is to achieve the most efficiency with the least amount of resources for the student.
- motivation of the stakeholders, especially the employees , and to keep them high.
- To make the school a healthy and safe environment by both preventing conflict between employees and taking other necessary precautions.
- To keep the school up-to-date by following the developments in the field of education and to make the school a lively structure by following the changes in the needs of the society.
- Developing the school-environment relationship, directing and directing the school environment when necessary.
- To protect the environment and meet the expectations of the society (Can, 2014).
- To coordinate the preparation of tools and materials such as the physical condition of the school, office, student and personnel affairs, and the curriculum, social activities, unit and lesson plans required for education.
- In summary, the most important thing is to ensure the development of the school in accordance with the objectives of Turkish National Education (Topçuoğlu, 2010).

Duties and Responsibilities of the School Manager
In order for the school to achieve its goals, the administration must be effective and efficient. The person who is responsible for managing this process called management and who is responsible for reaching the goals of the people who come together for a purpose is also called a manager. Again, the aim of the school administrator, who is the person who carries out and coordinates this process, should be to ensure the continuity of the school by using the resources of the school in accordance with the goals of the organization while achieving the goals. Management: It is a phenomenon that a person can only achieve through education, experience and self-development. Because it is an important activity that requires strict order and responsibility. The school has a vital importance for the development of the existing society and the continuation of its existence with the coming together of individuals, who are the most important elements of the school. In this context, when the administrator tries to reach the school's goals, he actually develops the society and makes it reach its goal. For this reason, the manager fulfills an important mission while fulfilling the purpose of the management as a requirement of his position (Görkem, 2008; Bursalıoğlu, 2015; Balcı, 2014).

The school administrator is the person who motivates the employees and can control where necessary by providing coordination among the members. In addition, it is among the responsibilities of the school administrator that the educational services, which are among the main goals of the school, are suitable for the general purpose, and that they try to ensure that the students grow up effectively and efficiently. Because it is the legal (legal) leader of the school and the symbol of power. For this reason, it is possible to state that a school administrator should have some characteristics. For example, the school administrator should be able to effectively use the decision-making, planning, organization, communication and control processes that are among the management processes. In order for the school to reach its goals, it should have a vision and be competent in legislation. Again, they should be reliable, active, knowledgeable, have high communication power, can use time sparingly, use their mother tongue properly and effectively, have civilized words and behaviors, and be impartial (Topçuoğlu, 2010; Yıldırım & Ada, 2015).

Education administrators are the ones who determine the policies that schools should follow and the education they should give. However, it is the school administrators who implement and implement these policies and ensure that the order is fed back. The duties and responsibilities of the school principal are as follows according to the Ministry of National Education Executive Appointment Regulation, in which those who carry out the duties of principal or assistant principal in educational institutions affiliated to the Turkish Ministry of National Education are defined as school administrators;

- The institution should be managed by the principal in a way that provides a democratic educational environment.

- The school principal is authorized to perform his duties, maintain and control the necessary order in accordance with the laws, regulations, programs, directives and orders.
- Provide school inputs and use resources effectively in line with the school's purpose.
- All kinds of work related to education and training should coordinate and plan the operation.
- It should ensure strong communication among stakeholders, cooperation and organization among employees.
- It should be able to channel this influence in line with the goals of the school, taking into account the dominant groups.
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In summary; should use the school's human and material resources effectively and efficiently in accordance with the school's goals (Şimşek, 2014).

Each school has its own symbolic environment. This is called the culture of the school. The school culture, which develops over time, emerges as a result of the beliefs and attitudes valued by the principal and other employees of the school. School culture has a positive effect on school success (Yılmaz, 2010; Gümüşeli, 382 2006; Tyson , 2008). In other words, the school culture, which increases the effectiveness of the school and makes itself accepted by the environment, is affected by the attitude of the school principal, the values and behaviors he cares about. The activity of creating a strong school culture, which is one of the first goals that the school principal should achieve, requires having sufficient knowledge on this subject. Therefore, the school principal, who can create a culture of quality in the school, will have fulfilled an important task in achieving the school's purpose. In this sense, in order to improve the school culture, the school principal; It should help determine the philosophy and values of the school, be aware of its basic values, adopt them, integrate the traditions with the school, include various cultural activities, determine the written and unwritten rules within the school and ensure that they are followed (Yılmaz, 2010).

Finally, it should be noted that today, the concept of educational leadership is preferred instead of the term school principal. Therefore, school principals are expected to act as the leader of the institution, not the manager. Because educational leadership requires being a guide not only within the school but also within the wider education system. For this, management should be seen and accepted as a profession. On this occasion, expressing school administrators' competencies, qualifications, and duties and responsibilities clearly will enable them to see themselves as leaders (Kesen, Abbaslı and Toklucu 2019). Again, regardless of the characteristics of school principals, it is necessary to determine the basic qualifications that the administrator should have, to determine some standards and to ensure that they go through some training, instead of the understanding that each teacher can be a school principal. The school principal, which should be in the professional and general administrative services class, should not only be a legal force (Topçuoğlu, 2010).

Success and Successful School

Since man is a social creature, he always strives to achieve his desires by adapting to the environment he lives in. As a matter of fact, a person will be satisfied when he is convinced that the society meets the expectations of him. Therefore, reaching one's goals is considered success. In other words , it is success when a person achieves what he wants, by consciously putting effort and motivation . For this reason, in order for a person to be considered successful, he or she must have achieved the goals he has set in the form of a certain time. Today, the word success is scattered in all areas of life and is accepted as a concept that focuses on more than one area. While success in the modern sense is used in the sense of self-development; In education, it is used in the sense that the student can acquire the necessary knowledge and skills in an academic sense, be appreciated by his teachers and improve himself in the lessons he sees at school (Can, 2014).

People want to be successful in order to be happy. So basically, success is a tool to be happy. A large part of the desire to be successful of a person who wants to be successful at different times and in different places in life is school success. School success, which is based on the evaluation made by the teacher after the education given at the school, should be considered in the context of the school, the student and the family. Because school success will be at the desired level with the participation of these three stakeholders in the process together. The fact that the school administration is the most important among these stakeholders is due to the fact that it can ensure the success of the student by controlling other stakeholders (Yılmaz, 2010).

Today, the success or effectiveness of the school is measured by the success of the students it teaches. As a matter of fact, a successful school is defined as a school that provides the cognitive, emotional, psychomotor and social development of its students in the most appropriate way. The school should try to achieve the goal of providing students with desired behaviors, which is basically the purpose of education. Therefore, there is a

direct relationship between school and student achievement. The Turkish Ministry of National Education Regulation on Primary Education Institutions contains the following statements regarding student success.

- Measurement and evaluation should be made on the basis of the achievements and objectives of the curricula.
- Measurements and evaluations should be made on a country-wide basis.
- Apart from the exam grades, the effect of the performance and project assignments on the success of the student should also be taken into account.
- The student should be evaluated as a whole. In other words, both cognitive, affective and psychomotor skills should be evaluated together (Can, 2014).

Measurement and evaluation process is carried out in order to determine the success in education, that is, whether the students gain the desired behaviors or not. Thus, student success is determined with the behaviors gained. In addition, deficiencies or difficulties that cause failure are determined. Therefore, the level of success is determined by the education administration or the school administration and the necessary measures are taken, and the deficiencies can be completed (Yılmaz, 2010).

There are many in-school and out-of-school factors that affect student success. As a matter of fact, the family is one of the external factors that affect the student's learning the most. Because children who follow their parents from the moment they are born; Having publications such as books and magazines at home, strong and balanced communication within the family, which can positively affect the development of the child, and parents who are reassuring and interested in the child's problems will of course positively affect the student's learning. Again, the fact that the student is deprived of the financial situation to not be able to buy the basic needs of the tools and the learning of the students who cannot even get pocket money from their families will also be negatively affected. Likewise, it is possible to state that factors such as the physical condition of the school, its heating, being in a noisy place in terms of its location, and the absence of places such as laboratories affect the success negatively. Finally, it should be stated that teachers and school administrators have a direct effect on student success as internal factors. As a matter of fact, the personality of the teacher, the method, technique, tools and materials he uses, and his relationship with the student will naturally affect the success of the student. The effect of the school principal on the success of the student and ultimately the school is examined below (Baran, 1995; Seven & Engin, 2008).

School success and the role of the administrator

School administrator; It is of vital importance for the school to be effective, powerful and to achieve its goals. Today, being seen as the leader of education and training also increases the responsibility of management. In fact, their responsibilities are interrelated. Because in order to contribute to the development of the society, it has to train the people that the society gives as input and send it back to the society as an output. Thus, while sending the output to the society, it has to achieve success in a way that will ensure the development and progress of the society. In order to achieve this, the student must be successful. In order for the student to be successful, the teacher, who is the main production function of education, must be motivated. It is also important that the teacher is motivated and has positive relations with the school administrator. Finally, the student's acceptance as successful is also directly related to the success of the school. For this reason, the school administrator should focus on student success while determining the goals of the school. As a matter of fact, it is possible to state that this is the reason why laws and even society see the administrator as an education and training leader. Therefore, the school administrator is responsible for providing the necessary environment for the success of the student. For this, it is important that he cares about in-school communication, has authority, power, can make decisions, organizes and coordinates, and that the school's purpose is clearly determined by showing that he aims success from the school administrator (Görkem, 2008).

The effect of any organizational management on the employees of the organization was mentioned for the first time with the Hawtorne studies conducted between 1924 and 1932. According to this study, it has been determined that the participation of the people who are in the kitchen of the organization, that is, the people who carry out the production, to the management and have a say in the management increases the productivity and also raises the morale of the employees (Topçuoğlu, 2010). After the effect of this research was noticed, it should be stated that the first study in this sense in the field of education was in the 1960s. In fact, it is seen that this study, which is carried out in the field of education, mostly focuses on the factors affecting the success of students and their analysis. Therefore, the effect of the school administration on the success of the teachers who provide the production and the student, which is the main target, has become an important issue for the administration. When the studies in this field are examined, it is historically divided into three different periods. The first period is the production function, which is the period in which student success is examined and the factors affecting success are analyzed. It is possible to state that the most important research in this period was

the research conducted in the USA in 1964 on 600 thousand students (Coleman , 1966). According to this research, many factors affecting the success of the student were tried to be analyzed. The effects of many variables such as school facilities, the situation of school principals and teachers, curricula, classroom situations and family characteristics on success were examined. The second period was entered in the 1980s, and when the studies conducted in this period are examined, it is seen that the focus is mostly on the effectiveness of the school. It has been thought that training successful students, especially in some schools in poor regions, and increasing the effectiveness of schools will play a major role in eliminating inequality in education and increase the success of the student. In the studies conducted in the third period, when leadership approaches were adopted, it is seen that the focus is on school management. It is possible to state that various scientific researches on leadership were carried out in this period, in which it is stated that the school administrator should be adopted as a leader in order for the school to be effective and productive, and the behaviors he will exhibit as a leader are important (Özdemir, 2016).

Ensuring that the student grows up and is successful is the reason for the existence of the school. The school administrator should also be aware of this. In other words, the existence of the school administrator stems from the existence of the school. Therefore, the primary goal of the school should be to train students and make them successful. Although knowing the legislation and passing the administration exam based on rote are apparently sufficient reasons for school administration, in fact, realizing the existence mission of the school , focusing on the success of the student and aiming at gaining the desired behaviors will make the person a school administrator or educational leader (Güneş, 2014). . Therefore, the school administrator should coordinate the activities in the school in accordance with the above-mentioned purpose of the school. In addition to the classical roles assigned to him, he must have extensive professional knowledge and experience. Again, he has to be a responsible person who can keep up with the developments around him. The researches show that the administrative activities of school administrators in the form of command are not very effective; instead, the transformational, distributive and constructivist management approach is more successful and serves the purpose of management. As a matter of fact, in the study conducted by Babaoğlan et al. (2017), school principals must have various competencies in order for the school to be effective, according to teachers' perceptions. It was stated that the teachers and school administrators involved in the research in question should be qualified, disciplined, participatory, democratic, solution-oriented, hardworking and visionary, and have leadership qualities. In the study of Görkem (2008), another research conducted on the need for school administrators to adopt modern management rather than command-and-command management in the classical understanding, in the study of instructional leadership, the relationship between leadership and educational leadership was explained, and the behavior roles of the educational leader were determined effectively. It is stated that the school will be more efficient as a result of using it. According to the modern management approach, the school administrator; They are expected to perform roles such as teaching leader, community leader, architectural leader of the organization, mentor, supporter, security and social worker, supervisor, competent in law, effective and efficient use of time, program development, economics specialist, and discipline provider. Therefore, while performing these roles in managerial activities, they should not act like a bureaucrat and should not forget the education and training leadership (Balyer, 2012).

The school administrator has an important position as a leader in ensuring the success of the school. Especially good relations with teachers will greatly affect student success. Since it is accepted that the school is accepted as effective or successful, the success of the student must be in good relations with the teacher and other employees of the school administrator. Scheerens (1988), in his research on the administrators of effective and successful schools, explains the behaviors of school administrators that ensure this success and effectiveness. According to what Helvacı et al. (2011) reported, the school administrator;

- It should create a suitable school atmosphere for education.
- Students should be evaluated by monitoring their progress.
- It supports teachers by establishing a strong communication with the teacher.
- It organizes educational work.
- It creates school values that have leadership characteristics and will provide school culture.
- It motivates teachers and students, is optimistic, and protects the employees of the organization from external influences by giving confidence to the environment.
- It appears frequently throughout the school building.
- There is one-to-one communication with students and parents.
- It supports the development of teachers by taking care of every event in the school (Helvacı & Aydoğan, 2011).

Rather than directly affecting the student's success, the school administrator indirectly influences student success by providing a suitable learning environment and developing positive relationships with teachers. As a matter of

fact, it was performed by Wellish et al. in 1976 ; In the study, in which the reasons for the increase in the mathematics scores of the students were investigated, it was determined that the main factor was that the school administrator gave importance to the material selection and took great responsibility in this regard. In addition, it has been seen that factors such as good dialogue with teachers and ensuring consensus increase the motivation of the teacher and this affects student success. Therefore, the school administrator should be aware and aware that the unit that has the most impact on the success of the school is the administration (Cited by Can, 2014).

In summary, the school administrator is the person primarily responsible for the success of the school. The success and effectiveness of the school is measured by the success of the person presented to the society as an output. In other words, the success of the student should be the main goal of the school administration. This main goal is that there are many in-school and out-of-school factors that affect student success. It is possible to state that if the physical conditions of the school, the appropriate learning environment, the motivation of the teacher, the establishment of a positive relationship with the students and the parents, the close and distant environment of the school are fulfilled as a requirement of modern management, it will contribute positively to the success of the student. The importance of the school administration's role is revealed here. Because it has been understood from the researches that being able to control these factors that indirectly affect student success, fulfilling the requirements, will bring student and school success. "For this, it is inevitable for the school administration to have certain characteristics. For example, the school administrator should have a communication expert, educator, visionary , facilitator, change expert, cultural architect, mobilizer, producer, character architect and mobilizer personality" (Mc . Ewcan, 2018).

Making arrangements regarding the selection, training and appointment of the school administrator, which is so important for schools, will be effective in increasing and ensuring the success of the school administrators. As a matter of fact, developments in education in the 21st century necessitate this situation. Researches (Behar-Horenstein , 1995) reveal that the current manager placement and appointment programs are insufficient, different views on the education system should be included, and education programs should be restructured in a way that facilitates learning (Aksoyalp , 2010). For this reason, it would be beneficial to restructure school administrators by considering international standards in the selection, appointment and in-service training of school administrators. In addition, it is very important to train principals in cooperation between universities and the Ministry of National Education, to re-evaluate the competencies of current administrators, to eliminate these deficiencies through in-service training of those who are found to be deficient, to establish school directorate centers or academies, and to have experts from universities or the ministry in these academies. offers. Finally, it is necessary to accept the assistant principals as potential school administrators and to make various plans regarding their training (Balyer, 2012).

CONCLUSIONS AND RECOMMENDATIONS

The concepts of management and administration can be expressed as the most important group activity that ensures the existence of any organization in the way of maintaining its existence and achieving its purpose. The school is an organization that aims to raise the individual in a systematic and planned manner with its expert staff in line with the interests of the society and therefore the country in which it is located, and to reach its goal in accordance with the expectations of the society. However, there are some unique situations that distinguish the school from other organizations. The school directorate, which is expressed as the management and administration of these public organizations, which have an important mission in line with the interests of the society, has a very important position in terms of increasing the success of the organization and the individual, raising the individual and bringing them into society in the context of achieving the school's goals . However, it is not possible to meet the needs of today's scientific institutions and administrations with the organizational laws prepared about 50 years ago. As a matter of fact, it is possible to state that the management laws used today have been in existence for a long time and have not been updated. (Bursalıoğlu, 2015). In fact, the reason why school administration and administrator selection laws are so important is that the school organization can achieve its goals, achieve success, and affect these situations in their roles in reintegrating students into society by ensuring their success. In this study, the effect of school principals, who are in the management of schools, which are of vital importance for the society, and who have the power to affect the school in the first degree, on the success of the school, which is one of the goals of the school, has been tried to be examined by making use of the researches and studies. Thus, various suggestions were made for the effect of the student, who is the main duty of the school and the reason for its existence, and the school principal, which is one of the most important factors affecting the success of the school, and for this effect to develop in a positive way.

In order for the school organization to achieve its goals, first of all, the management must be effective and efficient. In order for the management to be effective and efficient, it is possible to state that the school principal, who is expressed as the school administrator, has some characteristics that must be found as a result of the

examination of the findings obtained in the researches. For example, the school principal; Being in the position of coordinating the school, they can use the resources of the school organization in the most effective and efficient way, can improve themselves with the training and experience they will receive, have strong communication, motivate employees, are reliable, active, knowledgeable, have civilized words and behaviors, can use oratory and diction effectively, He has to be impartial and has to have full knowledge of the duties and responsibilities determined by the laws and the legislation . It has been determined that they increase the success of both the school and the student by using them efficiently. For this reason, it is possible to state that the qualifications that exist in all occupational groups should also be in school principals. However, it is possible to state that these qualifications are even more important because the school principal is a management mechanism and the influence of an institution such as a school, which has an important position on behalf of the society. Considering that the school administration's having these competencies can affect the school and the school can affect the society, the importance of the school administration's having these competencies will be understood.

A person's conscious and effortful achievement of what he wants, that is, his goal, is expressed with the concept of success. Student and school success is only possible when the determined goals are achieved. When the studies dealing with the factors affecting student success are examined, it is possible to state that there are many factors affecting student success and the most important one among them is the effect of school principals. Because the attitude, method or method to be adopted by the school principal, which has the power and authority to affect the factors affecting student success, such as family, teachers, and the physical condition of the school, is important because it can affect not only student success but also other pressure groups such as teachers, families and the environment. For this reason, it has been determined that it is important for school principals to be aware of the responsibilities they undertake, to have the above-mentioned qualifications, and to know clearly what their duties are in terms of reaching the result while fulfilling this task.

School principals have many duties (MEB, 2014; URL, 1). Making the school suitable for education and training, motivating them when necessary by providing coordination among employees, monitoring and following the development of students, strengthening communication with parents and enabling them to participate in educational activities, trying to create a school culture by acting like a leader, again a necessary tool for education. It is possible to determine their duties such as providing the school and other physical needs of the school. However, it should be stated that; The reason for the existence of the school is the student. Therefore, it is the primary duty of the school to ensure the success of the student and to send it back to the society. The most basic and most important task of the school, as the administrator of the institution, should be the main goal of the school principal, that is, the main agenda. For this reason, it should be noted that it is not possible to state that the school principal does not have an influence among those who affect the student and therefore the success of the school, which is the main goal of the school and its administration. In other words, just as the main goal of the school is to ensure student success and exists for this, the school principal unit also exists to achieve the main goal of the school. For this reason, when the qualifications of the school principal and the duties and responsibilities of the school principal are examined, it seems possible to make the following determination. The main purpose of the competencies and duties and responsibilities that school principals should have is to ensure student and school success. When the researches are examined, it is possible to determine that there are many ways for the school principal to achieve success. For example, motivating the teacher who gives the lesson to the student, creating a suitable school climate for the teacher, ensuring that the student participates in the management both in the education and school management by being in constant communication with the family, providing the necessary tools for education and training, and solving other physical problems. Being in a positive relationship with the pressure groups that the school is affected by and the school is one of the important issues that the school principal should follow.

As a result; The school principal is responsible for the success of the school and the student. Therefore, this responsibility affects the success of the student. Although he does not do this by giving lessons directly to the student, these issues such as taking strategic decisions in cases where he needs to intervene in a timely, effective and appropriate manner by following the teacher who teaches the student, the class and school where the student takes lessons, the relationship with the student's family and the development of the student are taken into consideration. It is possible to state that the success is impressive in a significant way. In addition, re-arranging, developing and improving the rights of the school administrator regarding the placement and appointment of the school administrator, which is so important, will increase the importance given to this profession. Therefore, bringing it to a position that is given importance by both those who practice the profession and the students, school and society will increase its effectiveness. As a matter of fact, considering the latest developments in the fields of education, training and administration, it will be beneficial for the school administration and its effectiveness to develop school directorates, review their legislation, and set international standards in school administrator selection qualifications and in-service training. In addition, the training of principals in cooperation

with the Ministry of National Education and universities, the reevaluation of the qualifications of current administrators and the elimination of their deficiencies, and the establishment of school directorate centers and academies will be an important step for the development of the school directorate. Therefore, the vision and mission of the school administration will of course affect the school and student success positively.

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The Relationship between Social Anxiety Levels and Academic Achievement in University Students

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Abstract

Social Anxiety Disorder, or Social Phobia, as it is commonly used, is an anxiety disorder in which the individual has the fear of being judged by others, and the thought that he will be embarrassed or humiliated, and a marked and constant fear in this regard. The aim of this study is to examine the relationship between university students' social anxiety levels and academic achievement. Social phobia (social anxiety disorder = SAD) is a marked and persistent fear of being embarrassed or humiliated in social situations where the individual experiences the anxiety of being judged by others. According to the DSM-IV, a person with social phobia demonstrates avoidance or avoidance in feared social situations, or endures it with intense anxiety or distress. This research was examined on a total of 227 students, 132 girls and 95 boys, studying at Samsun Ondokuz Mayıs University in the 2020-2021 academic year. According to the findings obtained from the research, a positive relationship was observed between the anxiety levels of university students and their academic achievement.

In addition, a positive relationship was determined according to age, gender, academic achievement, departments of the students, grade point averages, separation or coexistence of parents, parental survival/death status, family income level, and parents' educational status.
Keywords: Social Anxiety, Social Phobia, Academic Achievement, University Students

INTRODUCTION

Among social phobics, the number and type of social fears, an important clinical feature of avoidance, is an irrational fear of being scrutinized and evaluated by others (Dilbaz and Fall 2001a).

On the other hand, with the entrance to the university, the individual enters an environment where socialization is most intense. Here, an individual who cannot experience the positive socialization process may have difficulty in standing up against the difficult situations he will encounter in his future life, not being able to develop a sense of self-confidence, and then identity confusion (Dereboy 1993).

The lifetime incidence of SF is between 2-13%. It is one of the most common psychiatric diseases. In a study conducted with university students in Turkey, 24% of them were found to have this disease. Social phobia, also known as social anxiety, is a problem that causes serious deterioration in the social functions and quality of life of the individual (Kessler 2003).

When an individual enters an environment of anxiety, he thinks that he will be negatively evaluated and carefully examined, and this mindset gives him fear. As a result of fear, the person may wear himself out psychologically by enduring these situations in extreme distress, and he may exhibit behaviors aimed at isolating himself from the environment by avoiding all of them. For many years, the effects of mental disorders and especially anxiety disorders on quality of life were ignored and only the improvement in symptoms was taken into account.

With the concept of quality of life coming to the fore in recent years, it has been seen that studies on this subject have increased and social phobia has negative effects on quality of life. There is no single known reason why individuals show symptoms of social anxiety.

"Social Anxiety" (Watson and Friend, 1969); The rate of comorbidity (Kessler et al. 2005; Kessler, Chiu, Demler, & Walters, 2005), early onset (Otto et al., 2001; Stein et al., 2010), which is quite common among psychiatric disorders (Chartier, Walker, & Stein, 2003; Faravelli et al. 2000; Koyuncu et al. 2014; Bezerra De Menezes,

Fontenelle, & Versiani, 2008) and those with a high risk of suicide (Katzelnick et al. 2001; Lepine & Lellouch, 1995) It is a mental health problem that seriously affects the quality of life (Aderka et al., 2012).

It is known that biological causes in relation to environmental and serotonin imbalance in individuals who are psychologically overprotected by their parents due to a humiliating event experienced by individuals in the past have an effective importance in the behaviors that individuals will exhibit in their personality structure.
As the developmental stages of the individual progress, he or she has different duties and acquires certain goals to fulfill these duties and responsibilities. It is important to what extent a person can exhibit the behaviors they need to do in order to achieve these goals with a certain profession and life in daily life.

Although it is an important factor in the university in educating the individual in this regard, it is a structure that develops students in terms of social environment. In this phase, where the individual develops himself and prepares for a new life, he may exhibit behaviors of avoiding social environments and moving away from people accordingly. The university is an institution where both individual and group work is carried out and requires intense exchange of ideas and ensures that they are prepared for the profession in which they are prepared. Considering these inferences, the relationship between the success of the individuals who continue university life in participating in group work, speaking with someone more competent than themselves, participating in classes and presenting a topic in social environments is an important criterion. Social phobia tends to affect all important areas of a person's life. Social phobic individuals experience significant problems in business life, education, and social and emotional relationships.

Students with SAD experience failure or drop out of school during high school and university because of their difficulty in speaking in front of the class and the feeling of tension in the school and classroom (Van Ameringen et al. 2003).

For this reason, it will be ensured that they enjoy school, complete high school or university, and contribute to the society as a result, as long as they are recognized and treated early.

METHOD
Research Model
This research is a correlational study to determine the relationship between university students' anxiety levels and academic achievement in terms of various variables. Correlational research is research conducted to reveal the relationships between two or more variables and to find clues about the cause and effect relationship between them (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2014: 14).

This research, which aims to determine the views of university students on the relationship between social anxiety levels and academic achievement, is a study conducted with quantitative methods. In the fall semester of the 2020-2021 academic year, it was applied to a total of 227 people, 132 girls and 95 boys, from 9 different faculties at Ondokuz Mayıs University. Among the faculties, 66 from the faculty of education, 66 from the faculty of engineering, 18 from the faculty of agriculture, 33 from the faculty of science and literature, 9 from the faculty of health sciences, 24 from the faculty of economics and administrative sciences, 4 from the faculty of theology, 3 from the faculty of veterinary sciences, 4 from the faculty of sports sciences. Eight different variables were used for the study, and the academic success of the students was tried to be determined by their grade point averages. The data obtained from the scales were transferred to the SPSS program and the validity and reliability study was calculated.

Purpose of the research
The aim of this study is to examine the relationship between the social anxiety levels of university students and their academic achievement. The research was conducted with a total of 227 students, 132 girls and 95 boys, studying at Samsun Ondokuz Mayıs University in the 2020-2021 academic year. For this purpose, answers to the following questions were sought.

The relationship levels between the social anxiety levels of university students and their academic achievement a-gender, b- academic success, c- the departments of the students, d- grade point averages, e- age, e- parents' separation or coexistence, f- parents' right/ Does it vary according to death status, g- family income level, h- parents' education level?

Working group

Table 1. Frequency Values of Variables

Variables	Frequency	%	
Gender			
Girl	132	58,1	
Male	95	41,9	
Chapters			
faculty of education	66	29,1	
Engineering faculty	66	29,1	
Faculty of Agriculture	18	7,9	
Faculty of Science and Literature	33	14,5	
Health Sciences	9	4,0	
Faculty of Economics and Administrative Sciences	24	10,6	
Faculty of Theology	4	1,8	
veterinary faculty	3	1,3	
Sports Science Faculty	4	1,8	
Grade average			
2.00 and below	32	14,1	
between 2.00-3.00	135	59,5	
3.00 and above	60	26,4	
Age			
18-20	69	30,4	
21-23	136	59,9	
24-26	18	7,9	
27 and above	4	1,8	
mother/father union			
Yes	201	88,5	
No	26	11,5	
Mother/father life status			
Yes	211	93,0	
No	2		0,8
just mom	10	4,4	
just dad	4	1,8	
Mother/father education level			
uneducated	12	5,3	
Primary school	81	35,7	
Middle School	40	17,6	
High school	61	26,9	
University	33	14,5	
Family income level			
5000TL and below	29	12,8	
5001-7000	53	23,3	
7001-10000	64	28,2	
10000 and above	81	35,7	
Total	227		

In the 2020-2021 academic year, 257 volunteer students, determined by the appropriate sampling method, participated in the study. Samsun Ondokuz Mayıs University consists of 227 students studying at the Faculty of Education, Faculty of Engineering, Faculty of Agriculture, Faculty of Science and Literature, Faculty of Health Sciences, Faculty of Economics and Administrative Sciences, Faculty of Theology, Faculty of Veterinary Medicine, Faculty of Sports Sciences. The data of 30 people who were determined to be unsuitable for data analysis were excluded from the analysis. In the final version of the data, the participant group of the research consisted of 227 students, 118 girls (51.9%) and 109 boys (48.1%).

Data Collection Tools

The social anxiety scale consists of 24 items and 9 variables. The data obtained from the scale were evaluated in the SPSS 16.0 program and the Cronbach Alpha coefficient for the internal consistency of the scale was determined as .721, and a reliable relationship was found.

Data Collection and Analysis

Social anxiety (anxiety) Disorder, or as it is commonly known, social phobia is an anxiety disorder in which the individual has the fear of being judged by others and the thought that he will be embarrassed or disgraced in social environments, and a marked and constant fear about this issue. This scale is a 24-item scale applied to 227 people, 118 girls and 109 boys, in order to determine the relationship between university students' social anxiety levels and academic success. The scale was prepared in the form of a 5-point Likert scale with 5 different ratings (totally disagree, disagree, undecided, agree, completely agree). The scale includes nine different variables: gender, department, grade point average, age, whether parents are together or apart, parents' death status, parents' education level and income level.

Research data were evaluated in computer environment and using SPSS 16.0 program.
In the scale, a t-test was conducted for nine variables: gender, department of education, general grade point average, age, parental relationship status, parents' death status, education levels and income levels. In order to facilitate the understanding and interpretation of the relations between the variables in the scale, factor analysis was used. The reliability of the scale was evaluated by split-half, Spearman-Brown Coefficient, Guttman Split-Half analyses.

The cronbach-alpha for the internal consistency of the scale was calculated and found to be ,721. Correlation analysis was performed with the data obtained from the research.

Results

Table 2. Determining The Relationship Between the Scores Received From the Anxiety Scores of University Students and Their Age, Gender, Academic Achievement, Departments of The Students, Grade Point Averages, Parental Separation or Coexistence Status, Parental Survival/Death Status, Family Income Level, Parent Educational Status Results of Pearson Product-Moment Correlation Analysis

Variables	N	r	p	
Age	227	,422	000**	
Gender	227	,385	000**	
Academic success	227	,460	000**	
Chapters	227	,458	000**	
Grade average	227	,642	000** 000** 000** 000**	
Parent union	227	,510	000** 000** 000** 000**	
Parental survival/death status	227	,600	000** 000** 000** 000**	
Family income level	227	,560	000** 000** 000** 000**	
Mother/father Educational status	227	,466	000** 000** 000** 000**	

p<0,01**

In order to determine the relationship between the scores obtained from social anxiety and age, gender, academic achievement, departments of the students, grade point averages, parents' separation or coexistence status, parents'

survival/death status, family income level, and parents' education level, as seen in Table 2. According to the results of the correlation analysis; between age scores and social anxiety anxiety scale scores (r=-.42), age (r=-.38), gender (r=- .42), academic achievement (r=-.45) divisions, (r=-- .64) grade point average, (r=-.51) mother/father association, (r=-.60) mother/father survival or death status, (r=-.56) family income level, and (r=-.47)) the relationship between mother/father and educational status is statistically significant and positive (p<.001).

Conclusion and Recommendations

The research is located in the city of Samsun; It was carried out to determine the social anxiety levels of students studying at Ondokuz Mayıs University. In this study, the effect of social phobia on academic achievement in university students was investigated. The students participating in the research were undecided about their discomfort when attention was focused on them. The students stated that they did not have any difficulty in expressing their differences of opinion or expressing their displeasure with someone they did not know very well, and they did not hesitate to talk face to face. Students stated that they do not hesitate to eat in crowded and open places. They stated that they did not hesitate to participate in a small group activity. The students stated that they were hesitant to face their fears. They stated that they are uncomfortable with lack of respect and being criticized in the society.

According to the results of the correlation analysis conducted to determine the relationship between the scores obtained from social anxiety and age, gender, academic achievement, the departments of the students, their grade point averages, the separation or coexistence of the parents, the living/death status of the parents, the income level of the family, and the education level of the parents; the relationship is statistically significant and positive (p<.001). further research can be done with secondary school students. These research results can be shared with university students.

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The Use of Social Media by the Young African Students of Konya: Virtual Self and The Influence of Social Perception

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ABSTRACT

This study is inspired by the observations made on the way young African students use new media of communication which came up with technological developments and spread around the world with the help of globalization that interconnects different people around the world. Thus, to conduct this research, the ten most active young African students, (N=10), five boys and five girls aged 20-29, purposely selected out of thousands to represent our sample in the city of Konya in Turkey were followed with their consent, on their various social media. With the use of qualitative research, an opened-ended interview was carried out to clarify first of all, if there is a difference between their virtual selves and real physical selves; then, how they react to the arrival of new media as they are continuously impacting the educational and professional levels as time goes and finally, if the way people perceive them impacts their virtual selves. Thus, this research revealed that most of them particularly use social media either to show off a created self just for fun on Tik Tok, Facebook, and Instagram, or they use their fake accounts to freely communicate their inner thoughts on sensitive issues like politics or to discuss with the opposite gender. A few of them create fake virtual selves to hide their real private life, and the last category revealed to use social media for learning and educating others back, especially on YouTube channels through which they gain money and also for professional opportunities on LinkedIn, and Instagram. It emerged that these young people highly needed this kind of virtual platform to own the liberty to express their real selves and gain some social recognition from peers while taking advantage of the instructive and financial sides of the virtual world.
Keywords: Social Media, Virtual Self, Social Perception, Young African students, Turkey

ÖZET

Bu çalışma, dünyadaki farklı insanları birbirine bağlayan küreselleşmenin yardımıyla teknolojik gelişmelerle ortaya çıkan ve dünyaya yayılan yeni iletişim araçlarını genç Afrikalı öğrencilerin nasıl kullandıkları üzerine yapılan gözlemlerden esinlenmiştir. Bu nedenle, bu araştırmayı yürütmek için, Türkiye'nin Konya ilinde örneklemi temsil etmek üzere binlerce öğrenci arasından bilinçli olarak seçilen 20-29 yaşlarında beş erkek ve beş kız olmak üzere en aktif on Afrikalı genç öğrenci (N=10) rızaları ile, çeşitli sosyal medyalarında takip edilmiştir. Nitel araştırmadan kullanarak, öncelikle sanal benlikleri ile gerçek fiziksel benlikleri arasında bir fark olup olmadığının açıklığa kavuşturulması için açık uçlu bir görüşme yapılmıştır; daha sonra, zaman geçtikçe eğitim ve profesyonel seviyeleri sürekli olarak etkiledikleri için, yeni medyanın gelişine nasıl tepki verdikleri ve son olarak, insanların onları algılama biçimlerinin sanal benliklerini etkileyip etkilemediği. Bu nedenle, bu araştırma, çoğunun sosyal medyayı özellikle Tik Tok, Facebook ve Instagram'da tamamen yaratılmış bir benliği göstermek için; karşı cinsle konuşmak için ya da siyaset gibi hassas konularda iç düşüncelerini özgürce iletmek için kullandıklarını ortaya koydu. Bazıları gerçek özel hayatlarını gizlemek için sahte sanal benlikler yaratıyor ve son kategori, sosyal medyayı, özellikle para kazandıkları YouTube kanallarında ve ayrıca Instagram ve LinkedIn'deki profesyonel fırsatlar için başkalarından öğrenmek ve başkalarını eğitmek için kullandıklarını ortaya çıkardı. Bu gençlerin, sanal dünyanın öğretici ve finansal yönlerinden yararlanırken, gerçek benliklerini ifade etme özgürlüğüne sahip olmak ve akranlarından bir miktar sosyal tanınma kazanmak için bu tür sanal platformlara çok ihtiyaç duydukları ortaya çıktı.
Anahtar Kelimeler: Sosyal Medya, Sanal Benlik, Sosyal Algı, Genç Afrikalı öğrenciler, Turkey

INTRODUCTION

Social Media represents nowadays a means of communication that makes the freedom of expression to be more spread and assumed by most people. Today, thanks to various social media platforms, the interconnection between people around the world became faster and freer. We can reach one another in a very short period. Thus, some people can freely give their opinion and defend it against contrary ones. It can also be noticed that most of the issues that were hidden before in our societies are now openly discussed on different social media without boundaries or taboos. This freedom of speech comes with some positive but also negative sides that impact the way people used to talk to each other, affecting the way people used to respect each other 's private life, as well as

the way values, are respected in real non-virtual relationships. This freedom of speech behind the screens most surprisingly makes people bring out their hidden faces, the faces that can not be easily expressed in physical daily life. Some people seem to feel more comfortable expressing themselves behind the phone or computer screens. From the previous observations, this study thus aims in analyzing what makes people feel so confident that they can say anything valuable and/or non-valuable behind their screens, but probably would not say the same words in face-to-face communication. Does this virtual self have a different influence on their real selves? In the same way, how they want others around them to perceive them.

Therefore, this study has linked the analyses of the participants' virtual selves to the notion of social perception, that is, the way they want people to see them on social media compared to their real-life selves. This research was mainly done with African students living away from their home countries, living in the city of Konya in Turkey. Technological developments are more and more widely spread in most African countries just like in many countries around the world, at different levels such as education/training, advertisement, politics and social communication. Thus, we find it worthwhile to research this particular aspect of the use of social media and the influence they have on the real self of the youth, who are more and more numerous and younger using the new media to have access to educative and entertaining content. However, for a proper insight into this topic, it is of high importance to present the literature sources that sustain the arguments of this research. Computerized communication is now one of the main tools people use to express themselves, and also to create interpersonal as well as intrapersonal communication using the computer and the internet. Thus, there are some original and current important elements that need to be clarified to provide a global understanding of this research's results.

THE STUDY
Self and the Use of New Social Media
The self can be seen as a result of the social environment around us. The self is in other words a social construction. It thus represents our ability to think about our thoughts, to know and be conscious of ourselves, and to be able to willingly analyze, develop and adopt a behaviour according to the environment or the situation we are facing as explained by Berjot & Delelis (2014). This is who we are; our profound identity (Berjot & Delelis, 2014). In human communication, which is a constantly evolving field, we can notice the existence of social interaction which is known as communicating with others, to reach a mutual understanding through the mean of interplay (Shedletsky & Aitken, 2004). Communicating with others being one of the social life's main essence, is applied both at the **inner** level (communicating within one's self, decoding words and forming meanings), as well as at the **interpersonal** level (communicating with others to form significant meanings) (Shedletsky & Aitken, 2004). With the ongoing technological developments occurring around the world, there is a new type of communication that arise for decades now: social network communication through the internet.

The internet needs to be defined in this study marking purposes the origin of the virtual media and communication style. Thus, the internet can be defined as an electronic communication system that was created to connect people around the world through computer networks (emails, websites, e-commerce, etc) and also connect computer facilities around the world for years now (Lievrouw & Livingstone, 2004, p.6-7). 1995 was the year of the internet and it was appreciated by the users (Flichy, 2002, P. 139-138). With the arrival of the internet, what used to be a utopia became reality: communicating with the internet allowed people to talk instantly, and save time in transmitting the messages they want when they want to (Flichy, 2002, P. 139). Then, was born the term Computer-mediated communication (CMC) designates online communication through the computer, and this tool helps individuals to create and handle impressions of others and themselves (Baym, 2004, p.66-68). We also have the term Human-computer interaction (HCI) which refers to the communication between a person and a computer. For this virtual interpersonal communication to be possible, there has been the creation of what is known as the World Wide Web (WWW) which is a part of the internet created to facilitate network navigation by clicking on various web pages (Baym, 2004, p. 69-71). In this study we will focus on the CMC, that is, using the computer as a medium to send and receive electronic messages to other people or yourself depending on the mean of communication used. For example sending an email to others or yourself, navigating on search pages looking for information, commenting on social media pages, etc...

Concerning social media, it can be defined as interactive computer-mediated technologies (Lievrouw & Livingtone, 2004, p.5-6), that make it easy to create and share information, ideas, opinions, or to express one's thoughts on a given topic through particular media, to broad virtual communities or networks and groups. Users connect to social media through computers, tablets or smartphones, and they first had access to these web-based pages and networks in 2006 with Facebook and Twitter and the leaders, then followed by other social media like Pinterest, Skype, Instagram, Imo, LinkedIn, WhatsApp, and many others, mainly in the aim of messaging friends, family or close relatives, to share ideas, pictures, videos, and any other content on the various domain (business, work, trips, holidays, normal life events, etc...) (Lievrouw & Livingstone, 2004, p.6). Now all those media can be

accessed from schools, homes, work, or university libraries with their private and free accounts (Shedletsky & Aitken, 2004). Social media was born in the USA and spread to Europe and other continents later, but currently, China and India are the leaders in social media use. Currently, there are more than a billion social media users around the world and researchers expect more in the coming years given that social media is always changing and evolving. According to the Pew Research Center, social media users are more and more younger. More than 90 per cent of users are between 17 and 29 years old (www.investopedia.com).

This new way of computerized communication - obviously differs from the old traditional methods of communication such as using trumpet, balafon, and smoke for some societies in Africa and Asia namely; and from other previously modern means of communication such as the telegraph, fax, letter, radio, etc...- sprang from the need to rapidly joint the world together at the level of communication, interpersonal relation, trade, economy, and other domains of activity, given the fastest growth and developments around the world (McMillan, 2002, P. 164). These changes and evolutions are often linked by researchers to what is known today as globalization. Nonetheless, as mentioned by Beck, (2000) in his book, no nation can close itself to other nations to develop or live by itself. Thus, it can be said that globalization refers to a process where sovereign nations become more and more interdependent at the level of the economy, culture, technology, civil society, security forces, and communication. So, the creation of computerized communication is for some, the natural evolution in the domain of communication, and it affects thus many other domains given that, the internet allows people to take part in political affairs, to learn with a simple click on a given page, what before was very far and hidden from them; also to connect and express themselves to the world (Shedletsky & Aitken, 2004). The notion of globalization is quite controversial in the sense that, some researchers think that, it helps the new media to cause considerable changes in individuals' cultural identity, behaviour and perception of themselves, with the fast technological growth (McMillan, 2002, P. 165). However, what is seen today as new media is not a new phenomenon; past generations have been researching and creating what is now called old media which used to be considered at that time as new media (McMillan, 2002, P. 164).

Therefore, technological evolution is the best sign of social changes and the arrival of a new era and this comes with some novelties in terms of information transmission between people (Webster, 2002, p.23). People are more and more connected on the virtual social network platforms today in particular or simply connected on the internet in general since its creation in the 1990s, followed by the arrival of new means of mass and online communication facilitators like the personal computer, satellite, television, CD-ROM and others, and the very first social media in the 2000s (Webster, 2002, p.23). With the help of all these new technological tools, today, we are witnessing the birth of a new type of self: the virtual self, different from the real primary physical self.

The notion of **the virtual self or virtual identity** was born after the development of technology and the growth of social network use (Jankowski, 2002, p. 39). The virtual self differs from the normal physical self that can be perceived when communicating with others. Building this identity requires people to get involved in internet interactions, and for some researchers, what they called in this case 'play', is known as an important element that intervenes in identity building on the internet (Turkle, 1995). On the other side, it should be mentioned that with current new means of communication people go beyond the limits allowed by the traditional tools of communication by having fun or having intellectual debates or managing their commercial activity, etc. (Rheingold, 1993b, p.3) Thus, social network communication allows the inner self (intrapersonal communication) to be quickly connected to other external people (for interpersonal communication), by creating in the user's mind, imaginary pictures and sounds of people with who she/he talks online (Shedletsky & Aitken, 2004). Szuprowicz (1995) explained these communication features as user-to-user communication, which is, an individual's interaction with others on the internet, then appears the user-to-document interactivity which is the way active audience interpret and use social network messages; and finally, there is the user-to-system interactivity in new media which refers to the way individuals interact with documents or internet contents and towards those who create contents.

 In this study, as we are focusing only on social media interactions, we will develop the types of elements that intervene in the building of a virtual self on social media, considering the different roles played. Broadly speaking, seven types of play occur during inter-human communications on the internet namely Imaginative play like a child, Identity role-playing, Interplay with the self or the other, Play as actors play in a play, Games for destruction, playful works, and the fun of something new (Shedletsky & Aitken, 2004). These elements are presented here as a foundation to support our research and to detect the role most frequently played by our participants when they are on social media.

Imaginative Play Like a Child

According to Shedletsky & Aitken, (2004), in this case, people are exposed to jokes, and humour circulating on the internet, having fun, and playing games available on the internet for the users. Some users who may be used to computer games respond positively to such online games, but others who are not interested may get easily frustrated by those computer games proposed to them either automatically on the page, or suggested by friends (Shedletsky & Aitken, 2004).

Identity Role-Playing

Social media nowadays allow users to be face-to-face with their real identities. It gives them the occasion, while seating behind their smartphone or computer screens, to fake or hides their real identity. If you go online with a fake account and present a fake job to your contacts, or a fake way of life that is not really what you can afford, and many other lies, then you are involved in role-playing, and role-playing can be an extended part of yourself. Some users even switch their gender, pretend to be female when they are male and vice versa, for personal interest or to experiment with sexual interplay and other fantasies. (Turkle, (1997), Shedletsky & Aitken, (2004)).

Interplay With the Self or Other

It should be noted that here the word interplay is different from what people usually call communication. According to Shedletsky & Aitken, (2004), internet users communicate online in a playful way, given that they usually seek pleasure or amusement when they go online, instead of the formal communication used in the real life. In this sense, those users can form groups of discussions or joint community pages or forums related to their topics of interest, and together with other users, they interact and comment on particular topics presented in the groups, some going into people's private lives, which may become upsetting for those people (Shedletsky & Aitken, 2004). This is also another side of the internet game and social media communication, which is creating a sense of belonging to a given community (Jankowski, 2004, p.38-41).

Play Like Actors Play in a Play (Play Like Theater Scene)

Virtual interaction is done by people in an imaginary space where they can pretend or fake their identity and other aspects of their life. In this case, users act like actors performing on a theatre scene, since they are allowed to create fake accounts when logging in to the social media page (Shedletsky & Aitken, 2004). Besides, they can easily act as if they are not really behind their fake identity. So, it is generally not easy to determine when a user is expressing their real self or a fake one.

Games for Destruction

This type of game or online play is more destructive and has some serious effects and consequences on the target. According to Shedletsky & Aitken, (2004), people who perform games of destruction on the internet generally try to destroy other people's lives or resources. This game goes from online gossip to terrorism. The destruction effects vary from one target to the other, but still, some people feel so comfortable and confident when they are engaged in gossiping with others without proof, online lynching, mocking others for one reason or the other, online stalking, violent videogames, activities on sex sites, scamming, and others destructive activities that they consider as games or not a big deal per se. Shedletsky & Aitken, (2004) explained this destruction game as a self-reward of gaining some adrenaline and the feeling of winning a game or taking away something important from others such as their attention, their time, money, innocence, control, power, etc.

Playful Works

Today it is more and more difficult to capture young people's attention, especially during learning activities or courses. Students easily find themselves daydreaming during class hours. Nowadays, students have quick internet access and can anytime connect when they get bored during classes. Therefore, current research has found it necessary to use computers and the internet for learning and training, to provide students, with a means and tool of learning but at the same time fun (Shedletsky & Aitken, 2004).

The Fun of Something New

A great part of internet use is for entertainment. People want to feel free to have fun with anything, to lie about what they want, and feel confident about the fact that others will not discover the truth. As long as the pleasure side of using the internet is met, the other negative effects (frustration, unproductiveness, etc...) do not count for most of the users (Shedletsky & Aitken, 2004).

Besides, computerized communication creates what can be called polarization of people; meaning, people feel closer to other online users or mates than to the real people close to them in real life (Jankowski, 2002). This can create serious problems in some families or even couples if one of the partners is too linked to the internet interactions; or even cause social integration and adaptation problems because some people could no longer know

how to properly create a contact or communicate with real people or simple neighbours in real life (Shedletsky & Aitken, 2004). Today, more and more people feel much more comfortable launching an online conversation or interplay or interaction on platforms where there are millions of virtual unknown users than launching a face-to-face conversation with real people close to them. Therefore, people also feel less judged on the internet than in real life; this is one of the reasons why online communication is more and more preferred to face-to-face communication, especially for people with disabilities, shy or who have a problem starting interpersonal communication (Fox, 2000).

The Power of Social Perception and its New Dimension: the Virtual Side
The notion of Social Perception also called Social Recognition by some social psychologists, is associated with the way people reflect or think about themselves and the social world around them. that is, the impression they have of people and the impression people have of them; the impression they want to have for their significant others (parents, partners, friends, etc...) (Aronson *et. Al.*, 2013). Thus, Social Cognition precisely addresses how a Perceiver (someone who perceives) constructs an impression around a target (it can be a person or a group), depending on the set of information (age, emotions, gender, physical appearance, etc...) that she/he receives from the target. It also depends on the perceiver's personal internal and external characteristics (emotions, opinions), and finally, on the way she/he organizes (social categorization) and judges all the information received from the target, as stated by Berjot & Delelis, (2014).

The previously cited vision of social cognition was of course limited and valuable only for physical interaction or communication. We are analyzing here another level of social cognition which emerges from the use of social media.

Therefore, with the arrival of social media, many users tend to show their mates or contacts only what they want others to see. Some users do not want their families to see the life they live, so some can create fake accounts on social media, or fake gender when interacting online, while others show their perfect life and wealth (Shedletsky & Aitken, 2004). This kind of virtual illusion renders the notion of social perception to be blurred especially for uninitiated people because what we see about people to form our opinion of them, is probably far from reality. Thus, people's self-esteem and the image they have of themselves are determined by the way they think their significant others see them (Daly, 2002, p.147-149).

METHODOLOGY
For this research, based on a qualitative method, we will use the Phenomenological Research Design to deeply analyze and understand the way of life of one particular group of people (Rossman & Rallis, 2003, P.97), namely the young African Students living and studying in the city of Konya in Turkey. Thus, we will analyze the meaning that these young people give to their life experiences on social media. The data in this study were collected through standardized open-ended interviews with the same pre-defined questions asked to all the participants who freely developed their answers, and those answers were recorded with their consent (Rossman & Rallis, 2003) in English and French. The French versions from the participants were translated into English by the researcher. Moreover, the participants' interactions and interventions on the diverse social media were followed and then analyzed using content analysis, which is an approach to the analysis of documents and media texts that tries to quantify content in terms of predetermined categories in a more practical way, to reveal, then code what is not apparent in speeches (Bryman, 2004). Thus, we followed the most active participants on their different media and collected with the help of a smartphone, their comments, their posts and other interventions on the sample media selected. Their contents were then analyzed and used in the frame of this work.

From the interview responses, in the first step of the interpretative phenomenological analysis, the voice recordings of all the participants were transcribed and the online collected sources as well. Then, the main themes were formed for thematic analysis to have important details and rich descriptions necessary for a better comprehension of each participant's experience on the social network. After identifying conceptual similarities between the diverse responses, then followed the coding and analyses through the interpretation and structured description of all the original data.

For this research, we have worked with ten (N=10) university students all from African countries, living and studying in the city of Konya in Turkey, to collect the necessary information from them. Based on a prior analysis done before the interview, participants were selected through a purposeful sample selection. They are all young adult students between the age of twenty (20) and twenty-nine (29) in 2022. They were also chosen for this study because the researcher is close to this targetted population in terms of origin and daily activities, so this proximity has facilitated the exchanges with them. They were five (05) young women and five (05) young men from different African nationalities such as Cameroon, Chad, Ghana, and the Democratic Republic of Congo.

For ethical purposes, we requested and received the consent of all the participants to use and share the information they provided in the course of this study. We also kept secret all the participants' social media fake accounts as requested by them. All the names used in this work are anonymous.

FINDINGS
In this research, we have discussed with young African students targetted for this study, concerning their use of new media on daily bases, especially social media like Facebook, Tik Tok, YouTube and Instagram, which were used the most by the target population. A few of them also explained how they interact with people on WhatsApp and Linkedin. They also gave us the right to follow them on their various media to see how they interact virtually with others. Thus, we have discovered a variety of common points that are convenient to be classified under diverse main themes for deep analysis.

A Private Life to Preserve
The topic of private life protection was mentioned by many participants to justify why and how they use the new media, in particular those who used a different or 'fake account' on some media for interactions. Most of the male participants confessed to using a fake account (three on five) for their social media for diverse reasons; however, only one female participant confessed to using a fake name on one of her social media. Their various explanations can be grouped under the will of protecting their private life. Thus, as stated by Ana (24), Said (29), Omar (27), and Kenan (20), they currently use fake accounts for online interactions on some social media because they want to protect their private life. Said, for instance, explains that:

"On Facebook, for example, I have added many friends from different origins and backgrounds, those from my country of origin and here in Turkey, together with some of my selected relatives. However, on Instagram, I have added only professional contacts. Given that I provide my knowledge and services to some companies, my professional contacts do not know me closely, so I can publish what I want, create a professional image of myself that may not be true...";
This young man is a student but is also taking advantage offered by new media to start virtual businesses. He has a different name on social media so that his friends and family on other media can not find him on Instagram, because he is trying to preserve his real identity and his private life at the same time. He has created a different life on Instagram. As for his WhatsApp, he does not share it with everybody. He says:
''I do not like it when people I am not that closed to contact me on my WhatsApp; I use it mostly with my close friends and some family members...''.

On the other side, we have Omar who created a fake account that he uses for Facebook and Instagram because he wants to be free to interact with the political and social affairs of his country without exposing himself and his family to the public. He explains this:

"you know, in my country Cameroon it is complicated to give one's opinion on political topics without having many enemies in return. So for more freedom of speech, I found it logical to use a fake account to protect myself and my family, given that I have a large family ...''.

So for Omar, the fake account used on social media is for protection and better freedom during his interactions on sensitive topics. Similar reasons were given by Ali (25) concerning the reasons behind the creation of an account different from his principal account which has his real name. He explains that:

"I had to create another account to promote my profession to potential clients. For that reason, I do not want those potential clients to know or see my private life through my publications...''.

In the case of this young man, using a fake account helps both as protection for his private life and his professional activities. This participant also has the profile of a young student taking advantage of new jobs appearing on social media. Besides, there is also the participant named Kenan who defended the fact that a fake account is necessary for him on social media to protect his private life, and for him to be able to comment, post, have fun and interact freely.
As for Ana, she explained that, for her Instagram account, she had to choose a fake name, first of all, to be 'cool', but then with time, she discovered that, it also helps her to be able to like or comment without being recognized publicly (anonymous) by everybody; as she is following only celebrities and different friends that are not too close to her, it helps her to keep those foreigners close but at the same time far from her real life.

After following these participants on their diverse social media, we discovered that they use names different from what is their real name; the kind of names that, if not revealed to us by the participants themselves, we would never

have known that they were the ones behind those accounts. Moreover, they requested total anonymity on their identity and their fake accounts in the course of this study because they want to keep those fake accounts secret and restricted. The fewer people know they are behind those fake accounts, the more they can freely express themselves and keep on playing the role they created for themselves on the virtual platforms.

Pretending and Faking

Another theme that came up systematically while discussing with the participants is 'pretending'.

Most of the participants are playing a role whilst online; both those using their real name or real account, as well as those using modified names or fake accounts. We have the case for instance of Said who says:
 "When I connect on social media like Facebook, for example, I am there for fun and entertainment, so I change completely from who I am because I need to express myself freely. I post pictures or share articles with sexual connotations, make fun of people and situations, and share political opinions and violent social events, just to shock my contacts and attract attention and discussions on my page. Thus people have an idea of me that is different from who I am. And I think that this distraction of attention helps me to divert people's attention to the real me and my private me, my private life. So I am free to plan and live my life behind, far from the media, as I want, without them knowing what I am planning...".

This is another new way of life invented by this participant, a different person on social media, a character created just for the sake of virtual life.

Same remark for Omar who, on his Facebook page, where he uses a fake name, is free to publish so violent images, and he writes quite violent comments concerning his country's political affairs especially and says rude words to people who do not agree with him. As we were following him on his Facebook page, we could not believe that the man we met physically in real life, who was calm and moderate, could be so violent and radical on social media. Behind his smartphone screens, in the virtual world, he was different.

The role-play was also seen in the case of İrena (22) and Amina (27) who confessed to always trying to show the best side of themselves and their perfect family lives, even when they have serious family problems to handle in real life. While following them on their Facebook and Instagram platforms where they mostly interact with their real names, we did note that these female participants tend to post the best family pictures, creating their contacts' admiration and envy.

Ali on his own said he was obliged to play the role of a businessman on social media, given that all his activities are done online via Facebook and Instagram in particular, with potential clients. So, he had to divide his private account from the professional one, to be considered a serious businessman by his online contacts. This young student was also engaged in online businesses.

Nevertheless, virtual role-play was observed in one way or the other by almost all the participants, who usually tend to post the best pictures and videos of themselves or try to push people to see them differently, pretending to possess and show what they do not have in their real life for different reasons. Some wanted to impress their friends and family from their country of origin who they are in contact with, thanks to social media, to show that they have a better life abroad. However, the persons they want to impress end up being impressed; they believe what they see, depending on what they show to them. Others wanted to convince themselves that they are also important in society, that they count and can be seen as a model by many. This conclusion results from the participants' various responses and online interactions with others.

I am Pretty Responsible on Social Media

Another theme that regularly came up in our interview concerns those who stated that they take full responsibility for what they write as opinions, posts, shares, and comments on social media. This category of young people are connected to most social media, and they use those with their real names or real account. They defend the ideas they post for discussion on their pages or other contacts' pages. Generally, these young people have a quite good reputation in real life and they want to continue showing the real image of themselves on social media, same as in real life. It is the case with Paul (26), Ana, and Lena (21), who surprisingly seem to be true to themselves, that is, they are quite the same person both in real life and on social media. They are very active on Facebook, Instagram and Tik Tok, but remain real, and faithful to the ideas they defend.

Paul, for example, stated that people using fake accounts or fake names while interacting online with other people who kept their real names are simply cowards.

''They should not even have the right to discuss where 'real people are discussing if they do not have at least the courage to be faithful to themselves...''.

Irena on the other hand, apart from posting perfect family pictures to impress her contacts, also use her real account for commercial purpose. As she is having many friends following her on Facebook and Instagram, she takes advantage of this occasion to propose her products online. she says:
''keeping my real name on social media is advantageous for me because anybody can find me easily, and the more I have friends and contacts, the less I will need to pay for an advertisement for my products...''.

This participant is still a student but at the same time, she has some companies' products that she is proposing to her contacts online, on the behalf of big companies. Thus, she is now a worker thanks to social media.

Perception of Others and One's Self
Different dimensions of 'perception' were also the focal points during our interview with the participants. Thus, many talked about their image and the way they want their family, their close friends, their relatives, and their contacts not close to them, to see them. The fact of being far from their country of origin also allows them to have a perceptible and obvious self-freedom.

We have the case of the participant Said, who was showing an image of a bad boy on Facebook and Instagram, to make his friends and people who do not know him personally feel shocked, or for them to start funny discussions online with him just for fun, as he stated during the interview. This participant deeply depends on and cares about how his audience perceives him and cared about what he shows them. When following his publications on the internet, we did discover that he was playful, mocker, surprising, and not a very serious young man on Facebook. All this is to cover his real self and private life. Said further confessed that most of his Facebook contacts think he is not serious, and complain sometimes about his publications. From his publications on himself, he said:
"Most of my Facebook and Tik Tok contacts think I am already rich here in Turkey, especially my contacts living back in my country because I always take pictures in shopping malls, or in front of nice cars before posting them on Facebook...''.

However, on Instagram, this young man succeeds to show himself as a professional well-looking man, appreciated by his contacts, given that his family and people who know him are not present among his Instagram contacts; so nobody can prove the contrary or contradict what he is publishing there, as it may be the case on his Facebook page for instance. He confessed to having blocked or put some restrictions on his close nuclear family members, brothers, and sisters on all his social media because, for him, his family defends different ideologies in terms of religion and way of life, so he does not want to disappoint them. Therefore, he also stated:
''Most of my contacts are convinced by the fake image of me that I am displaying on social media, and this makes people's opinion on me to be very diversified...''.

Omar was another participant who cared about his image and private life. Concerning his image, he said:
"One of the main reasons I am using a fake account to interact on social media is that I do not want my family to see me negatively. They defend different values in terms of education, and respect and most of them support a political party different from mine, but I show them in real life that, I defend the same ideologies and same political parties as them...''.

Paul was very conscious of the fact that others should instead be learning from him, from his ideas and discussions, and thus always wanted to give the best of himself to impress others in online discussions. Ali too was in the same perspective of giving the best of himself for others to be satisfied with his commercial products and services.

Kena, Mariam (22), and Lena on the other hand were not very interested in what others think of them as individuals but were much more conscious of themselves and their roles while online. Irena and Amina on the contrary, always think of what people will think of them, and how people will see them as individuals first, and consequently, they were somehow influenced by people's opinion of them and were acting accordingly when they were on social media.

New Kind of Social Media Users: the Silent Followers or Watchers
We have noticed this category too in the course of our interview. Some participants were very active users of social media, meaning that, they are connected almost all day long on all social media, but they neither publish pictures and videos nor interact with their contacts when online. They can put a 'Like' or any other emoticon, but they do not comment, nor publish any publications, but follow up on every news published or commented on by others. When asked why, Kenan, Lena, and Mariam, Ana all had nearly word for word, the same response:

''In the past, I used to publish and comment a lot too; it was the tendency then. Everybody was posting pictures, and videos of themselves, the food they eat, their family, etc... and almost all my friends were on social media. So it was 'cool' to follow the tendency in the past. But with time, I am starting to see no meaning and no interest in publishing my life on social media. From time to time, I can post a product, a quotation that I like, but not often like I used to do...''

This means that, with time, the interest that some of these young people used to have in social media interpersonal interactions is decreasing. This may be a matter of age, or evolution in terms of priorities, mentality, or academic and professional purpose, but still, this point was surprisingly repetitive in some participants' speeches. Paul, for instance, even though very active now on social media, is however planning to abandon some aspects of his use of social media in a near future and orientate his use to other aspects. He confessed that being active for many hours a day on social media is exhausting and time-consuming. For him, it is sometimes better to be a simple follower, watching others interacting on different social media, then trying to correct, convince, and educate virtual people. Another, not negligible information that came several times from the participants, is that almost all of them now tend to prefer the use of YouTube channels, simply because, as students, they can learn everything from that platform. Some participants mentioned the fact that they are aware that people are making money on that platform, unlike Facebook and other media which are more limited in terms of payment. Thus, they slowly start to emphasize mainly on YouTube by creating their channels whilst following many pages. For them, it is more profitable to them at educational and professional levels, than other social media.

Kenan stated:
'' I learn many things concerning my courses from the contents found on YouTube channels. I spend much of my time there after class...''

Lena too confessed that:
'' Anytime I have a gap concerning religious questions, or concerning my courses, I directly go to YouTube for more information. You know, YouTube is a powerful search engine first of all, and it is also in fashion as a source of income for its users. I am planning to create my channel and propose content too''.

This new media indeed is of great help for these young people, but, there remains the problem of selecting the right people to follow or to take as a model, and selecting the right information to follow and apply. It is known that search engines such as YouTube and Google are vast open fields where anybody can publish what they want as content, some without great credibility and control. So, it can be said that these young African students tend to use YouTube, mostly for instruction purposes, to complete their educational gaps, for research, and less for fun, and entertainment. Besides, it can be noticed that, what can be seen as the first social media that opened the road to new interpersonal communication, seem to be becoming less used, and maybe soon replaced by more profitable types of social media like YouTube.

Interconnection of the Virtual and Real Self
In the course of this study, participants, while giving answers to the questions concerning their usage of social media and the way they play roles when they are online, used to arrive at the deduction that, they were not even aware that what they were doing was faking role play. Some just see it as another way of expressing their ideal self and their ideal life, as was the case for Amina, İrena and the others. These later experienced different realities in real life, not that pleasant for them, so they unconsciously wanted to portray a better image of themselves on their social media pages, and make people see them better, happier, and then envy them. Most of the participants said that, as soon as they close their social media pages, they return without great difficulty to their real life, with ego boosted thanks to some positive comments received from their social medial contacts. Thus, virtual life does not necessarily negatively influence their real self, but they are interconnected and well managed by those young people, helping them to keep a balance in their lives, from what they explained.

Ali and Irena for instance did not find any difficulty in moving from their real world to their virtual world because they assumed that, they play a game to reach their goal.

As for Said and Omar, they confessed to being sometimes worried about the lies they are hiding from their close families, by presenting a virtual life different from what they present in real life. Sometimes they have to think of the big lies or fake images of themselves they have to present either in real life or virtual life. Said stated that:
" When people get close to me I try to reject them because I am afraid they will discover the real me and get inside my private life. So I avoid having many real friends in real life; at the same time I have many virtual friends, who do not even know the real me...''.
He continues by stating that:

''When someone I like discovers the real me, I am so worried and I feel embarrassed for all my fakes and lies. But that is the lifestyle I chose, so ...''.

This participant sometimes regrets why he is faking his life, so much so that it influences his real life, but he still intends to continue pretending in this way.

Omar too seemed to experience difficulties from time to time in joining his real self, which he expresses freely on social media, with his real physical self when he is with his family members for example. He confessed that sometimes he feels like a stranger inside his own family, and experiences constant stress, because he does not want to disappoint his family, but still, he is continuing with that lifestyle.

The rest of the participants were living quite well with the difference between their real life and virtual life, and do not have great difficulties moving from their virtual selves to their real physical selves. Thus, they did not mention any influence noticed, no opposition but rather, an interconnection between both selves and lifestyles that allows them to keep on being connected to others and themselves.

Conclusion

To sum it up, this work globally aimed first of all to bring a literary explanation of the notions of virtual self, social perception and the diverse roles or selves on social media in general and then analyze how young African students present their virtual selves on social media.

Thus, it appears first of all that, young African students in Konya mostly use Facebook, Tik Tok and Instagram social media for fun and personal interactions, and tend to go more and more towards YouTube for its profitable aspects like educative content, academic information, entertainment and particularly because they can be paid for their publications or contents if they create an active page. It appears that the future of education will also pass through Youtube channels. Thus, educators should start looking for appropriate new methods of teaching that will be adjusted to conventional education, to attract young people's attention to the training. Most of the young participants were planning to open their channels and make money through new jobs such as online educators, coaches or content creators in one particular domain, influencers, online sellers, and so on. Parents should also be prepared to see their children in non-conventional jobs, with the expansion of new kinds of jobs that are created thanks to social media.

The participants were also asked about the way they present themselves on the internet and the way their contacts see them. Thus, we have noticed a diversity of responses and some similarities, not depending on their origin because we had participants from different African countries giving us almost the same reply to the same questions. As a result, most of the participants fake their virtual selves and pretend to possess what they do not have, and pretend to be who they are not in reality. For some of them, it was a quite stressful daily exercise but most of the participants got used to the fake life they created for themselves in the virtual world, and feel quite comfortable in their role, and some do not even intend to change that lifestyle, even though full of fleeting hope, lies, and illusions. This is how we discovered that pretending and playing different roles online do not impact these young people in their real selves. On the contrary, they made their virtual self, to be part of their real self. They appreciate the way others see them as the rich, happy, accomplished or bad boys for some; it is convenient for them. They have normalized virtual life which creates a sense of balance in those young people's mental equilibrium and self-esteem to some extent. It also gives them the feeling of being important, the feeling that they exist in the face of the world and that their opinion counts. Thus, all these seem to be the flames that ignite all the various types of interactions and behaviours seen on social media. The number of hours spent by those young students with their cell phones, always interacting on different social media was quite huge, and they seemed more concentrated on their virtual content than on physical educative content. Most of the participants were also connected on their social media pages, interacting during classroom courses. Those young people seem to exchange their concentration to serve virtual social media. One can question the long-term consequences of this new lifestyle on their cerebral capacity and also on their future academic abilities and performance during normal traditional training.

On the other hand, we have a small number of participants who struggle to stay true to who they are, in the virtual world as in the real world; they do not pretend to be who they are not or to show what they do not have in real life; some of them because they want to bring a value to their contacts, and others because it is beneficial for them if people can easily find them on social media for business purposes.

We also noticed a new category of social media users that can be called the 'watchers' or 'passive followers'. The latter are always connected but do not react to any publications. They comment to themselves or with physical people next to them but rarely publish or comment on any publication done by their contacts or appearing in their

social media pages' news feed. This category of users can be associated with what researchers in psychology called 'lookouts', spying on people's private life in silence, even though the participants in this research were not yet at that level. It should also be reminded that some of the participants, as time passes, choose no longer to use social networks very often; others even talk of quitting.

It can also be concluded that whatever their country of origin, all these young African students were craving freedom of speech, freedom to express their imagination and professional skills, and freedom to say what they think without being judged or being seen as a failure by their respective family or friends, and they are believed, from what they display on their social media pages. Thus, the way they presented themselves on social media was for them a normal process to reach their inner aim. Therefore, this renders the use of new social media interactions complicated to be controlled and regulated in many countries, given that it is opened to a large public, and even pages with age restrictions can be accessed by many young people. It should also be mentioned that many African countries like Cameroon have started to use implement some legal restrictions to control and reduce the number of misusers of the new media. However, even if the new social networks have opened up the need for validation and the search for social recognition for many, it remains necessary for external users to be able to select and differentiate an exhibitionist tendency that can cause any harm, to the real person behind those 'social media accounts.

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Total Quality Management in Educational Management: (TRNC Example)

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ABSTRACT
In the contemporary participatory management approach of Total Quality Management, there has been a process of getting used to and applied in our National Education System, as in all public institutions. The change of education programs and the implementation of student-centered education programs are also a positive development in the implementation of TQM. The aim of this research is to examine the level of adoption and application of Total Quality Management studies of the administrators and TQM institution representative teachers at schools and institutions affiliated to the Ministry of National Education. In the research, questionnaires were applied to reveal the perspectives of education administrators and TQM practices of organized school/institution representative teachers. The sample of the research consists of Educational Administrators and TKY School/Institution Representative teachers in the Nicosia District of the Turkish Republic of Northern Cyprus. The administrator questionnaire consisted of 17 questions and the teacher questionnaire consisted of 15 questions. The questionnaires were evaluated in the SPSS 13.00 Statistics Program. The findings obtained as a result of the research were supported by tables consisting of percentages and frequencies. Some of the findings obtained as a result of the evaluations are as follows: 48% of the school/institution administrators participating in the research think that their institutions do not have the necessary infrastructure for TQM practices in any way. Likewise, 41.2% of the teachers are of the opinion that the infrastructure of the schools is not ready for Total Quality practices in any way. School/Institution administrators find the training on Total Quality Management insufficient with a high rate of 88.6%. Although they see deficiencies in education and infrastructure, 60% of the administrators find TQM studies important. If we add those who find it very important with 37.2%, managers are aware of the importance of this job at a rate of 97.2%. In the research, 45.6% of the administrators and 34.1% of the teachers always feel obliged to work on TQM. Administrators and teachers think that those who participate in TQM studies should be rewarded (93.4%). In addition, the rate of teachers who stated that those who participated in the studies were rewarded is 5.9%. 21.6% of TQM institution representative teachers, that is, one out of every five teachers, have never felt the benefits of their work. While 55% saw the occasional benefit, 23.4% always saw the benefit of the work done.
Keywords: Education, Educational Management, Total Quality Method

INTRODUCTION

Quality first recalls that the commercial goods meet the needs of the consumer. Quality is a concept often associated with commercial goods. For this reason, the definitions of quality include more commercial expressions. E.g., According to the "European Association for Quality Control (EOQC), quality; It is all the characteristics of a good or service that reveal its ability to meet a specific need. Some of these features are size, shape, chemical-physical properties, longevity and safety" (Ercan, 1987). Total quality Management: It is a series of regular activities that cover all organizational employees, from managers to workers, with fully integrated efforts to improve performance at all levels in an organization (Imai, 1994).

TQM is defined as follows according to the Turkish Quality Award criteria, where the European quality award principles are taken exactly; "It is the management and direction of Policies and Strategies, Employees, Resources and Processes with an appropriate Leadership understanding in order to ensure Customer Satisfaction, Employee Satisfaction and Positive Effects in the Society, and to achieve excellence in Business Results (Ersun, 1995). Quality is one of the most important concepts encountered by managers, especially since the 1990s. Juran briefly defines quality as "fit for use". "In the most general sense, quality is the fulfillment of the requirements." (Kovancı, 2003).

Rapidly developing science and technology, industry, increasing population, social lives, changing cultural and political ideas and the future of the world have affected the meaning and content of the concept of quality for centuries and formed it in its current form. This concept changes and gains new meanings as time progresses. Because social and life expectations are changing and progressing. The people of the society have adaptation problems in the face of the rapid change of life and want structures that will support their life and meet their learning needs. As a result, society now demands quality expectations not only in the product but also in the service. Today, education has started to be at the forefront of the pursuit of quality and the importance of education in the progress of societies has been accepted (Lesinger, Şahoğlu & Yınal, 2018).

Quality work in education is inevitable. If it is necessary to determine a method in these quality studies, education provides a harmony with the philosophy of Total Quality Management in terms of the features listed above. The quality work to be done in education, whose material and service area is human, can be successful with the application of TQM, which also includes humane elements. The education of the people we will prepare for business life and the future must also be aimed at gaining the behaviors of accessing information, learning to learn, problem solving and creativity. In other words, the main goal in education should be to gain the behaviors of coping with change and continuously improving quality. The total quality movement in education is quite recent. There are very few references on this subject to dates before the late 1980s. Some reorganization studies, which can be considered pioneering in the direction of TQM, were carried out for the first time in some public schools in the USA and in some schools in England. Although studies in the USA were earlier, interest in both countries started to increase in 1990 and after (Ensari, 2003).

When TQM is put into practice in the field of education, some difficulties are encountered. In the industrial sector, it may be possible to change the raw material accepted in production, the mode of production, the machine, the technology, the workforce, the management approach, and the market. In addition, these changes can be measured with numerical data (Ürkmez, 2002). However, it is difficult to quantify behavioral changes in education. In education, the knowledge, abilities and behaviors gained by the student from educational institutions are evaluated. However, it is difficult to measure according to whom they will be evaluated. This is due to the fact that educational institutions take place in the service sector and have unique characteristics (Çoruh, 1997).

Many people objected to TQM studies in education for various reasons. They were disturbed by the reflection of their quality experience in the production sector in education. In addition, the concept of customer has also caused confusion and prejudice in the studies. Reactions to change and new practices are natural (Paçacı, 2001). As time progresses, TQM studies have been made more compatible with the working and principles of the education sector, and it has begun to be perceived and accepted by many segments that the main purpose is quality and efficiency. Service recipients in education should be well defined. Accordingly, goals are determined, and planning is made. TQM guides these studies with its philosophy, principles, statistics and research techniques. In the understanding of quality that is desired to be realized in education, there is to train individuals who are participatory, who have adopted the work based on cooperation and team spirit, who are educated and who are ready to be involved in life and business life. All these features can be given with TQM studies to be carried out in schools (Ergül, 2000).
During the implementation of Total Quality Management in education, seven basic methods are used. Three of these are the benchmarking studies, the adaptation of the Deming, EFQM and Baldrige awards to the education sector. Hoshin Kanri Planning Model is one of the effective methods used especially in strategic quality planning (Dudak, 2005). Again, the rules put forward by experts such as Deming and Crosby in TQM practices in education is another method widely used by many universities and similar institutions. The development of educational institutions as a production system with the help of statistical process control techniques is accepted as one of the most used methods today. The above-mentioned methods are used alone or together in the implementation of Total Quality Management (Gençyılmaz & Zaim, 1999).

In our age, where science and technology are developing and changing rapidly in all areas of life, educated and qualified manpower has been the most important factor. This power is a great weapon in the inter-communal arena. The more efficient use of world resources, the continuity of life, its quality, and the success of societies to survive have become dependent on raising manpower with these competencies. Education has been an indispensable part of human life. The way of education, which affects human life so directly and clearly, has formed the education systems of the states. Education, which is now the basis of development and development, is a phenomenon that needs to be developed in order to survive and compete in the world market.

Since TQM is a philosophy that tries to make continuous development and improvement an organizational culture, change is expected to be long-term. However, although a long time has passed since the studies, Total Quality Management studies in many institutions do not go at the desired and expected level. It is thought that the adoption of TQM philosophy and studies by the managers of the institutions, who play a key role in these studies, will directly affect the studies.

Problem Statement
What is the level of adoption and implementation of Total Quality Management studies by education administrators and school/institution representatives in official schools and institutions affiliated to the Ministry of National Education?

Sub Problems

Regarding the opinions of the administrators and TQM representative teachers in our schools/institutions about TQM.

1) According to Managers and TQM School/Institution Representative Teachers, do official education institutions have sufficient infrastructure for Total Quality Management?
2) Is the training given to the managers on Total Quality Management sufficient?
3) Do the education administrators find the total Quality Management studies sufficient?
4) Do the training managers want their employees to make Total Quality Management a priority target?
5) Do education administrators and teachers have difficulties in Total Quality Management practices?
6) What is the source of the difficulties experienced in Total Quality Management practices?
7) Are there work teams related to Total Quality Management for Educational Institutions?
8) Do the work teams related to Total Quality Management work adequately?

Limitations of the Research

The results of this research; With the administrator and teacher questionnaire used as a data collection tool, it is limited to the 2020/2021 academic year, with the administrators and TKY institution representative teachers of Nicosia district, and primary and secondary education level schools.

Method

Model of the Research

The research was prepared in accordance with the personal screening model. Survey models are research approaches that aim to describe a past or present situation as it is. In this model, the main thing is to be able to observe the existing situation without changing it. Relational screening models are They are research models that aim to determine the existence and / or degree of change between two or more variables (Karasar, 2002). The reason for choosing this research model in this study is to describe the current situation as it is. In the research, it was tried to reveal the perspectives of education administrators and TQM Institution/School representative teachers on total quality practices.

Universe and Sample

The research population consists of the administrators and TKY School representative teachers working in the official kindergarten, primary school and secondary education institutions in Nicosia in the years 2020-2021. In this universe, the sample consists of 427 administrators and 120 TQM institution representative teachers working in official kindergartens, primary schools and secondary education institutions in Nicosia, selected by random selection method.

Preparation of Data Collection Tool

In this study, administrator and teacher questionnaire was used as data collection tool. In the development of the questionnaires, first, after the literature review that will contribute information, besides the findings and experiences we have gained, expert opinions have also been used. While some of the questionnaire items were developed by the researcher, the questionnaire developed by the researchers was also used in the article titled A Research on the Views of Managers and Teachers on Total Quality Management by Günbay and Çevik. After the questionnaires were prepared, they were applied to 35 teachers and 4 administrators in the Primary School located in the Nicosia region to test their intelligibility, and they were revised in line with their opinions. The manager questionnaire consists of two parts. In the first part, there are questions about the demographic status of the managers such as age, gender, seniority and educational status. The second part consists of 17 questions and is arranged to understand the attitudes and opinions of Education Managers towards Total Quality Management practices.

Data Collection

The data related to the research were collected by the researcher in the 2020/2021 academic year. The Path Followed in Data Collection Applications of the questionnaires used in the research were carried out in May in the 2020/2021 academic year. The reason for this is that the total quality management studies carried out during the education period have come to an end.

Analysis of Data

After completing the survey, all of the forms given to collect information were checked by the researcher one by one. The data were evaluated by the researcher in Microsoft Excel and SPSS 13.0 package programs in computer environment. Percentage and frequency were used in the evaluation of the results.

RESULTS

Table 1: Distribution of Administrators Working in Public Schools in 2019 by Gender

Values	Universe		Sample	
	N	%	N	%
Woman	203	18	40	15
Boy	224	82	80	85
Total	427	100	120	100

The rate of female managers in the population is 18%, while the rate of male managers is 82%. While 15% of female managers in the sample are women, the rate of early managers is 85%. This shows that the distribution of the managers in the sample according to their gender is close to the equation in the universe.

Table 2: Distribution of Administrators in the Universe and Sample by Educational Status

Values	Universe		Sample	
	N	%	N	%
Doctorate	6	0,114	-	0
Master	92	4,235	8	1,873
License	204	84,888	85	80,095
Associate Degree	125	10,763	27	18,032
Total	427	100	120	100

According to Table 2., while the rate of associate degree managers is 10,763% in the population, this rate is 18,032% in the sample. This difference among managers with associate degrees decreases among managers with undergraduate degrees. While 84,888% of the managers in the universe are undergraduate graduates, 80,095 of the managers in the sample are undergraduate graduates. The low number and proportion of managers with master's and doctorate degrees draws attention in both groups. These results show us that the characteristics of the administrators and TQM Institution/School representative teachers in our sample, such as gender, educational status, are like the administrators and TQM Institution/School representative teachers in the Universe.

Findings Related to the First Sub-Problem

First Sub-Problem "According to the Manager and TQM School/Institution Representative Teachers, do formal education institutions have sufficient infrastructure for Total Quality Management?"

Table3: According to the managers; Do Educational Institutions have the necessary infrastructure for TQM?

Values	Yes	Some part	No	Total
N	18	207	205	427
%	3.6	48.4	48.0	100

According to Table 3, a very low rate of 3.6% of the administrators of educational institutions think that schools have sufficient infrastructure for Total Quality Management practices. 48.4% of them think that even if adequate support is not provided, some of them are provided, 48.0% of them think that the infrastructure of the schools is not ready for Total Quality practices in any way.

Second Sub-Problem

Table 4: Is the training given to managers on Total Quality Management sufficient?

Administrator	Values	Sufficient	Insufficient	Total
Manager Assistant	N	21	230	251
	%	8.3	91.7	100
Deputy Director	N	0	58	58
	%	0	100	100
School Principal	N	28	90	118
	%	23.7	76.3	100
Total	N	49	378	427
	%	11.4	88.6	100

According to Table 4, 88.6% of the Education Managers stated that the training given on Total Quality Management was insufficient. 11.4% of them find the training provided sufficient. Chief assistant principals constitute the group that thinks the training provided is most inadequate, with a rate of 100% among the managers. On the other hand, 76.3% of the school principals think that the training is insufficient. We know that a large number of trainings on Total Quality Management practices are given almost every year by the Ministry of National Education. However, according to the result, it is seen that these trainings do not reach their goals, they are far from providing the necessary skills to the participants and they cannot obtain the information they want.

Third Sub-Problem

Table 5: Do education administrators find Total Quality Management studies important?

Administrator	Values	insignificant	significant	Very important	Total
Assistant director	N	12	141	98	251
	%	4.7	56.1	39.2	100
Deputy Director	N	0	58	0	58
	%	0	100	0	100
School Principal	N	0	59	59	118
	%	0	50	50	100
Total	N	12	258	157	427
	%	2.8	60	37.2	100

According to Table 5, 60.0% of the education managers find the Total Quality Management studies important and 37.2% find it very important. 2.9% see it as insignificant.

Within this distribution, vice principals (56.1%) and chief vice principals (100%) mostly find Total Quality studies important, whereas school principals (50%) think very important. Almost all of the education administrators are aware of the importance of TQM practices. This situation is positive in terms of TQM studies.

Fourth Sub-Problem

Table 6: Do the training administrators want their employees to make Total Quality Management a priority target?

Education level	Values	Never	Sometimes	Anytime	Total
Master	N	0	38	52	98
	%	0	40.3	59.7	100
Associate Degree	N	15	80	109	204
	%	4.3	26.0	69.7	100
License	N	0	4	4	8
	%	0	50	75	125
Total	N	15	124	288	427
	%	3.5	29.0	67.5	100

67.5% of Training Managers want their employees to make Total Quality Management their priority target. When we look at the answers given by the administrators according to the level of education while investigating the Fourth Sub-Problem; It is noteworthy that managers with associate degree (59.7%) and undergraduate (69.7%) graduate degrees more often ask managers (50%) with a master's degree to make Total Quality Management work a priority target for their employees.

Fifth Sub-Problem

Table 7: "Do the education administrators and teachers have difficulties in the implementation of Total Quality Management?"

Education Worker	Values	Never	Sometimes	Anytime	Total
Education Manager	N	0	208	219	427
	%	0	48.7	51.3	100
TQM School/Institution Representative Teacher	N	13	76	31	120
	%	10.8	63.3	25.9	100
Total	N	13	284	250	547
	%	2.4	51.9	45.7	100

51.3% of Education Managers state that they always encounter difficulties during their work on Total Quality Management practices. While 48.7% of the managers stated that they encountered difficulties from time to time, it is remarkable that there was no manager who stated that they did not encounter any difficulties. While 10.8% of the teachers answered that they did not encounter any difficulties to the same question, 63.3% of them answered that they sometimes encountered it, and 25.9% of them always answered. It turns out that 97.6% of the total employee's face difficulties.

Sixth Sub-Problem

Table 8: What is the source of the difficulties experienced in Total Quality Management practices?

Education level	Values	Lack of Information	Inadequacy of Personnel in Practice	Complexity of Implementation	Employees 'Application Blocker their approach	All	Total
Associate Degree	N	66	-	8	16	8	98
	%	60		10.3	19.4	10.3	100
License	N	59	104	77	59	43	342
	%						
		17.2	30.4	22.5	17.2	12.7	100
Master	N	4	-	4	-	-	8
	%	50	-	50	-	-	100
	N	109	104	89	74	51	427
Total	%	25.5	24.3	20.8	17.3	12.1	100

Looking at Table 8, it is seen that the problems experienced by the administrators arise from a wide variety of sources. In other words, it is not correct to base the difficulties experienced by the managers on one or two sources. While the lack of knowledge with 25.5% is at the forefront of these problems, the inadequacy of the personnel (24.3%) and the complexity of the application (20.8%) follow it.

Seventh Sub-Problem

Table 9: Are there work teams related to Total Quality Management in Educational Institutions?

Values	Available	Not Available	Total
N	366	61	427
%	85.7	14.3	48.0

According to Table 9, boards related to Total Quality Management have been established in 85.7% of educational institutions. However, it is remarkable and thought-provoking that in the Total Quality Management, which has been implemented in real terms since 1997 (Mızıkacı, 2003), no committees have been formed with a rate of 14.3%. This result has revealed to us how correct it is to question whether the existing boards work adequately. Necessary findings were obtained in the Eighth Sub-Problem related to this. Volunteering and teamwork are important based on Total Quality Management studies. However, the ministry has made the establishment of these boards somewhat obligatory with the directives it has published. From this point of view, it is meaningful that the work teams have been established to a large extent, but the existence of problems in the place where they cannot be established is also important. The absence of committees and teams related to TQM practices shows that there is no work done here.

Eighth Sub-Problem

Table 10: Do the work teams related to Total Quality Management work adequately?

Values	Never	Sometimes	Anytime	Total
N	74	329	24	427
%	17.3	77.0	5.7	100

According to Table 10, the fact that 77% of the managers' report that the Total Quality Management boards work occasionally indicates that these boards do not work efficiently.

Discussion and Conclusion

Çetin (2001) in his study titled "Investigation of the Applicability of Total Quality Management Principles in Primary Schools" aimed to determine how much importance is given to Total Quality Management studies by the administrators and teachers in primary schools and its application in schools. As a result of the research, it has been seen that the Total Quality Management Principles are not applied to the extent that they are given importance in our schools.

In his research, Koplay (2001) discussed the problems encountered in the implementation of TQM in public organizations and examined them as general and specific problems. He stated that with the disappearance of these problems, the implementation of TQM in public organizations is generally accepted. 48% of the school/institution administrators participating in the research think that their institutions do not have the necessary infrastructure for TQM practices in any way. Those who think they are ready here are only 3.6%. Likewise, 41.2% of the teachers are of the opinion that the infrastructure of the schools is not ready for Total Quality practices in any way. The fact that this readiness is seen as insufficient may be a data about why the TQM studies that have been implemented in the Money for 5 years have not had the necessary effect.

School/Institution administrators find 88.6% of those concerned with education Total Quality Management insufficient. However, trainings and necessary arrangements regarding central education are planned in the Ministry of National Education. In the research, 94.3% of the education administrators received Total Quality Management training, while 5.7% received Total Quality Management training. The inadequacy in question here is the competence related to the content and the necessity to gain.

Although they see deficiencies in education and infrastructure, 60% of the managers find TQM studies important. If we add those who find it very important with 37.2%, managers are aware of the importance of this job at a rate of 97.2%.

Administrators and teachers consider TQM practices necessary for their institutions with a large percentage (94%). 65.7% of the training administrators state that they want the employees to make TQM work a priority target. This rate is significant in terms of making TQM practices operative. It is also noteworthy that 50% of the managers with a master's degree want TQM to prioritize their employees.

In addition, with another question, the education administrators always stated that they support the work they do related to TQM (88.6%). The answer that teachers always give to this question is 72.9%. The rate of teachers who think that they are never supported is 4.7%. This is close to the ratio between managers who have received training on TQM and those who have not (94.3%) of the training managers stated that they received Total Quality Management training, 5.7% did not.

In TQM practices, 51.3% of the administrators and 25.9% of the teachers stated that they always had difficulties. In addition, although 10.8% of the teachers stated that they had no difficulties, this rate was 0% in the administrators. This shows us that TQM school/institution representative teachers are more aware of the practices and have less difficulty in practice.

Apart from this, 97.6% of the administrators and teachers in total face difficulties, albeit occasionally. Identifying and guiding these difficulties When the reasons for this difficulty are examined; administrators listed several reasons equally. Lack of knowledge (25.5%), inadequacy of the personnel (24.3%), complexity of the application (20.8%), approaches of the employees preventing the application (17.3%) are all (12.1%).

In terms of teachers, the complexity of TQM applications (34.2%) is in the first place of the difficulties. Then, the lack of knowledge (24.2%), all (16.7%), the inadequacy of the personnel (13.3%) and the employees' attitudes that prevent the application (11.6%) come respectively.

This situation shows us that education should be increased in terms of quality and quantity, as well as the application should be brought to an easier and more understandable level within the education system. This result is similar to the results of Düzağaç (2005)'s research. As a result of Düzağaç's research, behaviors and practices that hinder TQM practices have been identified. Boards related to Total Quality Management have been established in 85.7% of educational institutions. At a rate of 14.3%, no board or team has been established regarding TQM at school. Volunteering and teamwork are important on the basis of total quality management studies. The Ministry of National Education has made the establishment of these boards, in a way, compulsory with the directives it has published. From this point of view, it is meaningful that the work teams have been established to a large extent, but the existence of problems in the place where they cannot be established is also important. The absence of committees and teams related to TQM practices shows that there is no work done here.

It coincides with the conclusion of Çetin (2001) that the Total Quality Management Principles are not implemented to the extent that they are given importance in schools.

There is no significant difference in the answers of administrators and teachers regarding whether the work teams and boards related to TQM work adequately. The adequacy of the work of the existing board and working teams;

The answers given by the administrators and teachers as sometimes (16.6%) and never (76.1%) in total are high (92.7%). This situation shows that the existing teams and boards do not work effectively and efficiently, and that there are teams and boards established by the directive published by the Ministry of National Education. The team, which is the engine of TQM practices, needs to be taken for the dissemination and adoption of teamwork. In the research, 45.6% of the administrators and 34.1% of the teachers always feel obliged to work on TQM. If we add those who say that they feel obligated from time to time to this, the rate (manager: 51.2%, teacher: 57.5%) grows. This state of necessity also explains the slowness and stagnation of applications.

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Traditional Service Learning, E-Service Learning, Hybrid Service Learning

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ABSTRACT
In this study, it was discussed how service learning in the digital age has experienced and should experience a transformation. Therefore, the study is a descriptive one. As in many fields, there has been a transformation in the fields of volunteering, community service, service learning and similar activities due to the necessity of the age, even under pandemic and similar conditions. In this context, there are generally three types of service learning approach: Traditional service learning, e-service learning and hybrid service learning. Firstly, these types were defined in the study. It was seen in the relevant literature that e-service learning was defined as a course and a new definition was made as an approach. A new typology was proposed against the typology of service learning types. Then, the advantages and disadvantages of e-service learning and suggestions to reduce these disadvantages were determined through a systematic literature review. E-service learning was proven to have many advantages. On the other hand, there were also disadvantages, many of which could be mitigated. Considering both these disadvantages and considering that the gains of both approaches are important, it was suggested to use a hybrid service learning approach.
Keywords: E-service learning, traditional service learning, hybrid service learning, emergency remote education, distance education, hybrid education.

INTRODUCTION
The Covid-19 virus, which emerged in China, turned into an epidemic that affected the whole world in a short time. Due to the epidemic, decisions have been made around the world, such as individuals to comply with social distances, partial and full-time curfews, and temporary closure of institutions or remote management. One of these institutions is schools. Schools have switched into emergency remote education applications. In this context, the courses were conducted with an emergency remote education approach. In addition, developing technology made it possible to conduct courses with a distance education approach. In the relevant literature, the advantages of the distance education approach were emphasized. Distance education was desired in accordance with the age. So, is it possible to use the service learning (SL) approach in distance education? Or is the SL approach in danger in this process?

Definition, stages, and importance of service learning approach
SL, as a concept, originated in the United States in 1967. However, even in the homeland of the SL approach, there is no clarity in terms of the definition and scope of the concept, despite its decades-long history. Kendall et al., who examined 147 different definitions and terms related to SL, stated in a study they conducted that SL can be grouped as a kind of education, philosophy, or even a phenomenon (as cited in Sandaran, 2012). Robert Sigmon, who was the first to use the term SL in today's sense, defined SL (1979) as an experiential education approach, Furco (1996), who has a spectrum on this subject, as a balanced approach to experimental training, Wade and Anderson (1996), who added the concept of community to SL and addressed it as community service learning, as a strategy for preparing human service-oriented teachers, Bringle and Hatcher (1995), owners of the most cited definition of SL, as a pedagogy, and Butin (2006), who has important studies on SL, as a postmodern pedagogy. As can be seen, SL is an approach, strategy, pedagogy, or method. The most cited (Butin, 2010) definition of the SL approach is as follows: SL, "to be a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (Bringle & Hatcher 1995). According to the National Youth Leadership Council/NYLC, one of the important institutions regarding the SL approach (NYLC, 2022) "SL is an approach to teaching and learning in which students use academic and civic knowledge and skills to address genuine community needs and a type of experiential and project-based learning that drives students' academic interests and passions toward addressing real community needs.". In other words, SL is "a learning/teaching approach in which the academic achievements determined within any course are gained through the experience of serving the society in the relevant subject, thus providing an equally two-sided gain." (Aykırı, 2019).

So, does the SL approach matter? Why should the SL approach be included in the distance education process? The

SL approach has a lot of contribution to the student. These contributions are as follows:

- It has a positive cognitive and affective effect (Butin, 2010). For example, it provides skills to understand social problems (Cress et al. 2005), take care of others (Wade 1997), and social responsibility.
- It has a positive moral effect (Butin, 2010; cited by Furco from Conrad and Hedin, 2001). For example, it positively affects social and moral reasoning, empathy, personal and social responsibility, perceiving helping others as a duty, self-sacrifice, worrying about the welfare of others, and awareness of social problems (Wilczenski & Coomey, 2007).
- It increases academic success (Furco, 2001; Wilczenski & Coomey, 2007). Also, it ensures school attendance and school performance in terms of learning responsibility, commitment to classroom work and good grades (Farber, 2011; Furco, 2001; Wilczenski & Coomey, 2007).
- It brings positive citizenship attitudes (Buch & Harden, 2011), citizenship skills (Conway et al. 2009), and citizenship responsibility (Furco, 2001). It helps increasing awareness of citizenship issues (Lee et al., 2007) and thus being an active citizen (Butin, 2010).
- It improves self-esteem and self-efficacy, which are important for positive identity development (Furco, 2001; Wilczenski & Coomey, 2007).

As a result, the SL approach is meaningful in terms of the relevant literature. Therefore, it is an approach that should not be neglected in the process of emergency remote education or distance education. In these processes, it is necessary to use the e-service learning (e-SL) approach, which carries service learning to advanced technology (Waldner, et al., 2012). What is the e-SL approach that cannot keep up with the pace of e-learning (Stefaniak, 2020), what are its advantages and disadvantages compared to the traditional SL approach?

Traditional, e-, hybrid service learning
In the previous section, the SL approach was mentioned in general. We can call the face-to-face implementation of SL face to face service learning (FTF-SL) or traditional service learning (T-SL). Waldner et al. (2012) preferred the concept of T-SL. In terms of continuity in the relevant literature, the concept and abbreviation of T-SL was used in our study. Before moving on to the concept of E-SL, we need to look at how the concepts of T-SL and E-SL are discussed in the relevant literature. In order to make this distinction, Waldner et al. (2012) analysed the relevant literature and created a typology. The typology is as follows:
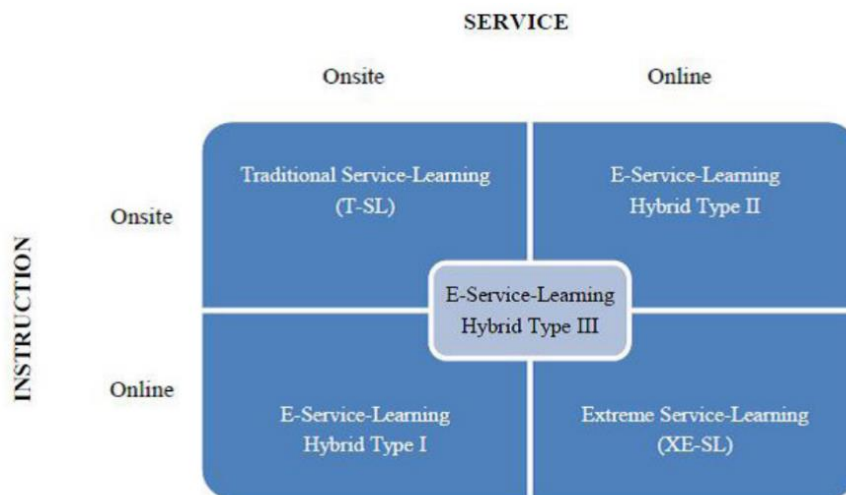
Figure 1. Types of e-service learning (Waldner et al., 2012)

What is meant by E-SL according to the typology: (a) SL course, (b) SL-based course, (c) SL approach itself. It is seen that Waldner et al.'s (2012) typology is suitable for options a and b. In other words, the typology is not SL but a SL course or a SL-based course typology. There are five types of SL course or SL-based course in the relevant typology:

1. *Traditional service learning (T-SL)*: Both the lesson is carried out face to face and the service is given face to face.
2. *E-Service learning (E-SL)*: There are three types depending on whether the course is delivered or the service is delivered online:
   a. *Hybrid Type 1*: The course is held online. The service is given face to face.
   b. *Hybrid Type 2*: The course is given face to face. The service is carried out online.

      c.   *Hybrid Type 3*: The course and/or service is sometimes online, sometimes face-to-face.

   3. *Extreme service learning (XE-SL)*: Both the course is conducted online and the service is delivered online.

In our study, SL was taken as an approach, not a course. The first reason for this opinion is that, as emphasized in the section where the definition of SL is made, the results of a study made by looking at the leading names of the field and many definitions show that SL is an approach. Second, SL is one of the types of experiential education that includes service, such as volunteering. SL focuses more on learning and service than volunteering (Furco, 1996). But both are one species. In the related literature, there are the concepts of virtual volunteering (Murray & Harrison, 2005) and online volunteering (Amichai-Hamburger, 2008; Lachance, 2020; Seddighi et al., 2020). In other words, it directly emphasizes the realization of a genre/approach with virtual, online, or electronic means. In other words, using the concept of "virtual service learning", "online service learning", or "e-service learning" within the framework of an approach is not a problem in terms of the relevant literature. Third, in the first studies on E-SL (Strait & Sauer, 2004), there was an emphasis on the realization of the service by electronic means, namely e-service. Again, it is seen that Dailey-Hebert et al. (2008) use the concept as "Service-eLearning" to emphasize the understanding of learning by service. So, which concept should be preferred: (a) "Service-Learning", which emphasizes the realization of the service by electronic means, (b) "Service-eLearning", which emphasizes that the main thing in the relevant understanding is learning, (c) "eService-eLearning", which emphasizes that both are realized by electronic means, but the relationship between the two concepts is not strong, (d) "e-service learning", which again emphasizes that both are carried out by electronic means, but where the relationship between both concepts is strong. As it is known, SL is an approach that focuses equally on service and learning (Furco, 1996). For this reason, the concept of e-service learning (E-SL) should be preferred. It is also important in terms of continuity in the relevant literature. However, it should not be forgotten that what is meant by E-SL in the relevant literature is an E-SL course or E-SL-based course rather than the SL approach itself. In the context of this information and based on the related typology, it is seen that there are three types of SL approach: Traditional service learning (T-SL), electronic service learning (E-SL), hybrid service learning (H-SL). Of course, these types can also be applied in face-to-face education process, distance education process or hybrid learning process. In this case, it is seen that there are nine types related to the SL course or any SL-based course. These types are presented in Table 1:

Table 1. Service learning course or typology of a service learning-based course

Type	Service-Learning	Type	Course
Type 1	Traditional service learning	Type 1a	Traditional education
		Type 1b	Distance education
		Type 1c	Hybrid education
Type 2	E-service learning	Type 2a	Traditional education
		Type 2b	Distance education
		Type 2c	Hybrid education
Type 3	Hybrid service learning	Type 3a	Traditional education
		Type 3b	Distance education
		Type 3c	Hybrid education

In this context, E-SL is the application of service learning approach with electronic tools. This application can be carried out in the traditional, distance, or hybrid education process. Another aspect of our study that is inconsistent with the relevant typology is whether or not what is meant by the concept of "e-" is meant only as "online". In the same study, Waldner et al. defined E-SL as follows: E-SL is a learning experience where "the instructional component, service, component, or both is conducted online" (Waldner et al., 2012). As it is known, what is meant by distance education is not only online materials and communication processes, and asynchronous content delivery is as important as synchronous content delivery in distance education (Bozkurt, 2020). Thus, similarly, the E-SL approach does not necessarily have to be online only. Our study is closer to the definition of Dailey-Hebert et al. (2008). The definition is as follows: SL, "an integrative pedagogy that engages learners through technology in civic inquiry, service, reflection, and action" (Dailey-Hebert et al., 2008). A longer definition can

be done like this: E-SL is a learning/teaching approach in which the academic achievements determined within the scope of any course are gained through online and/or offline material and communication processes, and experience of serving the community on the relevant subject, thus providing an equally two-sided gain.

In conclusion, E-SL is the realization of SL by electronic means. It is required to use this approach. This is because it has many advantages.

Advantages of e-service learning

- It ensures the safety of service providers, especially in emergencies such as epidemics, and reduces the anxiety of contracting the disease (Dapena et al., 2022).
- It provides active participation of the learner in the distance education process (Waldner, et al. 2012; Bourelle 2014).
- It provides real-life experiences needed in the distance education process (Dailey-Hebert et al., 2008; McGorry, 2012; Soria & Weiner, 2013; Schwehm et al., 2017; Stefaniak, 2020).
- It enables the development of problem solving and critical thinking skills in the distance education process (Garcia-Gutierrez et al. 2017, Shek et al, 2022).
- As in the T-SL approach, students who participate in the process gain the achievements of the relevant course (Dapena et al., 2022; Leary et al., 2022).
- It encourages those who would never participate in such activities or lazy volunteers to participate in such activities (Murray & Harrison, 2005). On the other hand, it has the potential to involve people who do not participate in service learning activities due to their circumstances (Bennett & Green, 2001). For example, people living in settlements far from schools (Strait & Hamerlinck, 2010), disabled people (Malvey, et. al., 2006), introverted individuals (Seifer & Mihalynuk, 2005). Similarly, it provides access to individuals who cannot access conditional services (Strait & Sauer, 2004; Strait & Nordyke, 2015). It allows to reach more people. Similarly, the project brings together the stakeholders (Waldner, et al., 2012). It enables reaching more stakeholders.
- It enables to establish intercultural dialogue and recognize cultures. In this context, it gains global citizenship competence (Selmo, 2010). So, the student doesn't just serve the local community. It provides an opportunity to serve transnational communities (Guthrie & Mccracken, 2010).
- It gives citizenship responsibility in the distance education process (Killian, 2004).
- Project partners cease to be local. Working with regional, national or even international partners is possible (Malvey, et. al., 2006)
- It improves digital competences in general (Selmo, 2020). Specifically, it improves online collaboration skills (Yusof et al., 2019). Not only cognitive but also affective gains develop. For example, a sense of online community builds (Early & Lasker, 2018)
- It reduces the project cost. Preferring electronic materials instead of printed materials and the absence of transportation fees are situations that reduce costs (Natalie, 1999).
- Online environments provide a more effective application of reflection, which is an important component of the SL approach (Guthrie & McCracken, 2014; Yusof et al., 2019).
- It enables the use of an electronic portfolio (Yusof et al., 2019). It saves paper, budget, and space. Adding documents to a portfolio is possible anywhere, meaning the portfolio gets rid of geographical restrictions. Relevant documents are seen by all permitted stakeholders and immediate feedback can be given. Transparency is provided.
- Although there are individual experiences, it contributes to the general learning of the students (Guthrie & McCracken, 2014).
- It provides communication skills similar to the T-SL approach. It also provides online communication skills (Leary et al., 2022). It increases the achievements related to the course by increasing the skills related to technology in the processes in which other courses are traditionally conducted.

As you can see, E-SL has many advantages. However, it has advantages as well as disadvantages. However, there are also suggestions to reduce these disadvantages in the relevant literature.

Disadvantages of e-service learning and recommendations to reduce these disadvantages

- Inequality of opportunity in education was already a problem. These inequalities became more evident during the pandemic process (Bozkurt, 2020b). There is a digital gap between those who have access to digital technology tools and those who do not (Koss, 2001; Hargittai, 2003). It also applies to the E-SL understanding. Particularly, it is difficult for students in rural areas to participate in E-SL due to the lack of infrastructure (Nielsen, 2016). In order to reduce this inequality of opportunity and digital divide, infrastructures that can be used free of charge and/or electronic tool support should be provided. In cases where this cannot be done, it is necessary to determine the expectations from the course accordingly and convey this to the community partners (Stefaniak, 2020). Unfortunately, students and/or communities that

do not have digital tools and/or internet will not be able to participate in this process at all (Murray & Harrison, 2005).

● While there is communication between the course advisor, student, project partner and client in the T-SL approach, there is a fifth component in E-SL: Electronic tools. Stefaniak (2020) suggested at this point that more effort should be made to ensure adequate communication between these components. Appropriate tools can be used for this (Soria & Weiner, 2013).

● It is required to be aware that the problems encountered in the distance education process are also in the E-SL understanding. For example, beyond verbal communication cannot be established and in this context, it is necessary to improve the communication skills of students in the virtual environment (Yusof, et al., 2019). Considering that communication problems will occur, the counselor should present clear expectations to the students (Stefaniak, 2015; Soria & Weiner 2013). Again, stakeholders (service student, receiving community and partner/institution) may experience communication problems (McGorry 2012; Bourelle 2014). In fact, this lack of communication may be such that the stakeholders are not even aware of the project (Goertzen & Greenleaf, 2016). Counselors need to make guidance to find suitable electronic digital tools and platforms.

● The distance education process is associated with self-directed and self-management learning skills (Knowles, 1975). In this context, E-SL is related to these skills. In connection with this issue, it is required to pay attention to the points that will ensure the continuity of the individuals or groups receiving service. In other words, self-directed service receiving skills of service recipients should be developed. Currently, E-SL is an approach that develops such skills (Levesque-Bristol & Stanek 2009).

● Service students may not fully understand the socio-cultural contexts of the receiving community (Guthrie and McCracken 2010; Hinck 2014; Mironesco 2014). Therefore, service providers should conduct intensive study on the relevant community in order to better understand the socio-economic background of the service recipients (Harris, 2017).

● There is a danger that E-SL should be thought of as an approach that is driven only by online platforms. For this reason, in the E-SL approach, it is necessary to give importance to asynchronous (brochure, information note, video, etc.) service delivery as well as synchronous (online consultancy).

● Some services cannot be performed with digital tools. For example, tree planting, environmental cleaning, etc. This is because these projects are carried out on site. Such projects can be converted to E-SL in two ways. The first is to turn relevant issues into informative and/or advocacy activities. In this context, to make synchronous and asynchronous notifications. The second is to use the layered service learning model. In other words, to ensure that the students who take an SL-based course learn by serving the people or groups they serve. In other words, providing students with synchronous or asynchronous service offerings, enabling those people to plant trees and clean the environment.

● There is a tendency to misunderstand that the E-SL approach will be designed as T-SL. Just as the distance education process is not designed as a face-to-face education process, different strategies should be used in the design of an E-SL-based course. Establishing the E-SL process is difficult (Guthrie and McCracken 2010). Also, it may take more time to design the E-SL approach-based course process compared to the T-SL approach (Killian, 2004). Course advisors should be aware of this situation and should design the course process in collaboration with people who have experience or expertise in the distance education process. Also, technology is changing rapidly and consultants who will take care of creating this process must constantly follow the technology (Guthrie and McCracken 2010).

● Although it is emphasized that the existing tools are not sufficient for some services (Pike, 2017), it is significant to give recommendations at the beginning of the process for tools and platforms that can be used for service and continuous communication. For example, in E-SL, it is known that students rely on Whatsapp for communication (Yusof et al., 2019). It is required to introduce not only synchronous but also asynchronous tools and platforms (Guthrie & McCracken, 2014).

CONCLUSIONS

There are three types of service learning. T-SL, E-SL, and H-SL. No matter what kind of education process (face-to-face, distance, hybrid) a course is conducted, it is T-SL if service learning takes place face-to-face, E-SL if it takes place with electronic means, H-SL if it is carried out both face-to-face and with electronic means. In conditions such as the pandemic, SL is endangered and E-SL is a way to save SL in such mandatory processes. In addition, technological developments have made great transformations in education. As a pedagogical approach, SL should take its place in this process. Currently, technological advances are not an obstacle to SL. On the contrary, E-SL, which means integrating technological tools with SL, has many advantages. In fact, it is meaningful not only for itself, but also for the distance education process in general. This is because in any course designed with E-SL in the distance education process, the student can actively participate and gain real-life experiences.

The E-SL also has disadvantages. In addition to the disadvantages mentioned above, there is another important

disadvantage. As it is known, individuals cannot be physically on-site in E-SL as in T-SL. For this reason, some studies (Malvey et al., 2006) expressed concerns that service providers would miss the spontaneity and excitement of events. More generally, it is thought that students will not be able to gain the achievements in T-SL. In this context, if the gains of both T-SL and E-SL are to be gained, H-SL should be preferred.

In the context of all these results, studies should be carried out to eliminate the conceptual confusion regarding E-SL. Also, studies should be carried out specifically addressing the advantages of E-SL and each of its gains in this context. In the relevant literature, it is observed that there are recommendation that reduce the disadvantages of E-SL. However, these studies are not sufficient. E-SL will become increasingly important in a process where electronic tools transform many activities due to technological developments and in mandatory conditions such as pandemics. Therefore, it is important to minimize their disadvantages. Currently, H-SL is recommended. However, there is no direct study on H-SL in the relevant literature. Although the concept of H-SL is partially included in the study of Waldner et al. (2012), its conceptualization and definition were made in our study. In order for H-SL, which is a new concept, to be included in the relevant literature and to be applied in the education process, it is recommended to conduct studies on H-SL.

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Using Possible Intuitive Virtual Applications Requested through Metaverse Nike Advertising in Shoes Sales and a Proposition Study on the Metaverse Shoes Sales Application Model

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Abstract
The fact that the space has gained movement and dimension is obvious as the brands begin to design visual communication through the metaverse and other virtual applications in their advertisements. The effect of this movement and size on the customer; While designing visual communication, symbols, signs, letters, etc. belonging to the brand should be used. In the presentation of linguistic or visual indicators identified with the brand, such as the preference and the effect of this preference on the customer, the suggestions of what this trend, especially seen in sports shoes, can turn into in the future, and the energy of need that can be felt, which can be the source of the designs, will be the subject of research in another article,

In this enjoyable, important issue that concerns all of us and where the excitement of the future takes place, the current online shoe sales trends are briefly mentioned and presented in the online shoe shopping of the customers; metaverse and beyond, where customers can choose the most suitable shoe for them, five senses plus intuition, trends An ideal shoe application model design that can be measured will be tried to be idealized and stylized. Since it is the first, it is a mystery to what extent it can be approached to the ideal. But the method applied to shoes designed for astronauts can be inspiring. As a social scientist, it is clear that further research is needed. However, this study is limited to hosting an amateur enthusiasm and will be limited to giving the idea and handing over the work to the expert. This article, which deals with the use of virtual universes for point-and-shoot solutions to the problems that people have experienced in daily life, is firstly based on an experiment on whether virtual universes can be used to change and improve the shoe industry. In other words, can they use the 3D technology they started to use in their advertisements to measure feet in the world and to produce smart shoes? These shoes will be so smart that you can continue to wear the same shoes with this feature with a small adjustment without having to take them off when your foot is sprained. From the area that is still new; Potential situations will be presented in the opinion and perhaps wishes section of the article by evaluating customer orientations in the feedback from the end user.

In summary: This article will focus on three issues:
How the language used in the field of shoe body language, which originates from the capitalist approach to the sale of shoes to the global market, can be negatively affected by the end consumers at the national level; It will be emphasized a little on those who may experience confusion.
 It will be designed that hitting the target in the field of shoes and clothing in the global market may not be difficult at all with the developed metaverse type and derivative applications.

3. The design of a metaverse sensor that will be able to measure the customer's foot in general socially and individually in a developed level, to perceive the five senses of the customer, to sense the unconscious tendency created by the intuition arising from his experience while the shoe is on his foot, and to put it into data will be made amateurishly. It can be considered as a thought exercise on the use of augmented reality in shoe wear, online and/or in the first prototype trials, data acquisition and presentation.
Keywords: Metaverse, Metaversal Shoe Application, Augmented Reality in Online Shoe Sales, Metaversal Recycling, Five Senses, Sense.

Introduction
"A healthy mind in a healthy body."
<div align="center">Mustafa Kemal Atatürk</div>

"A friend looks at the head, the enemy at the foot".
<div align="center">Turkish Folk Culture</div>

This saying can be reversed by loading its literal meaning. This is an article that takes a firm foothold as a friend.Scientific knowledge and unconscious gains at the moment of thought formation in a sound mind; in other words, from experiences gained through life…

An example of this from literature: "…I wonder if this work will be understood outside of Paris? It takes doubt. The features of a scene full of local observations and colors can only be evaluated between the Montmartre ridges and the Montrouge hills… (Balzac, 1988:18)."…

On the principles of the working of the healthy mind: Those who are interested in the order and functioning of the universe may like the images, news, information, content about the planet Jupiter the most. I think that only amateurs can show such a tendency if the experts in the field can get rid of the influence of the age and society they live in due to the education and training they receive. Since I do not know yet whether this is an area that is measured and subject to scientific research; With your permission, I would like to present the possible reasons for this enjoyment, based only on my current scientific knowledge.

Back to the question again: Why might people like the planet Jupiter more? Because it looks very colorful, we visually liken it to our planetary pattern, which we internalize because of the planet we live in and we are used to. You can reach this thought when you read ABC of Semiotics (Rifat, 2009, Entire book). Public Relations uses this phenomenon a lot, especially in PR and advertising work. If we give an example from the profession of journalism: "We learn about these events and situations because journalist tell us about them. These journalists, some just out of college and some 20-year newsroom veterans, are our link to the world beyond our direct experience. Using their judgment, experience and a set of journalistic guidelines, they decide what is worth calling our attention to-what is newsworthy (Mencher, 2006: Chapter1/s).

There is no doubt that our thought formation follows a process that also occurs according to a color scale that our eyes perceive and offer us. Nevertheless, it is obvious that it needs to be up-to-date with the existence of scientific data that support my knowledge at this moment. I will include all of them in my next work. Although we do not know the teaching and training of our experts who are interested in the universe, what science tells us is that the human child was born in is the age in which he was born, that he grew up influenced by the social environment. In other words, that the ideas of amateurs and/or non-amateurs are shaped by the society in which they were born. Objectionable thought formation can develop in both directions. Perhaps a teaching-training process that can test two thought formations, which must begin at a very early age, perhaps keeping both areas separate and subjecting the work of scientists from two different teaching-training bases to experiment may be the reasons for further discoveries. Perhaps in some states it is an area that has already been done and concluded. A scientist should be influenced by the aspects of the age in which he was born. The fact that the general majority is cut off from its cultural ties makes it difficult for it to reach it. Shouldn't it have such a goal? A waste of time? There is a system for governing majorities. Should scientific responsibility only be to science?

I've always wondered about the thought formation behind unique inventions. Maybe another thought formation can make us feel how colorful the gray-looking planets are. This area may also be completely resolved. Maybe that's all the science available to us, ordinary people. Even so, dealing with science means living, feeling alive.
Of course, I know that this is not the subject of my article. Returning to our subject, it is obvious that in this article about my Nike shoe example, metaverse-used shoe sales application model, I will act with the perceptions of the time period I live in and with the formation of thoughts.
Undoubtedly, every organ is important. When any of our organs are disturbed, our heart begins to beat there. The discomforts arising from the choice of shoes on our feet, which bear all our seemingly insignificant burden, can affect our whole day, prevent us from making healthy decisions, and cause permanent deformations and diseases. The age and society in which he was born in the general sense that shapes the human being is the use of metaverse in the measurability of the variability of the feet according to the societies? And the era of smart shoes…

When is the customer right?
Kitabe-i Seng-i Mezar

He didn't suffer from anything in the world
As much as he pulls from the callus;
Even because it was created ugly
He wasn't that upset;
When the shoe doesn't hit
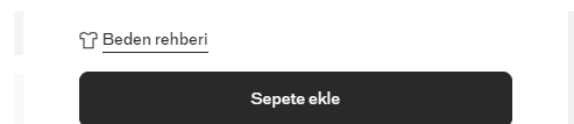He would not mention the name of Allah,
He was not considered a sinner. …..   https://www.antoloji.com / Orhan Veli Kanik

It is necessary to investigate the origin of the phrase "the customer is always right". My unconscious acquisitions have taught me that this is mostly for show. In general, the customer can be right until he sells the goods. Now, with the changing age, it may be time to finally give the meaning of the age. The customer is the person who cannot make the product he bought but needs to use it. In that case, the people who will do this do not enter into a kind, cheating, deception, deception, type and derivatives, and listen, understand, feel, observe, put into data, etc. ...isn't it necessary to implement? Moreover, in the digital age, it is hunted at three hundred and sixty degrees with legal and illegal data taken from it. In other words, the customer, whose universe of meanings has changed with the digital age and is surrounded by digital devices, is surrounded by things taken from him involuntarily. Concretely, the stories he internalized are no longer his, and the majority of customers who are still unaware of this are with the ones taken from him, which are now psycho-semiotic language usages; can be hunted easily. If the customer is prey in every sense, this should be used to his advantage.

An example of Shoe Size Indicators Available in the Market: The following is stated in the introductory article under the heading 'Size Guide' of one of the examples below: "This size guide gives approximate values and is only a guide. If you have similar products that you are satisfied with, we recommend choosing the same size."As seen in the table, the shoe tab has been opened, and the question arises whether the expression in this paragraph is also valid for shoes. Approximate body perception in shoes is not general in Turkish society. He goes for thirty-eight, if not, he tries half, but he's not used to playing a trick or two. Half are also not available in all brands. Turkish foot size in Italy, United Kingdom, Europe, Mexico etc. It is not clear what it corresponds to, as in the words of the ancients. Moreover, these tables were generally in English, although the page was not in English. Euro, United Kingdom etc. as. The client may be even more confused when he receives counseling. There are those whose Euro foot size does not match the Turkish women's foot size. It has been tried several times and will not be named here. Similar situations of some brands are also valid for dress sizes.

Beden kılavuzu

Bu beden kılavuzu yaklaşık değerleri verir ve sadece bir rehber niteliğindedir. Memnun olduğunuz benzer ürünlerimize sahipseniz, aynı bedeni seçmenizi öneririz.

ÜST GİYİM	ALT GİYİM	Aksesuar	Ayakkabı	İç giyim

Ayakkabı							
Avrupa	35	36	37	38	39	40	41	42
Birleşik Krallık	2	3	4	5	6	7	8	9
Amerika Birleşik Devletleri	5	6	6.5	7.5	8	9	10	11
Çin	230/83	235/84	240/85	245/86	255/87	260/88	265/89	275/90
Rusya	35	36	37	38	39	40	41	42
İtalya	35	36	37	38	39	40	41	42
Güney Kore	230	235	240	245	255	260	265	275
Meksika	23	23.5	24	24.5	25.5	26	26.5	27.5

Birim: Santimetre							
Ayak uzunluğu	22.4 cm	23 cm	23.6 cm	24.3 cm	24.9 cm	25.5 cm	26.2 cm	26.8 cm

Figure 1

https://www.massimodutti.com/tr/kare-burunlu-blok-topuklu-deri-ayakkab%C4%B1

Beden rehberi

Sepete ekle

Figure 2

https://www.massimodutti.com/tr/kare-burunlu-blok-topuklu-deri-ayakkab%C4%B1

Erkek Ayakkabı Beden Tablosu

UK	6	7	8	9	10	11	12	13	14	
EURO	40	41	42	43	44	45	46	47	48	
USA	7	8	9	10	11	12	13	14	15	

Kadın Ayakkabı Beden Tablosu

UK	3	4	4.5	5	5.5	6	6.5	7	7.5	8
EURO	36	37	37.5	38	39	40	40.5	41	41.5	42
USA	4.5	5.5	6	6.5	7	7.5	8	8.5	9	8

Figure 2

https://www.soylustore.com/Uploads/EditorUploads/bedentablosu.jpg

Head and feet, two very important organs. Think about it, if your feet are uncomfortable, is it possible to think healthy?The poverty of Süleyman Efendi, who inspired the poet, is evident from the poem; it is obvious that he has a lot of calluses from his poverty. So, can those who have enough money today buy the right product for themselves? Our small and beautiful planet, together with the commercially developing technology, in the name of capital, for the sake of capital; With the new world policies, these borders have become even smaller. Many famous brands have been opening new stores on a global scale and confuse end users and consumers by offering "new customs to the old village". First of all, we see that brands like Nike, which use advanced technology in their products, have started to use metaverse elements immediately. Approaches such as NFT, the stock market, commercial aspects are beyond the scope of this article, and it is an article study based on making the life of the end user, that is, the consumer, easier with the inspiration of the 3D Nike advertisement.

Five senses, 6th sense and Metaverse… Metaverse Features What is it and what else do we want it to be?

"The meta-universe is a persistent, online, 3D world concept that combines multiple virtual worlds. You can think of the meta-universe as the future of the internet. meta universe; It will allow users to work, meet, play and socialize in these 3D worlds." https://academy.binance.com/

What is the definition of a meta universe?
 Meta universe is the concept of an online, 3D, virtual world that connects people in all aspects of their lives. Just as the internet can provide access to different websites with a single browser, the meta-universe will connect many platforms. https://academy.binance.com/We know that learning takes place more easily in areas where the five senses are active. This is why the metaverse is linked to the topic that the content mentioned at length in the introduction focuses on. The reason why it is kept long is the passion of the owner of the article for space… Can metaverse and metaverse features be used in the full analysis and definition of feet, which are variable from society to society, almost like a cultural feature? Instead of offering attractively features that will make the end user buy, just to sell more. shoes filled with equipment that can measure the 5 senses, sense intuition, feel the foot and put it into data, both to promote the product with these features and to develop metaverse features with advanced metaverse studies. Think beyond 'Hand Made', because human perception can be wrong. Are personal rights not violated? That's all it takes for someone who already has a smartphone. Volunteers can be started.

Figure 4
https://www.youtube.com/watch?v=N6v7HQiCNiQ

Figure 5
https://www.youtube.com/watch?v=N6v7HQiCNiQ

As seen in Nike advertisements, the sale of any product that refers to the five senses will be much more effective than the other. How many senses do you think were activated using the metaverse effect in this Nike graphic? Here are the methods of pouring all this into the sensor and using it both in product sales and in defining, analyzing and putting it into data for the customer, and putting it into an application and creating a prototype should be considered as a study. Are smart, healthy, unique and special shoes, shoes that can measure, possible with virtual universes? Personal rights? Which personality? Foot personality...? Measuring foot characters. Metaverse applications with sensors where your feet can finally be comfortable. Metaversal applications are the ones that can filter one-to-one 5 senses plus intuition, and pour data that will return to the person they filter.

Figure 6
https://www.youtube.com/watch?v=N6v7HQiCNiQ

Conclusion, recommendations

If the data on a global scale is to be taken and put into the service of capitalism, at least recycling, metaverse recycling) can be used as a source of transformations that can make the consumer who is exploited, exhausted and consumed in all aspects smile finally. Metaverse recommendations for preventing online sales accidents. When talking to brands, they say that such online sales accidents can happen to all brands during discount times. Maybe it means that the boxes cannot be looked for due to speed reasons. In the solution of this, technology that can show the inside of the box multidimensionally can be used after and/or before the boxing stage, as well as digital equipment that is sensitive to the lack of product with multidimensionality before it can be used and all of these can be included in the scope of metaverse and/or metaverse features. It can be predicted that the experience gained after receiving these data will be sufficient and can be continuously improved.

included in the scope of metaverse and/or metaverse features. It can be predicted that the experience gained after receiving these data will be sufficient and can be continuously improved.

Moreover, it should be a different pleasure to wear the same shoes with a small adjustment for minor foot bumps and injuries, or to buy a shoe with these features. Although the existing shoes are called ergonomic and anatomical, they are like shoes made on the basis of a certain mold filled with cotton, and despite all the money, their compatibility with the feet can be a matter of debate. Although it is called the conditions of the environment that created those who shape the era in which they were born, it should not be forgotten that the person who creates the environment is also human. In global marketing, the countries where the brands are carried use the usual guides without considering the local language use (letters/numbers), and they do not take into account the general foot structure of the society) can also be made available. Although the malicious digital uses and DigiSlave incidents created by the era we live in have not gone down in history yet, the brands that are connected to illegal global data mining and/or even created by illegal data field plunder have deciphered the situations that cause such confusion. They can use it as a Semiotic Language and turn it into tools of repression in real, everyday life. You can read my articles on this subject. It's defined by my field as: My Digital-Real Psycho-Semiotic Language Use, and I even have an invention called Digital Manual.

Psycho-Semiotic Language Use parsers that aims to decipher this language. If you can read my theorems and information about my invention from these works. See also (Algül,21:300-305;20:744-747-20:796-802; 20:20-24).

Also, normal, flat, hollow foot and Latin, Greek, Epgytian etc…. Special solutions can also be found for the toes.

This article is not for people who are born into a culture that has already overcome the problems with feet and shoes; It should be noted that it is for the general majority.

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