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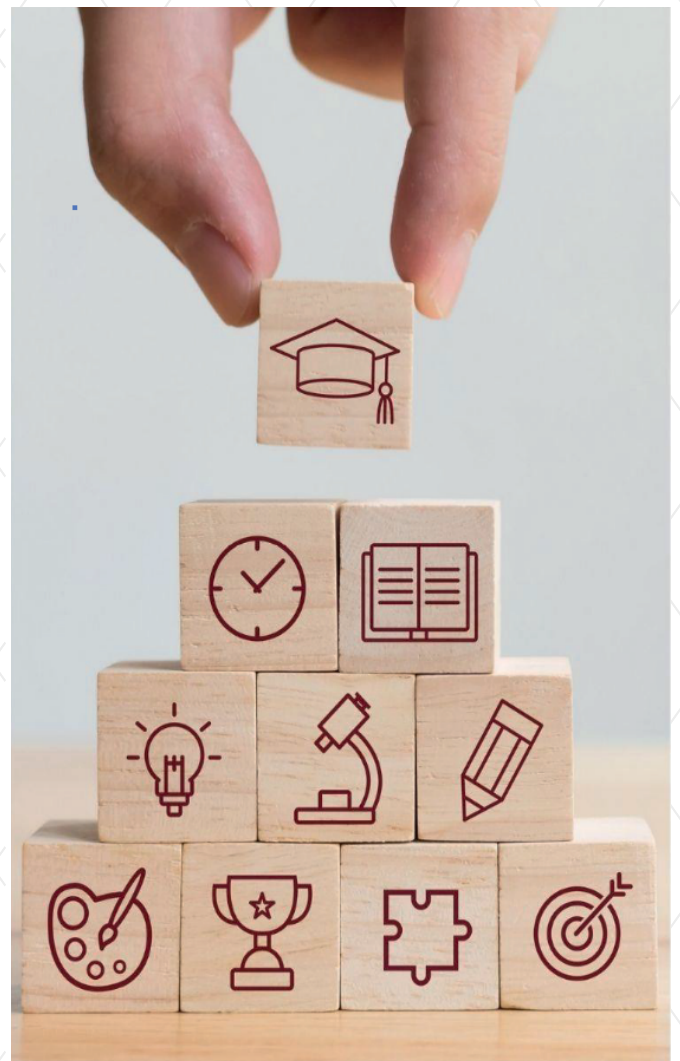
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REVIEWS**

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PRESCHOOL EDUCATION TEACHERS' EVALUATIONS ABOUT THE PROBLEMS EXPERIENCED IN THE EDUCATION PROCESS AND THEIR SOURCES*

Abstract: The aim of this research is to reveal the evaluations of preschool teachers' about the problems experienced in the education process and the sources of the problems. The study was carried out based on the basic qualitative research design. The research participants consist of 19 preschool teachers working in public and private schools providing preschool education in Eskişehir city center. The primary data of the research were obtained through semi-structured interviews with teachers. In addition, the parent demographic information collection forms and the researcher diaries were used. Descriptive analysis and content analysis were used in the analysis of the data. According to the main findings obtained within the scope of the research, the most frequent and common problems experienced by students in the education process are related to attention and maintaining attention, and exhibiting behaviors in accordance with the rules in the classroom. In addition, the problems experienced are observed much more intensely in male students compared to female students. When teachers compare their students from past years with their current students, they are of the opinion that there is a significant increase in the problems experienced in the education process compared to years. Problems experienced in the preschool education process occur more frequently and are more common in public schools compared to private preschool education institutions. The most important sources of problems behind the troubles that arise in the education process; students' parents, common technology usage habits of students, quality of teachers, quality of educational environments, preschool education program, student characteristics and changing daily life habits of students.

Keywords: Preschool education, Problems experienced in the education process, Use of technology in preschool age, Basic qualitative research design.

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INTRODUCTION

The preschool period is a session in which human development takes place the fastest in many aspects. From this point of view, preschool education institutions play an important role. A qualified preschool education process offered in this period is precious. It can be said that quality in preschool education is handled within the framework of some basic elements such as a program based on the development of children, their interests, wishes and needs, equipped educational environments suitable for child development, well-supported educators, knowledgeable and consistent parents.

During this period, children are very attached to their families and are heavily influenced by their families. the child is most attached to his family and is heavily influenced by his family. The communication established between parents and children in the preschool period also forms the basis of the development of the children's social relations (Kırman & Doğan, 2017). For this reason, the lack of love and interest caused by the parents, who have a very important place in their children's lives, cannot take care of their children adequately can cause the child to exhibit problem behaviors in preschool education environments and make it difficult for the child to adapt to school (Correia & Marques-Pinto, 2016).

As in every education level, children's education life at the preschool level is based on the curriculum developed for this purpose. All educational activities that are planned and tied to a specific time, including knowledge, skills, and behavioral changes aimed at gaining students, come to life through educational processes in schools (Köksal, Balaban-Dağal, & Duman, 2016). In this respect, there is a strong relationship between the quality of preschool education and the quality of the education programs that shape the education process (Başaran & Ulubey, 2018; Özsırkıntı, Akay, & Yılmaz-Bolat, 2014).

Educational environments are the most important determinants of the quality of education as the places where the education process is implemented. For a qualified pre-school education; clean, adequate light, sound and heat insulation, equipped with rich educational materials (Çukur & Güler-Delice, 2011), safe educational environments that allow participatory learning (Kara & Çağıltay, 2020; Schilling, 2011) is very important.

Teachers who interact directly with students, model for students, plan, implement and evaluate the educational process can also determine the quality of pre-school education. (Curby et al., 2009). The qualifications of teachers to realize the gains and indicators in the daily education flow, their knowledge about the developmental areas of children, and the extent to which they benefit from the family support program integrated with the preschool education program directly affect the quality of the process. (Köksal, Balaban-Dağal, & Duman, 2016).

Despite all the variables mentioned above, there is no doubt that the most important explanation of the results that will emerge in the context of the quality of preschool education institutions and the educational services provided in these institutions is students. Students' developmental characteristics, needs, expectations, readiness levels, learning speeds, learning styles, work habits, attitudes, feelings, and interests (Çakır-Balta, 2008) directly affect the education process.

In the literature, there are studies on various behavioral problems observed in preschoolers which directly affect the quality of the education process. According to studies tantrums, crying, shouting and stubbornness are among the unwanted student behaviors that preschool teachers' frequently encounter during the education process (Yağan-Güder, Alabay, & Güner, 2018). In addition, phobic behavior, breaking the rules, inconsistent behavior, jealousy, using slang (Broidy et al., 2003), physical violence to friends, ear pulling, hitting, pushing, spitting (Uysal & Dinçer, 2013), making noise, distracting the group, behaviors of not showing interest in activities, complaining, interrupting, disturbing one's friend, harming and constantly acting (Sadık, 2004), distracting the class, interrupting the activity, damaging the materials (Uysal, Altun, & Akgün, 2010) other related findings.

Studies on student behaviors that negatively affect the preschool education process show that today's children come to classes with new expectations and different demands, much more aroused compared to the children of the past, and hyperactivity and attention deficit are common in children (Bayraktar, 2013; Bilgin-Ülken & Kılınç, 2018; Chassiakos et al., 2016; Mustafaoğlu, Zirek, Yasacı & Razak-Özdiñler, 2018; Sevi et al., 2014), it is emphasized that the cartoons, videos and digital games watched by children who make technology a habit of living at the level of addiction may be the source of behaviors such as hyperactivity, distraction, aggression and violence. (Çağlar & Savaşer, 2010; Şenay, 2011; Taştekin, 2019). It is stated in the researches that this kind of behavior brings with it many negativities (Açıkgöz-Yiğit et al., 2018; Bilgin-Ülken & Kılınç, 2018; Burak & Ahmetoğlu, 2015; Palaiologou, 2016; Parnell & Barlett, 2012; Radesky, Schumacher & Zuckerman, 2015; Subrahmanyam & Šmahel, 2011; Timisi, 2011; Üstündağ, 2019).

There is no research that examines the evaluations of preschool teachers' who are the most basic stakeholders of the preschool education process, about the problems caused by student behavior in the education process and the sources of these problems, through a qualitative research topic. This indicates the originality of the research. This study is also important and valuable in terms of clustering the behaviors commonly seen in educational environments in preschool children, determining the variables behind the problem behaviors, increasing the awareness of teachers about the subject, raising the awareness of families and improving educational environments.

With this research, it is aimed to reveal the evaluations of preschool teachers' about the problems experienced in the education process and the sources of the problems. Within the framework of this main purpose, the research questions sought to be answered in the research are as follows:

1. What are the opinions of preschool teachers' about the problems they experience in concentrating and maintaining the attention of their students during the education process?
2. What are the views of preschool teachers' about the problems their students experience in motivating and sustaining learning during the education process?
3. What are the views of preschool teachers' about the problems experienced by their students regarding the behavior of fulfilling the duties and responsibilities assigned to them during the education process?
4. What are the views of preschool teachers' about the problems their students experience in exhibiting behaviors in accordance with classroom rules during the education process?
5. What are the views of preschool teachers' about the problems their students experience in classroom communication skills during the education process?
6. What are the opinions of preschool teachers' about the problems that their students experience in cooperation and cooperation skills with their peers during the education process?
7. What are the opinions of preschool teachers' about the changes in the problems experienced in the education process according to gender, years and school type?
8. What are the views of preschool teachers' about the sources of the problems experienced in the education process?

METHOD

RESEARCH DESIGN

This research, which aims to describe the views of preschool teachers' about the problems experienced in the education process and especially on student behavior-oriented problems and their sources, is designed as a basic qualitative research in the qualitative research type. The main criterion in determining this design for the research is its suitability for the research purpose. In basic qualitative research; how individuals construct the meaning of a life is

discovered, this meaning is revealed and interpreted (Meriam, 2009). In this study, this aspect of the basic qualitative research design was used in the problems experienced in the preschool education process and in revealing the sources of these problems.

SAMPLE

The participant group of the research consists of preschool teachers and parents of students. The participant teacher group, from which the research data were obtained, consists of nineteen preschool teachers working in the preschool education classes of private and public schools in the city center of Eskişehir in Turkey. Participating teachers were determined at the end of a two-stage sample selection process using criterion sampling and maximum variation sampling, which are purposeful sampling methods. During the data collection process, the parents of the students studying in the classrooms of nineteen preschool teachers were asked to answer the parent demographic information collection form prepared within the scope of the research.

DATA COLLECTION

Semi-structured interview form for teachers; Semi-structured individual interviews were conducted with each of the 19 participating preschool teachers in accordance with the calendar created, and it was aimed to reveal the facts expected to be discovered within the scope of the research with these interviews (Merriam, 2009). In the fall semester of the 2019-2020 academic year, interviews with teachers were held in November, December and January. The participants were also informed verbally about the ethical rules.

Demographic information collection form for parents; It was prepared for the families of the students studying in the classrooms of the participating teachers. Form; It consists of a total of 24 questions, two of which are open-ended and the rest are multiple-choice. With the first 7 questions in the form, it is aimed to obtain demographic information such as the ages of the students' parents, separation status of parents such as divorce, death, employment status, education level, number of children. There are 17 questions in the following part of the form. These questions are asked to parents of students, the duration of their children's use of technological tools, the frequency of use, the purpose of use and the effect of technology use on family relations, whether children have a room of their own at home, whether they live with family elders such as grandparents, children's friendships outside of school, school. It aims to determine the environments in which they spend time outside and the situations where families spend effective time with their children.

Researcher diaries; Researcher diaries were regularly kept by the researcher throughout the period covering November, December and January of the 2019-2020 academic year fall semester, in which research data were collected through face-to-face structured interviews. It was thought that these diaries would provide a basis for the formation of ideas in the process of interpreting the findings (Alaszewski, 2006; Silverman & Marvasti, 2008).

DATA ANALYSIS

The analysis of the data obtained from the semi-structured interviews conducted face to face with preschool teachers was carried out using descriptive and content analysis methods. Using the descriptive analysis technique, the data obtained with the first nine research questions; The data obtained within the scope of the tenth research question were analyzed by content analysis technique. In the data analysis process, a pseudonym was used for each teacher due to the ethical principles adopted in the research. In this research, the descriptive analysis technique was carried out with a four-stage process. Firstly; themes were created for descriptive analysis, then the data were processed according to the thematic framework, the findings were defined, and finally the defined findings were interpreted (Yıldırım & Şimşek, 2016). In this study, the content analysis systematic proposed by Yıldırım and Şimşek (2016) was adopted in terms of the order in which the operations should be performed in content analysis. Content analysis stages are as follows; writing the interview data and obtaining the raw data, coding the data,

categorizing the codes by finding common aspects, finding themes, organizing the data according to codes and themes, interpreting the findings. The themes determined before the descriptive analysis process carried out in the research, "problems experienced in the preschool education process", "differentiation status of the problems experienced in the preschool education process according to the gender variable", "change of the problems experienced in the preschool education process according to the years", "the problems experienced in the preschool education process". the differentiation status of the problems according to the school type variable". The theme revealed by the content analysis is "the sources of the problems experienced in the preschool education process" and its sub-themes are "students' parents", "intensive use of technology", "teacher quality", "educational environments", "quality of the education program", "student characteristics", "changing daily life habits", "other sources of problems".

CREDIBILITY IN RESEARCH

Credibility in qualitative research; it is reached by explaining the dimensions of reliability, transferability, consistency and confirmability. (Başkale, 2016). In this study, expert review, diversity in data collection methods and participant confirmation were used for the reliability dimension. Detailed descriptions were made for the transferability dimension, criterion sampling and maximum variation sampling methods were used and direct quotations were included. Consistency analysis was carried out for the dimension of consistency and finally, reduction of researcher biases and confirmation/reflection examination was applied for the confirmability dimension.

FINDINGS/RESULTS

FINDINGS REGARDING THE PROBLEMS EXPERIENCED IN THE PRESCHOOL EDUCATION PROCESS

FINDINGS REGARDING THE PROBLEMS STUDENTS EXPERIENCE IN CONCENTRATING AND MAINTAINING ATTENTION

All of the nineteen (19) participating preschool teachers think that they have problems in concentrating and maintaining their students' attention during the education process. As for the prevalence of the issues in concentrating and maintaining attention, 15 of the teachers stated that they observed such difficulties in all of their students, and four (4) teachers stated that they observed such problems quite clearly and frequently only in some of their students. Within the scope of the first research question, in order to provide explanatory clarity, the teachers were asked "*Can you give examples of the problems you observed in your students in concentrating and maintaining attention?*" The question was asked and the teachers were asked to explain the situations that attracted their attention regarding this problem by exemplifying.

Teacher Büşra stated her observations about the distraction problem of the students with the following sentences:

One of the things I have observed most recently in children is that they get distracted a lot, and I find this very strange. Some children have trouble following commands. That is, the child does not receive instructions, does not listen. I explain over and over; "We will do it like this, it will be like this." shaped. Obviously, children deal with much more animated and colorful images on the tablets they use, and many things are no longer sufficient for them in the education process. The activities in the classroom may not attract their attention, as there are very colorful and moving things on the screens.

Teacher Defne stated that her students, like teacher Büşra, have a distracted attitude when it comes to concentrating and maintaining attention, and therefore, they have problems in getting and applying instructions by concentrating their attention during the education process:

I observe that some of my students in my class have obvious distraction problems. I say that; I say you can take your pencil cases, you can buy desk A and desk B. But while some take the instruction and go and get it right away, some do not seem to hear me. There are times when we experience this over and over, and frankly, my students who have such problems are children who do not spend much time at home with their parents, whose parents work very hard, and students who spend a lot of time with computers and tablets.

In the research, within the scope of the first research question, “*What would you like to say about the frequency of your students encountering problems in concentrating and maintaining their attention?*” The answers given by the teachers to the question are presented below. More than half of the teachers (10 teachers) state that such problems are experienced “*every day*” during the education process regarding the frequency of their students having problems in concentrating and maintaining their attention in classroom activities. This view is followed by the “*several times a week*” assessment by 7 teachers. There is one teacher who stated that he observed problems with his students “*sometimes*” in concentrating and maintaining attention, and there was one teacher who stated that he observed problems “*rarely*”.

FINDINGS REGARDING THE PROBLEMS STUDENTS EXPERIENCE IN MOTIVATION TO LEARN AND MAINTAINING MOTIVATION

In the study, sixteen teachers were of the opinion that some of their students had problems in motivating and maintaining learning during the education process. Three teachers think that their students do not have any problems in this regard.

The views of teacher Elif, who mentioned the lack of intrinsic motivation in her students, are as follows:

If I divide the class into two, there are those who can start a job with self-motivation at first, but there are also those who are not motivated at all. I feel that they have always been brought up with the reward-punishment method. They expect: “Here's what you get in return if you do this”. They are so accustomed to this that I honestly do not see the inner motivation I expect in my students.

Teacher Kübra explained that she could not get feedback from her students in activities that required them to focus and motivate as follows:

For example, we just did an experiment, the experiment was according to the level of the children, so it was not an activity that they would have difficulty in perceiving. But when I received the feedback, when I asked why this object sinks, why this object does not sink, I got feedback from 4-5 of my 22 students. But I get few feedbacks from children in activities that require attention and motivation. I can say that I can't get any at many events. In other words, I cannot get concrete feedback in seventy percent of the activities that require cognitive skills.

In the research, it is seen from the opinions of the teachers that their students encounter problems with varying frequency in terms of motivation to learn and maintaining motivation during the education process. In this context, six (6) participating teachers state that their students encounter such problems “*every day*”. While four (4) teachers evaluated that their students encountered problems in this regard “*several times a week*”; three (3) teachers reported that they encounter such problems “*sometimes*”. While two (2) teachers stated that they “*rarely*” encounter problems in their students' motivation to learn and maintaining motivation; one (1) teacher stated that he observed problems with his students in this regard “*with a decreasing frequency since the beginning of the semester*”. The number of teachers who think that they do not encounter problems in motivation to learn and maintaining motivation in their students during the education process is also three.

FINDINGS CONCERNING THE PROBLEMS STUDENTS EXPERIENCE IN FULFILLING THEIR DUTIES AND RESPONSIBILITIES

Fifteen (15) teachers stated that they observed such problems in all of their students, and two (2) teachers in some of their students regarding the problems they experienced in fulfilling the duties and responsibilities assigned to them during the education process. The number of teachers who stated that their students did not experience any problems in this regard is two. Teacher Sevda shared that a student of hers expects help from other friends during the activity and does not want to do even simple tasks that she can do without help by making it a habit in her comments below:

I would like to give an example of one of my students. Since all the work of my student is done by others, namely a mother, father or family member, he expects everything from me and his friends in the classroom. For example, he doesn't even pick up his pencil that fell on the floor in the classroom. If he was able to complete the event, he could not even collect his paints, he expects it from me or his friends. Montu does not want to bring them in his bag and sees these things as a burden. Because someone did it instead, my student could not develop a sense of duty and responsibility even in very simple matters.

Teacher Aylin referred to this situation she observed in her students with the following sentences; *"...But when I think about it in general, I observe that these children are children who are raised by their grandparents and play tablets, that is, children who enjoy their seats and are not given any responsibility at home, and they try to maintain these habits in the classroom."* In these statements, Aylin refers to the effect of people who take care of children after school and the impact of technology use on preschool students. From these views, it can be said that the school environment is not independent of the home environment and the experiences in the home environment. When the frequency of the participant preschool teachers' encountering problems with their students' behaviors in fulfilling the duties and responsibilities assigned to them is examined, it is seen that six (6) teachers stated that they "sometimes" faced such problems during the education process. This evaluation is followed by four (4) teachers' "increasing frequency from the beginning of the semester" and three (3) teachers' "rarely" evaluations. Two teachers stated that their students faced problems "every day" in fulfilling their assigned duties and responsibilities; two teachers stated that they encounter problems in this regard "several times a week". On the other hand, two teachers stated that their students did not have any problems in this regard. It can be said that the participant teachers observed that their students had problems in this area, although not often.

FINDINGS REGARDING THE PROBLEMS STUDENTS EXPERIENCE IN EXHIBITING BEHAVIORS IN ACCORDANCE WITH CLASSROOM RULES

Almost all of the preschool teachers' (18 teachers) who were interviewed in the study thought that their students commonly had problems in exhibiting behaviors in accordance with the rules in the classroom. Teacher İpek, on the other hand, stated that her students did not experience any problems in this regard. In the research, in the opinions of the participating teachers about the behavior of the students in accordance with the classroom rules; the digital game they play, the video they watch etc. It is seen that they mentioned that they were under the influence of the contents and could not throw their energy away, showed resistance when warned to behave in accordance with the in-class rules, and obeyed the rules when there was adult supervision. Betül teacher made the following statements regarding a student who showed violent behavior towards her friends in the educational environment:

I have a student who is exposed to violence at home and of course he reflects this to his friends, he has behaviors such as hitting and pushing. Another problem I saw very recently was that a child who came to school after a fight with his mother, opened the door of the classroom and acted like running out. Children certainly reflect their experiences outside to the classroom.

It is seen that the most repeated opinion about the frequency of students encountering problems in terms of exhibiting behaviors in accordance with the rules in the classroom by the participating teachers is "*rarely*" (4 teachers). This view is followed by the "*every day*" opinion expressed by three (3) teachers and the "*decreasing frequency*" opinions expressed by three (3) teachers. Three (3) teachers also suggested that they observed problems "*two or three times a week*" regarding their students' behavior in accordance with the classroom rules. The frequency of encountering this problem in their students by two teachers was "*once a week*"; two (2) teachers gave the answer "*often*". While one teacher reported that she "*sometimes*" encountered problems with her students, one (1) teacher stated that her students did not experience any problems in this regard.

FINDINGS REGARDING THE PROBLEMS STUDENTS EXPERIENCE IN CLASSROOM COMMUNICATION SKILLS

In the study, sixteen (16) teachers stated that their students had problems with in-class communication skills during the education process, and three (3) teachers stated that their students did not have any problems in this regard.

In the opinions of the teachers; It is seen that they mentioned that their students have problems with the development of language and speaking skills, groupings in the classroom and peer bullying, the effect of parents' attitudes on their children's communication skills, the students' inability to establish the right communication channels in the classroom environment, the students' self-confidence problems and the problems they experience in classroom communication skills. Kübra teacher referred to the articulation problem that she observed in her students and that she thought had a negative impact on their classroom communication skills in the following comments:

In the first years of my career, one or at most two of my students would have articulation problems, the guidance teachers would take care of it, or I would direct them to other places depending on the level of my student's problem. Let me speak for my current class these last years, at least six of my students are having this problem. My student, who has articulation problems, does not want to communicate with his friends and me. He is aware that he cannot say some things, and he is closed in what he cannot say, he prefers to remain silent. I have this problem the most when it comes to communication skills.

Teacher Eda touched upon the problems that arise regarding the communication skills of her students during the education process with the examples presented below:

In the classroom, children say the words they heard from their parents at home to their friends. Last time we had this, the father of the child at home said, "Get out, go!" "Get out! Go away!" he began to tell his friends. When she later met with the school psychologist, she said, "My father calls me that too." said my student. I had another student. He also had a biting problem. And in fact, they loved the child at home by biting grandparents. The child accepts this as an act of love and bites his classmates. Especially in this communication, it becomes clear how role models shape children.

When the teachers' opinions about the frequency of their students having problems in classroom communication skills are examined, six (6) teachers express their opinion "*every day*". It is seen that this view is followed by the view of "*with decreasing frequency from the beginning of the semester*" by five (5) teachers, and this view is followed by the view of "*sometimes*" expressed by three (3) teachers. In the study, one (1) teacher evaluated that his students "*frequently*" encountered problems in classroom communication skills; one (1) teacher also stated that his students "*rarely*" faced problems in this regard. In the study, all three (3) teachers stated that their students did not encounter any problems in this regard.

In the demographic information collection form, the next question is “How often do you think your child has problems in communicating with his/her friends?” The question was asked, and it was aimed to get information about how often their children had problems in the communication they established when they came together with their friends outside of school. When the answers from 272 participating parents to this question are examined; It is understood that 49% (135 parents) think that their children rarely have problems in the communication they establish when they come together with their friends outside of school, while 29% (78 parents) think that they have problems from time to time. While 19% of the parents (51 parents) think that their children never have a problem when they get together with their friends; 3% (8 parents) stated that they had communication problems very frequently. It is understood that almost half of the parents think that their children rarely have problems with their friends, and quite a few think that their children have communication problems with their friends very often. When the findings obtained from the participating teachers within the scope of the fifth research question are evaluated as a whole, it is understood that sixteen of the nineteen (19) preschool teachers think that their students have problems in their classroom communication skills. On the other hand, when the data coming from the parent information collection form are taken into account in order to reach a holistic evaluation, it is seen that the parents do not agree with the teachers about the communication problems of their children with their friends. This finding can be explained as follows; Only 1% of children see their friends every day, and almost half only see them on weekends. Based on this information, it can be said that the time a parent can observe their child with their friends is more limited than a teacher who can observe in the classroom every day. Therefore, it is normal for teachers and parents to have different opinions.

FINDINGS CONCERNING THE PROBLEMS STUDENTS EXPERIENCE IN COLLABORATION AND HELPING SKILLS WITH THEIR PEERS

In the study, sixteen (16) teachers stated that their students had problems in cooperation and cooperation skills with their peers; three (3) teachers are of the opinion that their students do not have any problems in this regard.

In the opinions of the teachers; It is stated that students do not cooperate with their peers when they do not have control over their cooperation and cooperation skills, some students make it a habit to have their other friends do their activities under the name of cooperation, students' game time, activity time, etc. It is seen that they mentioned that they had problems in cooperation and cooperation during their education. On the other hand, some teachers also mentioned that inclusive students in their classrooms positively affect the cooperation and cooperation environment in the classroom. Büşra teacher stated in the following comments that she observed that some of her students were sensitive about helping each other, while others only showed cooperation in supervised situations:

Cooperation and cooperation are very important in this age group and its foundation is laid here. I want my students to communicate with each other and cooperate with each other during the activity hours, and I try to catch this. But they don't cooperate, they don't help each other in my free time, over which I have no control.

In the research, some of the participating teachers stated in their opinions that since their students are very open to helping each other, but some of their students who do not want to do their activities, make other students who like to cooperate do some of their activities first, and then all of them in the following days, and they make this behavior a habit over time. Regarding the frequency of students encountering problems in cooperation and cooperation skills with their peers; it is seen that six (6) teachers "*rarely*" encounter problems with their students, followed by the "*several times a week*" opinion expressed by four (4) teachers. In the study, three (3) teachers made evaluations that they observed problems in their students "*sometimes*"; It is understood that three (3) teachers made evaluations that they did not encounter problems

with their students in this regard. On the other hand, it is understood that only Sultan teacher is of the opinion that his students face problems "every day" in cooperation and cooperation skills with his peers. In the study, it is understood that teachers encounter problems with their students less frequently in terms of cooperation and cooperation skills in the education process, when compared to the problems to be answered by other research questions.

CHANGE OF PROBLEMS EXPERIENCED IN PRESCHOOL EDUCATION PROCESS BY GENDER, YEARS AND SCHOOL TYPE

In the semi-structured interviews about the differentiation status of the problems experienced in the preschool education process according to the gender variable, the answer of which was sought within the scope of the seventh research question in the study, the participant teachers were asked, "Do you think that there is a differentiation according to the gender of the students regarding the problems experienced in the education process?" the question was asked, and answers were received from all of the participating teachers. Thus, the second theme of the research, "The differentiation status of the problems experienced in the preschool education process according to the gender variable" has been reached. In the research, it is understood that the majority of the participating teachers (14 teachers) think that the problems they observe in their students differ according to the gender variable. In the study, five (5) teachers thought that both female and male students had the same problems and stated that they did not observe any differentiation according to the gender variable in the problems experienced. Sevdâ, Sultan, Betül, Defne, Ebru and Canan teachers are related to the problem areas that are tried to be answered with the first six research questions; stated that male students have problems in different fields and female students in different fields.

In the semi-structured interviews about the change (increase-decrease) of the problems experienced in the preschool education process, the answer of which was sought in the research, the participant teachers were asked, "*When you consider your professional experience, do you think that there is a significant increase or decrease in the problems experienced over the years?*" The question was asked and answers were received from all the participating teachers about the subject. With the analysis of the raw data obtained as a result of the interviews, the third theme of the research, "Change of the problems experienced in the preschool education process according to the years" was reached. When the majority of the participating preschool teachers' (17 teachers) evaluated the problems they observed during the education process according to the years, it was seen that they thought that there was an increase in the problems. On the other hand, two teachers stated that there was a decrease in the problems experienced in the education process compared to the previous years.

In the ninth research question of the study, it was tried to reveal whether the evaluations of the participating preschool teachers' about the problems experienced differ according to the school type variable. In this context, with the analysis of the data obtained as a result of the semi-structured interviews with the teachers, the fourth theme of the research, "The differentiation status of the problems experienced in the preschool education process according to the school type variable" was reached. When all the findings reached under the theme of differentiation status according to the school type variable of the problems experienced in the preschool education process are evaluated; it is seen that there is no differentiation according to the school type variable in the problems of concentrating and maintaining the attention of the students during the education process and the problems in fulfilling the assigned duties and responsibilities. In the problems experienced in terms of motivation to learn and maintaining motivation, behavior in accordance with the rules in the classroom, in-class communication skills and cooperation and cooperation skills with peers, differentiation according to the school type variable arises and students who continue their preschool education in public schools are more likely to attend preschool education in private schools. It is understood that they have more problems than the students who continue their education.

FINDINGS REGARDING THE SOURCES OF THE PROBLEMS EXPERIENCED IN THE PRESCHOOL EDUCATION PROCESS

In the research, with the eighth research question, it was tried to reveal the opinions of preschool teachers' about the sources that are effective in the formation of the problems experienced in the education process. With the analysis of the qualitative data obtained from the interviews, the fifth theme of the research, "The sources of the problems experienced in the preschool education process", was reached.

STUDENT PARENTS

In the research, the preschool teachers were asked, "What do you think are the possible causes or sources of the main problems experienced in the education process and discussed above?" When the question was asked, eighteen (18) teachers answered that the first source of the problems experienced during the preschool education process is "student parents". In Table 1, the codes and frequencies related to the category of "student parents" as one of the sources of the problems experienced in the education process are presented.

Table 1. Codes and frequencies related to the category of "student parents" as one of the sources of the problems experienced in the education process

Category	Sub Category	Codes	Teachers	f
Student parents	Parent attitudes	Indifference of parents	Aysun, Bahar, Büşra, Çiğdem, Defne, Ebru, Elif, İpek, İsa, Kübra, Sevd	11
		Parents' failure to set rules in the home environment	Aysun, Betül, Eda, Elif, İsa	5
		Parents being negative role models for their children	Büşra, Defne, İpek, Yağmur	4
		Parents do everything for their children	Aylin, Çiğdem, Elif, Kübra	4
		Allowing parents to do whatever their children want.	Aysun, Canan, Ebru, Kübra	4
		Parents tagging their children	Aylin, Büşra	2
		Violence in the family environment	İpek, Yağmur	2
	Parent characteristics	Changing parent profile	Aylin, Aysun, Betül, Büşra, Ebru, Elif, Mesude, Sultan, Yağmur	9
	Demographic features	Divorced parents	Canan, Çiğdem, Halil, İpek	4
		Being an only child in the family	Defne	1
		Change in family structure	Halil	1
		Education level of parents	Çiğdem	1

Participating teachers, who think that the main source of the problems is primarily "student parents", stated that the parents' indifference is directly reflected in the school. Ebru teacher stated that she thinks that *"The behaviors such as irritability and jealousy that she observed in her students and that cause in-class communication problems arise as a result of the parents' indifference: They have communication problems with their friends."*

In the demographic information collection form in the research, "Do you and your spouse regularly spare time for your child outside of school and working hours?" The question was directed to the parents. This question was answered by 272 parents. Of the parents, 209 (77%) answered yes, 61 (22%) answered partially, and 2 parents (1%) answered no. It is understood from the answers of the parents that they think that they spend time with their children regularly. In addition, the form asked parents, "Do you think that the time you and your spouse spend with your child is enough?" The question was also asked. To this question, 102 parents (40%) answered that the time they allotted to their children was sufficient, 117 parents (41%) answered

that the time they allotted to their children was partially sufficient, and 53 parents (19%) answered that they did not spare enough time for their children. Most of the parents think that the time they spend with their children is “partially sufficient”. Participating teachers also stated in their opinions that parents do not spend enough time with their children, therefore they experience problems in the education process of their children. In this context, the opinions of the teachers and the answers from the parents who filled out the form are consistent.

Regarding the code of “parents being negative role models for their children”, which is one of the codes that make up the “parent attitudes” sub-category, some teachers emphasized that their parents are negative role models for their students. In this context, Büşra teacher, parents' phone, etc. He explained that they are negative role models for his children in the use of digital tools with the following words:

I don't know what Mom's, I don't know what Instagram phenomenon moms. Mothers who make their child cry to take a video of their child and share it on Instagram. Let me take a picture of you, let me take another picture, stand straight, turn right, turn left. Children grow up in such an atmosphere. In our classroom pretend play, yes, children now make phone calls rather than picking up a lego and building a car. They take pictures of each other. As educators, we try to do our best, in this sense, we make an effort as a school. But we are clearly falling short.

When the above view is examined, it is understood that children who observe their mothers' behaviors in the home environment take their mothers as models and exhibit some of their behaviors in the educational environment.

In the research on the code of “parents do everything for their children”, which provides access to the “parent attitudes” sub-category as the source of the problems, some teachers emphasized that their parents are in the attitude of doing everything for their students and that by acting in this way, the parents are effective in the students' experiencing problems. Çiğdem teacher says that her students have problems in the development of various skills, especially self-care and self-efficacy skills, because their parents, who have an overprotective attitude by doing everything for their child, do not give their children the opportunity to develop their skills. *“She can put her bag and water bottle in her locker. But they can't. The children are coming, everything is ready, their mothers have done everything for them so much that they are standing in front of their children, there are serious problems in the development of skills in children.”* expressed as.

Children who experience negative behaviors such as violence, conflict, argument, etc. in the family environment also exhibit similar behaviors in the educational environment. Teacher İpek said, *“What my students are exposed to at home, they do the same in the classroom. They see violence and they use violence.”* expressed his views.

In relation to the “changing parent profile” code, which constitutes the “parent characteristics” sub-category of the “student parents” category, as the source of the problems in the research, the teachers stated that there are some changes in the parent profile each year based on the behaviors exhibited by the parents. Elif teacher mentioned this change in parents and said that this change is natural in the current environment, but it also causes problems, *“The generation has changed, the profile of the parents has changed. These changes caused some problems in children. I think it triggered the problems.”* emphasized by his words.

TECHNOLOGY USAGE HABITS IN PRESCHOOL PERIOD

In the study, seventeen (17) teachers stated that one of the sources of the problems experienced by their students during the education process is “the students' intensive use of technology”. While some of the participating teachers mentioned that all their students have tablets, some teachers also mentioned that most of their students have their own tablets. In the research, it is understood from the information given by the parents in the form that most of the children have

a tablet computer. Only 58 of the 272 parents' children do not have a tablet. In other words, 79% of children have a tablet.

Participating teachers emphasized that their students use technological tools uncontrollably in terms of usage time and purpose of use. At the same time, they explained their views on how this uncontrolled use of technology caused the problems they observed in their students during the education process. In Table 2, the codes and the frequencies of these codes are seen based on the teachers' opinions who think that one of the sources of the problems is the intensive use of technology by children.

Table 2. Codes and frequencies related to the category of “intensive use of technology” as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Intensive use of technology	Uncontrolled use of technological tools by children	Aylin, Aysun, Betül, Büşra, Çiğdem, Ebru, Eda, Elif, Defne, Halil, İsa, Kübra, Mesude, Sultan, Yağmur	17
	Exposure of children to content inappropriate for their age	Büşra, Çiğdem, Defne Halil, Yağmur	5

When Table 2 is examined, the most repeated opinion by the teachers about the intensive use of technology by their students is that their students use technological tools such as phones, tablets and computers for long hours without being controlled by their parents. These views put forward by the teachers led to the code of “children's uncontrolled use of technological tools”. On the subject, teacher Büşra said, *“As I said, long-term use of phones, tablets and televisions causes problems in the process, and all of my students have tablets.”* expressed his opinion. Betül teacher evaluated the problem of distraction as a characteristic of today's children, with the sentence *“Generally, the children of this period have a very scattered, fast-ending attention span” about concentrating and maintaining their students' attention during the education process. It is a situation related to long-term use of tools.”* explained as. İsa explained how the uncontrolled use of technology by his students on the educational process was as follows:

...There are some of my students who have problems. The zombie-like one... Why does this occur? Of course, from the computer games he plays. Kids want to be YouTubers now. They used to want to be teachers, doctors. Since children's lives always continue on the internet, they continue their lives with tablets and confuse real life with virtual. I have three or four such students. They are very distracted and have motivation problems.

From the views of İsa teacher; It is understood that he thinks that the uncontrolled use of technology causes his students to have problems in motivating and maintaining learning, providing concentration in the learning process and listening skills, which is a part of the communication issue, at the same time, he observed that his students are unresponsive in the activities carried out during the education process, have cognitive problems, and confuse the real and the virtual. . In the parent demographic information collection form, which is another data source in the research, it was also aimed to obtain information from the parents about how long they have been using the technological tools used by their children at home, and the parents were asked *“What does your child estimate about the technological tools such as tablet, smart wristwatch, smart mobile phone, computer?” How long has he been using it?”* A question was asked and they were asked to answer it. When the data obtained from the answers of the parents about how long their children use technological tools; 97 parents for two years (36%), 69 parents for one year (25%), 65 parents for three years (22%), 26 parents for less than one year (10%) and 20 parents for four years or more (7%). Stated that their children have been using various technological tools for a while. The research includes preschool level, 5-year-old students. According to the information given by their parents, more than one third of the

children have been using tablets, phones, etc. for 2 years uses technological tools. In this case, it turns out that children have been using these digital tools since the age of 3.

“How many days a week does your child regularly use technological tools?” question was posed. According to the answers from the parents, the technological tools; 129 children every day of the week (47%), 44 children twice a week (16%), 36 children three days a week (13%), 27 children once a week (10%), 18 children four days a week (7%), 18 children use it regularly, five days a week (7%). When the answers from the parents are examined; almost half of the children (47%) have a tablet, phone, computer, etc. at home. It is seen that they use technological tools regularly every day. Ask the parents, *“How much time does your child spend with technological tools on average per day?”* The question was also posed. With this question, the data on how long the children spend with technological tools on average after school were obtained. When these data are examined; 45% of the children (122 children) regularly spend an average of 1-2 hours per day with technological devices, 37.5% of the children spend less than 1 hour on average per day 14% of the children spend an average of 2-3 hours a day. It is seen that 3.5% of them spend more than 3 hours a day with technological tools on average. In the research, along with the data obtained on the duration and frequency of use of technological tools by the students, data on the purposes of use were also obtained. In this context, in the information collection form, the parents were asked *“For what purposes does your child use technological tools the most?”* question has been asked. Considering the children's use of technological tools; firstly for watching cartoons (163 children), secondly for playing games (155 children), thirdly for watching videos (127 children), fourthly for learning new things (127 children), fifthly (for 43 children) use technological tools for listening to music and finally 10 children for communicating with their friends. It is seen that the teachers' opinions and the parents' answers in the form regarding the duration and purpose of using technological tools of their children are in parallel.

In the parent demographic information collection form, *“Do you think that using technological tools has negative effects on your child's behavior?”* The question was also posed. 245 parents answered this question asked in the parent demographic information collection form. In the parent demographic information collection form, parents who answered "yes" or "partially" to this question were asked to list the three negative effects they observed in their children's behaviors as a result of their use of technological tools in the next question in the form. 27 parents, who thought that they did not observe any negativity in their children as a result of their use of technology, did not answer this question. On the other hand, some parents noted that they observed less than three negative effects and wrote one or two negative effects. It is understood that 90% of the participating parents (221 parents) think that their children are adversely affected by the use of technology.

Due to the use of technological tools, it is seen that parents observe the most aggressive behaviors in their children, followed by the problem of attention deficit. Then, it was stated by the parents that problems such as communication problems, deterioration of eye health, irritability, asocial behaviors, slang words, sleep disturbance, fear and addiction emerged. Teachers, students' problematic technology use in the educational process; they emphasized that it is reflected in the form of problems in various subjects, especially problems in concentrating and maintaining attention, problems in motivation to learn and maintain motivation, and problems in classroom communication skills. In this framework, it is seen that the negative effects listed by the teachers and the parents on the problems experienced by the students in the education process as a result of their problematic use of technological tools are in the same direction.

TEACHER QUALIFICATION

Eight of the nineteen (19) teachers participating in the study mentioned the qualifications of teachers as another source of problems experienced in the education process. In this context,

Table 3 shows the "teacher quality" category as the third of the sources of the problems, the codes that enable this category to be reached, the teachers who gave their opinions that enable these codes to be reached, and the frequencies of the codes presented.

Table 3. Codes and frequencies related to the category of "teacher quality" as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Teacher qualification	Attitudes of teachers towards the teaching profession	Bahar, Ebru, İsa	3
	Teachers' failure to take steps towards solutions in the face of problems	Sevda, Yağmur	2
	Teachers not updating themselves	Aysun, İsa	2
	Teachers' failure to prepare their education plans carefully and carefully	İpek, Yağmur	2
	Teachers' reflection of their stress levels to the class	Elif	1
	Teachers not being creative	İpek	1

As stated in Table 3, the code of "teachers' attitude towards the teaching profession" was first obtained from the opinions expressed by the teachers in the study. In this regard, the teacher İsa said, *"You know, it starts with loving what you do. Otherwise, the teacher may also be a source of problems."*

In the research, participating teachers stated in their opinions that some teachers do not want to take steps to solve the problems of their students who have problems in their classrooms, and that some teachers cannot find support from their environment even though they are trying to find a solution. From these views put forward by the participating teachers in the interviews, the code of "teachers not taking steps towards solutions in the face of problems" was reached. For example, Yağmur teacher explained her views on the subject by giving an example of a student who showed bullying in her class and an incident with her family as follows:

My student knocks and hits everyone in the class, he has a violence problem. The child has behavioral problems. I talked to the parent, I talked to the school principal. He told me: "This kid will fail this class." He said let him beat, let him hit. How can you say that, I said in my class, no child can hit another. Could we solve it? Yes, we could, but I needed to learn how to treat this kid. I said that an expert should give me an opinion, a specialist should be visited, it was a crime. They said that the teacher's classroom management is not good, the parents said that there was no such problem for a period of time, has this problem recurred now?

Teacher Aysun and teacher İsa shared an opinion on the "teachers not updating themselves" code, which is one of the codes that enables the "teacher quality" category to be reached in the research. Aysun teacher said;

In preschool education, we pretend to be in the classrooms. So now there are stereotypes. Teachers also need to be able to break their shell and follow current developments. One of my professors in college used to say, 'Don't make ducks that always face the same direction.

In the research, teacher İpek and teacher Yağmur shared an opinion on the code of "teachers not preparing their education plans carefully and diligently", which is one of the codes that allows to reach the category of "teacher quality". Yağmur teacher expressed her opinion on the duties of a preschool teacher in the education process, and expressed that she thinks that teachers should be careful while preparing the daily education flow and enrich the education flow with the following sentences: *"Today's children are always in search of different things. I think it would just be a waste of time and cause problems to come and send the kids to play with a toy or two. It is our job to carefully prepare and enrich daily plans, and I think we will achieve good results as we enrich them"*.

THE NATURE OF EDUCATIONAL ENVIRONMENTS

In the study, Aylin, Aysun, Çiğdem, Halil, İsa and Sevda stated in their opinions that the teacher education environment can also be a source for the problems experienced by the students in the education process. The codes that enable access to the "educational environments" category from the opinions of the participant teachers, the teachers who reported the opinions that enable these codes to be reached, and the frequencies of the codes presented are shown in Table 4.

Table 4. Codes and frequencies related to the category of "educational environments" as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Educational environments	Physical inadequacies in preschool education environments	Aysun, Çiğdem, Halil, İsa	4
	Too many class sizes	Aylin, Sevda	2
	Failure to achieve standardization in preschool education environments	Aylin	1

In the study, teachers Aysun, Çiğdem, Halil and İsa shared their views on the code of "physical inadequacies in preschool education environments", which enables access to the category of "educational environments". In this context, teacher Halil explained his thoughts as follows by mentioning that his students, who spend time in closed areas at school, experience problems in the education process:

They are constantly on the move. I attribute this to: Children are within the four walls at home, and here they are within the four walls. This situation is against the nature of children. We don't have enough playgrounds at our school where they can get rid of their energy or get motivated again. We don't have a garden, we don't have a natural place. Why are there problems? Because children are always within 20 square meters.

Teacher Sevda shared an opinion on the code of "unable to achieve standardization in preschool education environments, " which provides access to the "educational environments" category. Sevda teacher stated that she had problems due to both the large number of students and the small class size.

THE NATURE OF THE PRESCHOOL EDUCATION PROGRAM

In the study Aysun, İpek, İsa and Yağmur teachers stated that the preschool education program can also be a source for the problems experienced in the education process. The "quality of the education program" category, which is the fifth of the sources of the problems experienced in the pre-school education process, the codes and frequencies that enable this category to be reached, and the teachers who expressed their opinions on this subject are presented in Table 5.

Table 5. Codes and frequencies related to the category of "quality of the education program" as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Education program nature	Preschool education program is simple for today's children	Aysun, İpek, Yağmur	3
	Not including activities and techniques that increase students' creativity skills in the preschool education program.	İsa	1

In the research, Aysun, İpek and Yağmur teachers shared their views on the code of "preschool education program being simple for today's children", which is one of the codes that enables the category of "quality of the education program" to be reached. In this context, Yağmur teacher explained her opinion with the following sentences: *"I can talk about our program as a source for motivation problems experienced in the classroom. The program sounds simple to children. Like I said, because these kids are on different quests."*

Teacher İsa, on the other hand, stated that he thinks that the inclusion of art activities, worksheets, and magazine activities that take a long time and do not develop children's

creativity skills in the daily education flows prepared based on the preschool education program are effective in children having problems in motivating them to learn.

STUDENT CHARACTERISTICS

From the statements of the teachers, the category of "student characteristics" was reached as the sixth of the sources of the problems experienced in the preschool education process. The codes that enabled this category to be reached in the research and the teachers who gave their opinions on these codes and the frequencies of the codes are presented in Table 6.

Table 6. Codes and frequencies related to the category of "student characteristics" as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Student characteristics	Personality traits of students	Aylin, Sevda	2
	Emotional needs of students	Kübra	1

On the subject, teacher Sevda said, *"Some children have a perfect family, they do not have problematic technology use, but there are also student personality traits here. For example, my student's being very active, unable to focus, having problems communicating with his friends... This can sometimes be related to the personality of the child."* expressed an opinion. In her views, Sevda teacher emphasizes that the personality traits of her students can be effective in the process of communicating with her friends.

Kübra teacher stated that her students are tired of the intensity of the schools and courses they start at a young age, and that they think that not meeting their emotional needs, which occurs when they stay away from the family environment they need, can be a source of problems.

CHANGING DAILY LIVING HABITS

In the study, Aylin, Betül and Ebru teachers stated that some of the changing life habits of their students may also be a source of problems experienced in the education process. From these statements of the teachers, the category of "changing daily life habits" was reached. The codes and frequencies that enable this category to be reached in the research are presented in Table 7.

Table 7. Codes and frequencies related to the category of "changing daily life habits" as one of the sources of the problems experienced in the education process

Category	Codes	Teachers	f
Changing daily living habits	Changing eating habits	Aylin, Betül	2
	Changing entertainment habits	Ebru	1

In her comments, Aylin teacher mentioned that today's children's eating habits cause developmental problems and mentioned the effect of this situation on the problems experienced by her students in the education process:

Now, what our children eat and drink can be the source of these problems. In other words, it can be caused by the student, they used to eat healthier things, now they eat more artificial things, we do the same, and now there is a difference in the child's development already, there is a difference in his hormonal development, these are things that come from within the child, and I cannot do anything. things. Hyperactivity is on the rise. Hyperactivity in the classroom, which leads to behavioral problems.

OTHER SOURCES OF TROUBLE

As a result of the content analysis made in the research, it was found appropriate to present the problem sources that were expressed once or twice by the teachers and that could not be presented under the categories reached before in the research, under the category of "other problem sources". The codes belonging to this category, the teachers who provided the opinions providing access to the codes and the frequencies of these codes are presented in Table 8 in detail.

Table 8. The codes and frequencies of the problems experienced in the education process related to the category of "other sources of problems"

Category	Codes	Teachers	f
Other sources of trouble	Gender confusion	Canan, Yağmur	2
	Keeping children away from nature and animals	Halil	1
	Homeworks	Büşra	1
	Environment of the school	Çiğdem	1
	Inconsistencies in preschool education policies	Betül	1

While Canan and Yağmur stated that they observed behaviors that they describe as "masculine" in female students in their teachers' opinions; Teacher Halil, on the other hand, gave views on the code of "children should be away from nature and animals" and mentioned that the relationship between child and nature has reached the breaking point today. While Büşra teacher mentioned that homework given by pages is effective in students' having problems; Teacher Çiğdem also stated that the environment where the school is located is an effective variable on the behavior of children: *"My first place of duty was in Kütahya and my school was in the back neighborhoods. The children were more selfish there and had problems communicating and cooperating with their friends."* explained with sentences.

Betül teacher expressed an opinion on the code of "inconsistencies in preschool education policies" reached under the category of "other sources of problems" in semi-structured interviews. Betül teacher stated that the Ministry of National Education was not consistent in the high decisions they took on preschool education, which caused the parents to perceive the preschool education process as an *"insignificant education process"*.

DISCUSSION AND CONCLUSION

With this research, it is aimed to reveal the evaluations of preschool teachers' about the problems experienced in the education process and the sources of the problems. According to the findings obtained from the semi-structured interviews with 19 participating preschool teachers, it is understood that the students mostly experience problems in the subject of exhibiting behaviors in accordance with the rules in the classroom, concentrating and maintaining attention during the education process.

In the research, from the statements of a significant part of the teachers who stated that the problems experienced in the education process differ according to the gender variable; it is concluded that female students mostly have problems in classroom communication skills during the education process, and then they have intense problems in motivation to learn and focusing their attention. Lauth (2009) found in their research that male students are prone to externalizing disorders due to their biological structure and genetic equipment, and that they are more prone to problems such as attention deficit, hyperactivity, and non-compliance with rules than female students. On the other hand, they emphasize that female students are prone to experience problems in communication and socialization by generally experiencing anxiety disorders and turning inward. Lauth (2009) research supports the results of the research regarding the problems experienced by male and female students.

In the research, the increase-decrease situation of the problems experienced in the education process was also examined, and it was revealed that almost all of the teachers observed an increase in the problems experienced by the students when they were evaluated according to the years. The very few teachers who think that there is a decrease in the problems experienced have made this evaluation; It is seen that they associate them with the increase in their professional experience and the development of classroom management skills with the passing of time. It was concluded that the teachers thought that there was an increase in the problems they experienced in concentrating and maintaining the attention of the students. On the other hand, it is seen that there is no differentiation according to the type of school (public school-

private school) in the problems that students experience in concentrating and maintaining their attention, and in fulfilling their duties and responsibilities. It has been understood that there is a differentiation situation according to the school type in the problems experienced in the other topics discussed and that the students who continue their preschool education in public schools have more problems.

Within the scope of the eighth research question in the research, it has been tried to answer the problems experienced in the preschool education process, the sources of the problems and how these sources play an effective role in the emergence of the problems experienced. According to the data obtained from the interviews with the participant preschool teachers, the sources of the problems experienced by the students in the preschool education process; students' parents, technology usage habits in preschool period, teacher qualification, quality of educational environment, quality of preschool education program, student characteristics, changing daily life habits and other sources of problems.

The fact that parents do not show sufficient interest and love to their children is reflected by children as incompatible and problematic behaviors in the educational environment. According to the teachers, the problems that some students experience in concentrating and maintaining their attention during the education process arise due to their parents' indifference. When the literature is examined, it is seen that there are studies that reach similar results. In Özyürek and Gürleyik's (2018) studies, it has been determined that although parents are aware of the importance of taking care of their children, they cannot spare enough time to play or take care of their children because they work or give priority to housework when they are at home.

According to the teachers in the research, the uncontrolled use of technological tools by children and their exposure to inappropriate content according to their age; problems in motivating and maintaining learning, problems in concentrating and maintaining attention, problems in classroom communication skills, fear, anxiety and peer bullying. In the research, teachers mentioned that students act impulsively during the education process. While there may be many reasons why students are impulsive, it is seen in the research that teachers refer to their students' uncontrolled use of technology in this regard. In the study, from the analysis of the data obtained from the parent demographic information collection forms; Parents can use tablets, smartphones, etc. after school. As a result of their intense use of technological tools, it is understood that they mostly observe problems in aggressive behaviors, attention deficit and communication skills in children. In support of the results of the research, Kol (2019) also stated in his study that children learn some negative behaviors imposed on them with the elements in the digital media content and reflect them as problem behaviors such as aggression and violence in the school environment. It has been reported in scientific studies that long-term exposure to various digital content such as digital games, cartoons and videos accessed by technological tools negatively affects impulse control mechanisms that provide impulse control in children in the context of environmental factors and causes impulse control disorder (Radesky, Schumacher, & Zuckerman, 2015).

As in all education levels, teachers in preschool education are also at a key point in the formation of the problems experienced by the students in the education process and in revealing the solutions (Sayan-Korkutata, 2020). In the literature, it is seen that there are studies that deal with the effects of teachers on the educational process from different perspectives. Güner-Yıldız and Kurtova (2017), in their research aiming to find solutions to the behavior and learning problems experienced by students who have trouble adapting to school, as a result of the counseling and support they need; They have reached the conclusion that they show behavioral changes that positively affect the classroom order in terms of preventing the problematic behaviors that occur during the education process, giving consistent responses to the problematic behaviors of the students, and making the necessary arrangements in the education environment and education process by considering the individual differences of the students.

Another result of the research is that the preschool education program implemented is not sufficiently understood by the preschool teachers who are the practitioners and therefore cannot be adopted. There are various studies in the literature that touch on this subject. As a result of the research carried out by Köksal, Balaban-Dağal and Duman (2016); While it was determined that the participant teachers positively evaluated the student-centered education idea in the program and the achievement and indicators dimension of the program, it was understood that the teachers needed support in putting the preschool education program into practice.

In the study, it was understood that teachers needed to use different educational materials in order to motivate learning and maintain motivation in educational activities, but there were inadequacies in classrooms in terms of preschool education materials. In the study conducted by Dikici-Sığırtmaç, Hoş, and Abbak (2011), similar results were obtained with the research. It was determined that there was a shortage of materials and that there were problems in the education process due to this situation. Teachers also stated that an update study should be carried out in the preschool education program they implemented, taking into account children's changing developmental characteristics and current needs.

The literature review reflected that studies in which the preschool education program was frequently evaluated by the teachers who used the program, and it was seen that the teachers made similar evaluations in these studies. For example, in their research, Başaran and Ulubey (2018) stated that the achievements that can be achieved in the family environment, such as the basic achievements and self-care skills that are below the development levels of today's preschool children, were removed from the program and replaced with the needs of the age such as values education, human rights, technology use, scientific literacy, and financial literacy.

In the research, it was found that the personality structure of the student can also affect the education process as a source of problems in experiencing problems in the education process, but when the relevant studies in the literature are examined (Şahin, 2013; Şendurur & Barış, 2002; Tuğrul & Duran, 2003), it is seen that the personality development of children is generally affected by the teachers during the education process.. In addition, it has been understood in the research that the changing daily life habits of children are also effective in experiencing problems in the education process. It has been concluded that these sources of problems can be effective in the fact that students experience problems in motivation to learn and maintain motivation more intensely in the education process.

SUGGESTIONS

In the study, it was concluded that preschool teachers' felt inadequate to cope with the problem behaviors encountered in the context of classroom management, in the preparation of the educational plans that were aimed to be implemented in the education process, and that they needed support in terms of professional self-development. Suggestions for practice developed in line with the results of the research are listed below.

- Teachers' ability to develop original educational materials in digital environments can be improved through in-service trainings for preschool teachers.
- Parents fail to establish reasonable and solid rules regarding their children's access to the digital world, and they act compromisingly. It is considered an important necessity to organize online or face-to-face family education programs on the reflection of the said mistakes or violations on the individual development and education process of children.
- Preschool teachers should be supported through in-service training in terms of classroom management skills, especially considering the changing behaviors and habits of today's children. In addition, based on the changing student characteristics, it is essential to make an update study that will meet the requirements in question by evaluating the existing preschool education program.

- Collaboration of teachers with families is very important in identifying and solving problems experienced in the education process. Practical in-service training should be designed and implemented, covering the points that preschool teachers should pay attention to in cooperation with the family and the methods and strategies they should adopt.
- It would be very beneficial to establish a practical digital game rating system that is easier to understand and suitable for the Turkish society.
- Class sizes in preschool education classes should be standardized.
- The reflection of problem behaviors arising from the life habits of today's children to the education process can be examined in detail by selecting different demographic variables.

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RISK TAKING BEHAVIOR AS PREDICTORS OF SELF COMPASSION IN UNIVERSITY STUDENTS

Abstract: The present study was aimed at investigating to what extent self compassion of university students was predicted by their risk taking behavior sub-dimensions. The sample of study included 658 undergraduate students from different faculties of a public university during the 2018-2019 academic year. In order to collect the data in the study, Self Compassion Scale, Risk Behaviors Scale and Personal Information Form are used. Pearson product-moment correlation coefficient and multiple regression analysis were used in the analysis. The results of the study revealed the highest correlation between self compassion scores and suicidal tendency, which is one of the sub-dimensions of risk-taking behavior. In addition, it was found that together with the sub-dimensions of risk taking behavior, it explained 38.2% of the variance in self-compassion scores and It was found that the variable that most predicted self-compassion was suicidal tendency. Findings were discussed and interpreted in the light of literature.

Keywords: Self-compassion, risk taking behavior, suicidal tendency, university students, drug use.

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INTRODUCTION

The individual who starts university goes through a difficult period such as taking various responsibilities and adapting on the way to be an adult. The individual starting university is faced with situations such as a new social environment and negotiating the temptations of a college environment and autonomy (Kamel, 2018). This difficult process can lead individuals to experience negative emotions and situations such as stress, anxiety, and depression (Karahan, Sardoğan, Özkamalı & Dicle, 2005). The decisions made by individuals during the university process and the dynamics of their lives appear as factors that shape their attitudes in adulthood (Şakiroğlu et al, 2017). In this context, university students may tend to have risky behaviors. Self-compassion is thought to be one of the most important personality traits that keep individuals away from risky behaviors (Neff, Rude & Kirkpatrick, 2007). Therefore, studies that examine the self-compassion levels of university students for various variables become more and more important today.

Self-compassion is when an individual feels pain or negative emotions, recognizing and accepting their emotions without judging and one is aware that such negative emotions are common to all people (Neff, 2003). A self-compassionate individual is aware that no one is perfect. In addition, one's gentle and affectionate to oneself, therefore one sees the difficulties they face as a necessity of human nature and it can be said that they cope with these difficulties in a healthy manner (Neff, 2003b). Self-compassion is one of the most important concepts that give an idea about the psychological health of students. As the self-compassion level of individuals increases, it is seen that the levels of depression, anxiety, thought suppression, rumination and self-criticism decrease (Neff, Rude & Kirkpatrick, 2007). Self-compassion is a protective feature that enables individuals to cope against negations and failures (Aktaş, 2017). Mindfulness, one of the sub-dimensions of self-compassion, is also a skill that improves coping with stressful events (Fathalla, 2018).

Risky behaviors are defined as behaviors that directly or indirectly endanger a person's life and that are likely to result in illness, injury and death (Gençtanırım, 2014). Along with the negative risks taken by the young people who have difficulties in adapting to the university period; their mental and physical health and quality of life are negatively affected (Şimşek et. al., 2007). Besides, risk-taking behaviors of university students increase as they start to live separately from their families (Çamur et. al., 2007). Violent tendencies, committing crime, smoking, alcohol, substance use, self harm, early / risky sexual intercourse, harmful eating habits are among the prominent risky behaviors (Ateş & Akbaş, 2012). It is emphasized that university students use more alcohol, drugs and cigarettes than adolescents (Haller, Meynard, Lefebvre, Hasselgård-Rowe, Broers & Narring, 2015).

When the literature was examined, self-compassion stands out as a functional coping mechanism in problematic alcohol use and risk-taking behaviors (Akın & Akın, 2015; Bennett & Goleman, 2001; Garner et. al., 2020; Miron et. al., 2014; Wisener & Khoury, 2020). In addition, studies have shown that self-compassion is negatively related to depression, anxiety, preoccupied attachment, fearful and dismissive attachment styles (Neff & McGehee, 2010), depression (Neff & Faso, 2014), perceived stress (Bluth, Roberson & Gaylord, 2015) and negative affect (Kılcalı, 2015). On the other hand, self-compassion is positively associated with social connectedness and secure attachment style (Neff & McGehee, 2010) include emotional intelligence, self-control (Neff, 2003a), self-esteem (Neff & Faso, 2014), psychological well-being and self-efficacy (Souza & Hutz, 2016).

When the literature was examined, it was seen that the relationship between the concept of self-compassion and many psychological variables was examined. Despite this, there is no study examining the relationship of self-compassion with the sub-dimensions of risk taking behavior. Thus, the aim of the study is to investigate to what extent self compassion of university students

was predicted by their sub-dimensions of risk taking behavior. In this purpose following questions will be answered:

1. Is there a significant relationship between the self-compassion level of university students and the sub-dimensions of risk-taking behaviors (antisocial behaviors, alcohol use, smoking, suicidal tendency, eating habits, school dropout, and substance use)?
2. Do university students' risk-taking behavior sub-dimensions significantly predict their self-compassion levels?

METHOD

PARTICIPANTS

Random cluster sampling method was used within the scope of this research and the study group consists of university students studying in the second and third years of undergraduate level at various faculties of a public university in the fall semester of the 2018-2019 academic year. In the study, which reached 658 participants in total, 454 (69%) of the participants were women and 204 (31%) were men. When analyzed according to grade level, 300 (45.6%) of the students were studying in the second grade and 358 (54.4%) in the third grade. It was observed that 343 of the participants did not use alcohol at all, 294 used it occasionally and 21 people used alcohol regularly.

DATA COLLECTION INSTRUMENTS

Within the scope of the research 2 different scales were used with a personal information form prepared by the researcher.

Personal Information Form: This form, prepared by the researcher, was prepared to obtain basic information about the students' gender, age, department of education, grade level and alcohol consumption.

Self-Compassion Scale (SCS): Self-Compassion scale was developed by Neff (2003). It had 6 subscales which were self-kindness, self-criticism, common experiences of humanity, isolation, mindfulness, and overidentification. The total self-compassion score is calculated by averaging each subscale and adding the subscales. The total score was used in this study. The Cronbach Alpha reliability coefficient for the total score of the Self-Compassion Scale was calculated as .92 (Neff, 2003b). The Turkish translation of the original SCS was studied by Deniz, Kesici & Sümer (2008). It was observed that there was a positive correlation between the original of the scale and understanding of the Turkish forms ($r = .96$, $p < .001$). Moreover, 2 items, which were under .30 in the item total correlation table were removed from the scale, and 24 items remained. This exclusion was higher the Cronbach's alpha coefficient value $\alpha = .89$ and offered good test-retest reliability with the value of $\alpha = .83$. The reliability coefficients of the scale for this study were discovered as .87

University Form of Risk Behaviors Scale (RBSUF): University Form of Risk Behaviors Scale was developed by Gençtanırım (2014). Test-retest correlation of the University Form of Risky Behaviors Scale for each sub-dimension was found respectively AB (Antisocial Behaviors) = .95, AU (Alcohol Use) = .98, S (Smoking) = .98, ST (Suicidal Tendency) = .74, EH (Eating Habits) = .80, SD (School Dropout) = .94 and SU (Substance Use) = .97. and the cronbach alpha coefficient of RBSUF for each sub-dimension was found AB .82; AU .92; S .93; IST .91; EH.81; SD .64; SU .90. the cronbach alpha coefficient of this study for each sub-dimension were discovered as AB (Antisocial Behaviors) = .81, AU (Alcohol Use) = .92, S (Smoking) = .90, ST (Suicidal Tendency) = .87, EH (Eating Habits) = .84, SD (School Dropout) = .64 and SU (Substance Use) = .90. RBSUF is a likert scale consisting of 60 items and seven sub-dimensions.

DATA ANALYSIS

First of all, Pearson moment-product correlation coefficient technique was utilized to detect the relationship between the subscales of risk taking behavior and the self-compassion scores of the study group. Multiple linear regression analysis was conducted to determine to what extent the risk taking behavior scores of the total sample group were predicted by self-compassion. Then, a stepwise linear regression analysis was applied to determine which risk-taking behaviors were the most predictive of self-compassion.

FINDINGS

When the findings obtained within the scope of the study are examined, Pearson Product-Moment Correlation coefficients for relationships between the participants' total self-compassion scores and risk taking behavior subscales are given in Table 1.

Table 1. Correlation Coefficients Between Self-Compassion and Risk Taking Behaviors for Total Sample Group

Risk taking behavior sub-dimensions		Self-Compassion
Alcohol use	r	-,052
Smoking	r	-,020
Suicidal tendency	r	-,604**
Eating habits	r	-,233**
School dropout	r	-,220**
Substance use	r	-,067
Antisocial behaviors	r	-,124**

*p<0,1 , **p<0,5

As seen in Table 1, it (statistically highest significant relationship) was found that the opposite correlation between the mean scores of suicidal tendency sub-dimension and the mean scores which were obtained from the self-compassion scale by university students. It is respectively followed by a negative relationship between eating habits-school dropout sub-dimension scores and self-compassion scores. These results indicated a low of significant and negative correlations among the average scores of university students in the self-compassion scale and the antisocial behavior sub-dimension. However, it was observed that there was no significant relationship between the average scores of university students in the self-compassion scale and the average scores they got in the sub-dimension of alcohol use, smoking and substance use. Multiple linear regression analysis was performed to measure the expressing power of self-compassion levels of participants' scores of risk taking behavior subdimensions, and the results obtained are given table 2.

Table 2. The Power of Risk Taking Behavior Scores to Explain Self-Compassion Level

Variable	B	Standard Error B	B	t	Bivariate r	Partial r
Constant	101,971	2,009		50,760	-	-
Antisocial behaviors	-,058	,093	-,023	-,628	-,025	-,019
Alcohol use	,049	,077	,026	,638	,025	,020
Smoking	,172	,062	,102	2,796	,109	,086
Suicidal tendency	-,849	,048	-,593	-17,678	-,570	-,545
Eating habits	-,133	,073	-,061	-1,819	-,071	-,056
School dropout	-,196	,139	-,049	-1,415	-,055	-,044
Substance use	,040	,110	,013	,365	,014	,011

R= ,618

R= ,382

F= 57,333

*p<0,5

Together with the sub-dimensions of risk taking behavior, it can explain 38.2% of the variance (variability) in self-compassion scores. Suicidal tendency (p<, 05) and smoking (p <, 05) sub-dimensions significantly predicted the level of self-compassion. It is observed that the relative

order of importance of the variables in predicting self-compassion is listed as suicidal tendency, smoking, eating habits, school dropout, alcohol use, antisocial behaviors and substance use. According to these results, it is possible to say that the variables of suicidal tendency and smoking are more important in predicting the self-compassion variable.

A stepwise linear regression analysis was performed to determine the sub-dimensions of risk-taking behaviors that predict the most self-compassion of the participants and the results are shown in Table 3.

Table 3. Stepwise Linear Regression Analysis Table for Predicting Self-Compassion by Risk Taking Behavior

Predicted Variable	Model	Predictors	B	Sh	β	t	p	R	R ²
Self Compassion	1	Constant	100,985	1,240		81,453			
		Suicidal tendency	-,865	,045	-,604	-19,42	,000	,604	,365
	2	Smoking	,162	,053	,096	3,05	,002	,612	,374
	3	Eating habits	-,160	,070	-,074	-2,268	,024	,616	,379

Sum: R= .604; R² = .36,5, F= 132,903, P< .05

In Table 3, it is seen that the stepwise multiple linear regression analysis was completed in 3 stages. In the first stage, only suicidal tendency explains 36.5% of the total variance (P <.001). In the second stage, when the cigarette use variable was included in the model, the explained variance increased to 37.4% (P <.001). In the third stage, when the eating habits variable was included in the model, the explained variance increased to 37.9% (P <.001). As a result, the model consisting of 3 stages explains 37.9% of the total variance. It is possible to say that the variable which predicts self-compassion most is suicidal tendency.

DISCUSSION AND CONCLUSION

When the findings are examined, it is seen that there is a moderate significant relationship between the self-compassion levels of university students and the suicidal tendency sub-dimension of risk-taking behavior, and there is a a low-level significant and negative relationship with the sub-dimensions of eating habits, school dropout, and antisocial behavior. In addition, according to the findings, it is possible to say that the variable that predicts self-compassion the most is suicidal tendency. The contribution of the variables of smoking and eating habits to the model is at a lower level. As a result of the study conducted by Vetesse et al. (2011), it was found that adolescents with high self-compassion levels were more likely to struggle with psychological distress, emotion regulation disorder, substance use and suicide attempt, and it was found to be consistent with the study. While self-compassion reduces stress, it increases psychological well-being, happiness and optimism (Van Dam et al., 2011). This result seems to support views put forward by Rabon et al. (2019). Such that, Rabon et al. (2019) finding a negative and significant relationship between self-compassion and suicidal behavior. Individuals with high levels of self-compassion establish a kind and loving relationship with themselves. Therefore, they are very unlikely to suppress unwanted thoughts and negative emotions (Leary et al., 2017). In this study, although predictivity of self-compassion was low for smoking, some researchers found a higher level of correlation between smoking behavior and self-compassion (Garison et al., 2015; Kelly et al., 2010).

In this study, it was found that there was no relationship between alcohol use and self-compassion, and alcohol use was not a predictor variable. However, many studies have concluded that problematic alcohol use in university students is associated with low self-compassion (Brooks et al., 2012; Kaplan et al., 2020; Phelps et al., 2018; Rendon, 2006). It has been observed that individuals tend to use alcohol in order to cope with negative emotions such

as depression and anxiety (Grant, Stewart, O'Connor, Blackwell, & Conrod, 2007). The different result of this study can be explained by the cultural characteristics of the studied participants. Because only 21 out of 658 participants state that they regularly drink alcohol. The vast majority (342 people) do not use it at all. This explains why alcohol consumption does not predict self-compassion.

In this study, it was concluded that the self-compassion in university students was predicted by risk taking behavior sub-dimensions, especially such as, suicidal tendency, smoking and eating habits. However, there is no predictive feature of two of the risk taking behavior sub-dimensions which are alcohol use and substance use for self-compassion levels of university students. However, it should be kept in mind that an individual who engages in any risky behavior has an increased tendency to engage in another risky behavior (Alexander et al., 1990).

RECOMMENDATIONS

In the light of the findings and results, with the idea that self-compassion significantly reduces risk-taking behaviors, these skills can be gained by students via planning to make studies which can step up the levels of self-compassion towards the students in guidance and psychological counselling services. The cultural aspect of self-compassion has not been addressed in this study. It is thought that self-compassion behavior may be different, especially in individualistic and collectivistic cultures. In this context, considering that the self-compassion of the human being can also be affected by culture, it is thought that conducting studies including cross-cultural comparisons on this feature may be useful.

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ANALYSIS OF POSTGRADUATE THESES PREPARED FOR THE PRESCHOOL PERIOD ON “ENVIRONMENTAL EDUCATION” CONDUCTED BETWEEN 2011 AND 2020 IN TURKEY: A CONTENT ANALYSIS

Abstract: This study was conducted to analyze postgraduate theses in the field of environmental education in preschool education in Turkey between 2011 and 2020 in terms of their distribution, levels (doctorate, master's), sample groups, and data collection tools. To establish the theses written in the field, the Higher Education Council National Thesis Centre database was reviewed on April 16th, 2020. Care was taken to determine postgraduate theses according to the criteria of having been conducted on environmental education with preschool children, preschool teachers/prospective preschool teachers and families, having been conducted on the subject area of education and training, having been registered to YÖK National Thesis Centre with permission for access. In line with these criteria, a total of 12 postgraduate theses were included in the study. The data were accessed using the document analysis technique. Detailed information about the postgraduate theses was collected using a “Postgraduate Thesis Examination Form.” Postgraduate theses included in the study were examined under the headings of thesis year, thesis type, objective, study group, methods, and designs, and data collection tools and frequency (f) were used in the analysis of data. When the distribution of postgraduate theses studies was conducted in terms of thesis type, it was found that the number of masters’ theses (n=8) was much higher than the number of doctoral theses (n=4), there was a large increase in the number of theses in 2015, the theses were mostly doctoral (n=3), and children mostly featured in the postgraduate thesis studies conducted within the specified dates.

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Keywords: Environmental education; environmental education program; pre-school children; postgraduate theses

INTRODUCTION

From its existence to the present, humanity and the environment have been in an interactive relationship (Bahar, 2018). With humans starting settled lives and dealing with agriculture, especially after the industrial revolution, this relationship changed and continued with the idea of dominating nature and the thought that natural resources were endless. The rapid increase in the consumption of natural resources has begun to threaten the cyclical sustainability of ecology (Cevher Kalburan, 2009; Özbebek Tunç, Akdemir Ömür, Düren and Zeynep, 2012; Özdemir, 2017; Gökmen, 2011). As an inevitable result of this situation, an advanced level of environmental destruction has begun to pose a threat to humanity and the lives of all living beings on our planet. Thus, the necessity of raising awareness and taking preventive measures regarding environmental problems that rapidly affect all living beings has come to the fore. To protect the environment so that all living beings can maintain their lives healthily, environmental education should be given to all people, who are the main source of the problem (Gökmen, 2011; Kurt Gökçeli, 2015). The basic philosophy of environmental education to be given for this purpose is the establishment of empathic ties with living and non-living beings in nature and the thought that we are a part of life on our planet, not the possessor, in addition to having information about the environment (Özdemir, 2017). The main purpose of environmental education is to educate new generations to consume only as much as they need, be sensitive to environmental problems, and be environmentally conscious with the awareness of their responsibility to subsequent generations (Ünal, Mançuhan and Sayar, 2001).

To develop positive attitudes towards the environment and to ensure the continuation of the acquired attitudes in later life, it has become a necessity to provide environmental education and to start this education at an early age when the foundations of life are laid and the fastest development is seen. This is because children who are environmentally conscious and sensitive to the environment and who show a protective attitude to the environment maintain this attitude in their adult years thanks to the bond they develop with the nature and the empathy they develop (Gönen and Güler, 2011; Kurt Gökçeli, 2015; Güler Yıldız, 2017; Önder and Özkan, 2013; Robertson, 2008; Wells and Lekies, 2006; Wells and Zeece, 2007). There are a large number of studies in the literature emphasizing that attitudes, behaviors, and awareness gained from early ages continue in individuals' later years and they are effective in creating their life philosophies (Eagles and Demore, 1999; Sabo, 2010; Wells and Lekies, 2006).

First-hand experience, that is, direct interaction with nature, is very important. Providing the opportunity to have these interactions and experiences at early ages can be achieved through adults who are aware of the importance of this situation. Preschool teachers have important responsibilities in preparing enriched educational environments that are offered to children through various activities and methods in preschool years (Başal, 2005; Biçer, 2020; Kandır et al, 2012; Laing, 2004; Nikolaeva, 2008; Zembat, Adak-Özdemir and Özdemir-Beceren, 2010). It is also important that teachers, who children take as models in this period, are qualified in and sensitive to environmental education so that the environmental education process is effective and efficient. Preschool teachers also have a facilitating role in structuring children's long-term environmental values and attitudes (Darling-Hammond, 2000; Davis, 1998; Haktanır, 2015, p.24). Some studies emphasize that teachers who increase their level of awareness and knowledge about environmental education thanks to the education they receive at the undergraduate level will show positive changes in their behaviors to the environment, and also be positive role models to children they educate (Çabuk, 2014).

Education takes place through the transformation of knowledge into behavior. It is important to measure and evaluate the effectiveness of education in terms of efficiency. It has become inevitable to give environmental education to raise conscious generations, especially to prevent environmental problems, which have increased in recent years. In this study, which was

conducted to analyze recently conducted postgraduate theses on environmental education, the distributions of postgraduate theses on environmental education conducted between 2011 and 2020 were detailed by considering their year of publication, type, target population, data collection method, technique, and tools. Another aim of the study was to inform families who have preschool children and professionals who are working or who want to work in the field of environmental education, and shed light on new studies.

METHOD

The inclusion criteria for the theses were having been conducted in an education environment with preschool children, preschool teachers/prospective preschool teachers and families, having been conducted on the subject area of education and training, and having been registered to Higher Education Council National Thesis Centre with permission for access. In line with these criteria, a total of 12 postgraduate theses were included in the study. The data were accessed using the document analysis technique. Detailed information about the postgraduate theses was collected using a “Postgraduate Thesis Examination Form.” Postgraduate theses included in the study were examined under the headings of thesis year, thesis type, objective, study group, methods, and designs, and data collection tools and frequency (f) were used in the analysis of data.

RESEARCH DESIGN

The aim of the present study was to analyze postgraduate studies conducted between 2011 and 2020 in the field of environmental education in preschool education. Data were collected by using document analysis, one of the qualitative research designs. In qualitative research designs, data are collected through methods such as interviews, observation, document analysis, and audio-visual materials. In document analysis, which includes the analysis of written materials that contain information about the phenomena or events aimed to be investigated, there are stages such as organizing the data to be used, reviewing, coding, categorizing into themes, determining how to present the data, and interpreting the results. The documents used in the research were determined in relation to the research problem (Creswell, 2013; Yıldırım and Şimşek, 2018).

SAMPLE

To determine postgraduate theses conducted on environmental education in preschool education in Turkey, the database of Higher Education Council National Thesis Centre was scanned. In the search, the key terms “*environmental education*,” “*environmental education program*,” and “*preschool*” were used and all postgraduate theses accessed in the database were taken into consideration. One hundred thirty-eight records were found with the key term *environmental education* and eight records were found with the key term *environmental education program* and the sample was determined using the criterion sampling method, one of the purposeful sampling methods. Postgraduate theses to be included in the sample of the study were determined according to the criteria of including preschool children, preschool education teachers, and/or families with preschool children in the study group, being studies conducted on environmental education/ environmental education program, having been conducted in the field of education, having been conducted on environmental education/environmental education program, being registered in Higher Education Council National Thesis Centre, and having access permission. In this context, a total of 12 postgraduate theses that were accessed commonly in all areas reviewed and met the predetermined criteria formed the data set of the study.

DATA COLLECTION

Within the context of the document analysis used in the study, first, all postgraduate theses in the Higher Education Council National Thesis Centre database were reviewed with the key terms “*environmental education*,” “*environmental education program*,” and “*preschool*.” In the reviewing stage, “education and training” subject area indexing and “2011-2020” year classification was performed and the full texts of all postgraduate theses that were accessed were coded in pdf format and downloaded to a computer. As a result of this classification, a total of 138 theses were accessed with the key term “*environmental education*” and six of which were related to ‘*pre-school*.’ Eight theses were accessed with the key term “*environmental education program*,” six of which were related to ‘*pre-school*.’ After reviewing these theses individually, 12 postgraduate theses were conducted with children, and educators in preschool education were included. The data were collected on the website of the Higher Education Council National Thesis Centre on April 16th, 2020. The fact that the study data were collected at the beginning of 2021 facilitated the inclusion of postgraduate theses completed until the end of 2020. Thus, all postgraduate theses written between 2011 and 2020 were included within the scope of the research and analyzed in accordance with the purpose of the study.

DATA ANALYSIS

To analyze the 12 postgraduate studies, which formed the data set of the study, after the literature was reviewed by the researcher and the data collection tools of similar studies were analyzed, detailed information was included on a “Thesis Review Form” related to the authors’ name, the year of the thesis, the type of thesis, the name of the university, the name of the institute, the title of the thesis, the aim of the thesis, sample, data collection method/technique, and the data collection tools. Descriptive analysis was used in the analysis of the data obtained. The study groups, types, data collection methods, techniques, and tools of the postgraduate theses by years are presented in the results section in figures and tables.

FINDINGS

This section includes the results obtained from the present study, which was conducted to analyze the postgraduate theses conducted in Turkey on environmental education in preschool education. In this context, first, data regarding the types of theses and study groups by years were shared. Next, the methods of the postgraduate theses were detailed regarding the participants as children and adults, and these were explained in tables.

All of the 31 postgraduate theses included in the study were registered at the Higher Education Council National Thesis Centre and conducted on the subject of education. Table 1 includes the distribution of postgraduate theses conducted on environmental education in preschool education by years in terms of the type and study groups of the theses.

Table 1. Distribution of types of postgraduate theses conducted on environmental education in preschool education by years

Years	Master’s theses	Doctoral theses	Total
2011	-	-	-
2012	-	-	-
2013	1	-	1
2014	-	-	-
2015	1	3	4
2016	1	-	1
2017	-	-	-
2018	2	1	3
2019	2	-	2
2020	1	-	1
Total	8	4	12

When Table 1 is examined, it can be seen that eight theses were master's theses and four were doctoral theses. In terms of distribution by years, it was found that the highest number of theses conducted on environmental education in preschool education ($n=4$) was in 2015, three of which were doctoral theses and one was a masters' thesis, followed by 2018 ($n=3$) and 2019 ($n=2$), all of which were master's theses. It was also found that only four of the postgraduate theses conducted in the last 5 years on environmental education in preschool education were doctoral theses. In addition, no postgraduate thesis was written in accordance with the study criteria in 2011, 2012, 2014, and 2017. When the distribution of postgraduate theses by years was examined, there was no accelerated distribution. Also, it can be interpreted that there was continuity in the studies conducted in the field of environmental education in the last 3 years.

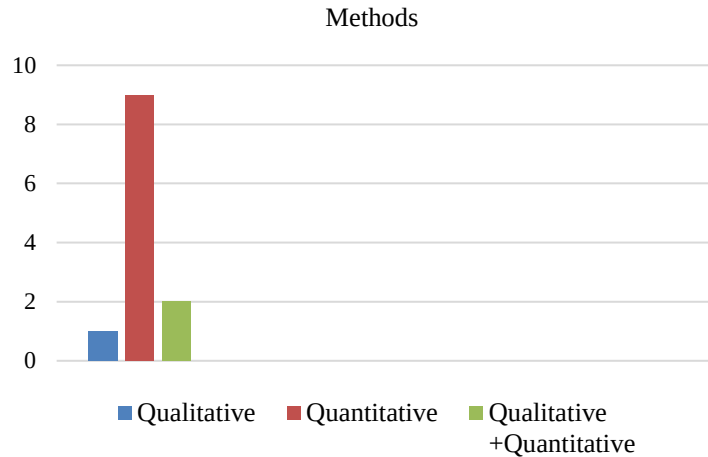


Figure 1. Methods Used in Postgraduate Theses in the Field of Environmental Education

Figure 1 illustrates the number of theses that used qualitative and quantitative methods detailed and examined in tables. According to this, two theses used both qualitative and quantitative methods (Güner, 2013; Ahi, 2015), only one thesis used qualitative methods (Karahana, 2019) and nine theses used quantitative methods (Erol, 2015; Koçak Tümer, 2015; Kurt Gökçeli, 2015; Uslucan, 2016; Buldur, 2018; Şahinpinar, 2018; Bakar, 2019; Karahana, 2019; Biçer, 2020), a total of 12 postgraduate theses. When the methods used in the theses were examined, it was determined that quantitative data were used in the majority of the 12 theses.

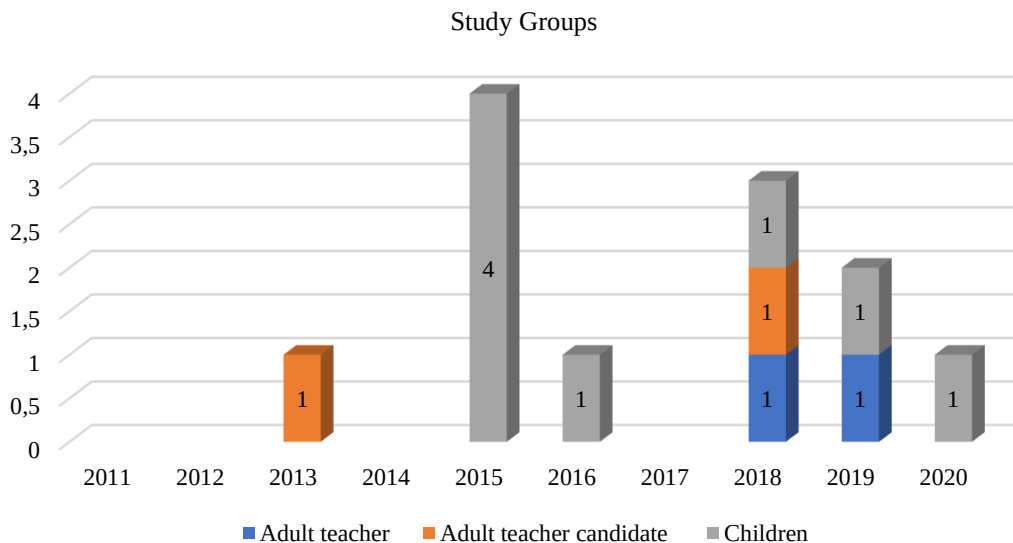


Figure 2. Distribution of study groups of postgraduate theses conducted on environmental education in preschool education by years

In Figure 2, the study groups of the postgraduate theses are examined. It was found that the group most studied was children (n=8). The data were examined in more detail and the theses were grouped in three categories as those that included children, adult teachers, and adult preservice teachers. The study groups are detailed and examined in the figure. Erol (2015) worked with both preschool children and their parents, that thesis is included in the column on working with children in the figure. In this context, a total of eight postgraduate theses conducted with preschool children were examined. This can be explained by the fact that an experimental design was preferred in these eight postgraduate theses.

Table 2. Postgraduate theses including children as the study group

Year	Type of thesis	Researcher	Title of the study	Sample	Data collection method/technique/tool
2015	Ph.D	Ahi, B.	Effects of environmental education program integrated with preschool curriculum on children's mental model development about "environment" concept	52 kindergarten children aged 48-66 months	Quantitative study, Quasi-experimental design with a pretest-posttest control group, Qualitative phenomenologic method based on social constructivist philosophy, Triangular mixed pattern, Draw an environment test rubric
2015	Ph.D	Koçak Tümer, N. B.	Development of "environment scale for children" and investigation of the effects of an environmental education program on children's attitudes toward the environment	Children aged 48-72 months getting an education at Ankara University Preschool	Quantitative study, experimental design with experimental and control groups. Environment scale for children
2015	Ph.D	Kurt Gökçeli, F.	The effect of an environmental education program on 48-66-month-old children's environmental awareness	40 kindergarten children aged 48-66 months obtaining education at preschool; selection random	Quantitative study. Mixed design method, experimental design with pre-test/post-test/follow-up test and control group. Interview and observation method. Personal information form, a scale for the assessment of environmental awareness in children aged 48-66 months
2016	Master	Erol, A.	Investigation of the effect of environmental education program with family involvement based on project approach on 5-6-year-old children's awareness and attitudes towards the environment	22 children, 22 mothers, 22 fathers in experimental group 1; 21 children, 21 mothers, 21 fathers in experimental group 2; 22 children, 22 mothers, 22 fathers in experimental group 3; 23 children, 23 mothers, 23 fathers in the control group.	Quantitative study. Personal information form. Environmental attitude scale. Children's Attitudes towards the Environment- Preschool Version (CATES-PV), Environmental Awareness and Attitude Scale for Preschool Children (EAASPC)

2016	Master	Uslucan, S.	The effects of the environmental education program on pre-school children's (aged 60-72 months) environmental attitudes (Sample for Çanakkale)	50 children aged 60-72 months, 25 in the experimental group and 25 in the control group, attending Hüseyin Akif Terzioğlu Kindergarten in the central district of Çanakkale province.	Quasi-experimental design. Pretest-posttest control group model. Personal information form. "Children's Environmental Attitudes Scale"
2018	Ph. D	Buldur, A.	Investigation of the effects of an environmental education program supported by multimedia on children's environmental attitudes and awareness	40 children, 20 in the experimental group and 20 in the control group, attending kindergartens of two primary schools in the central district of Sivas province	Quantitative study. Experimental design with pretest-posttest control group. General information form. Environmental awareness and attitude scale for preschool children.
2019	Master	Bakar, N.	The effect of the environmental education program on the cognitive structures of the five years against the environmental concept	41 5-year-old children in the experimental and control groups attending an independent kindergarten in Kastamonu province	Quasi-experimental design. Pretest-posttest control group model. Word association test
2020	Master	Biçer, M.	The effect of a story-based environmental education program on 48-72-month-old children's environmental awareness and attitudes	40 children, 20 in the experimental group and 20 in the control group, attending kindergartens of two primary schools affiliated to Afyonkarahisar Directorate of National Education	Quantitative study. General information form. Environmental awareness scale for preschool children "Children Attitudes Toward the Environment Scale-Preschool Version (CATES-PV)"

When Table 2 is examined, where the postgraduate theses with children in the study group are presented, it is seen that four of the eight postgraduate theses in this category (Ahi, 2015; Koçak Tümer, 2015; Kurt Gökçeli, 2015; Buldur; 2018) were performed at the doctoral level. Three of four postgraduate theses at the doctorate level were conducted in 2015. In all of the postgraduate studies with children, an environmental education program was performed. Ahi (2015) integrated the environmental education program prepared by the researcher with the Ministry of Education (MoNE) preschool program and examined the effects of this program on the development of children's mental model development regarding the concept of the "environment" in a doctoral thesis. For this purpose, "draw an environment rubric" was used and it was found that a significant number of the children had incomplete and unscientific mental models regarding the concept of the environment and the integrated environmental education program was effective in children's developing mental models in terms the concept of the environment.

Koçak Tümer (2015) developed and used the “Environment Scale for Children” in a master’s thesis to examine the effect of the environmental education given to preschool children on their attitudes towards the environment. As a result, it was found that the environmental education given helped children to develop positive attitudes towards the environment. Similarly, in a study by Uslucan (2016) to examine the effects of preschool children’s attitudes towards the environment, a personal information form and the “Environmental Attitude Scale for Children” were used. As a result of the study, a significant difference was found between the scale scores of children in the experimental and control group, in favor of the experimental group. Buldur (2018) examined the effects of an environmental education program supported by multimedia on children’s attitudes and awareness towards the environment and used a general information form and the “Environmental Awareness and Attitude Scale for Preschool Children” to evaluate the data. It was found that environmental education program supported by multimedia was effective on children’s attitudes and awareness towards the environment and this effect was found to be permanent. Biçer (2020) used a general information form, the Attitude Towards the Environment Scale: preschool version (CATES-PV) and the Environmental Awareness Scale for Preschool Children in a study that examined the effects of a story-based environmental education program on environmental awareness and attitudes of preschool children. It was found that the education given was effective in children’s gaining awareness and attitude towards the environment. In a study that examined the effects of a project attitude-based environmental education program with family participation on children aged 5-6 years, Erol (2015) used a personal information form, the CATES-PV, the Environmental Awareness and Attitude Scale for Preschool Children (EAASPC), and the Environmental Attitude Scale. Both children attending preschool education and their parents were included in the study. In the study, it was concluded that environmental education activities with family participation were significantly effective on parents’ thoughts, behaviors, and the attitude total scores of parents ($p < 0.01$). No significant difference was found between the pre-test, post-test, and follow-up test measurements of parents in terms of the mean environmental behavior, attitude, and awareness scores without family participation ($p > 0.05$). In addition, it was found that pre-test measurement scores of children aged 5-6 years and the variables of being in different groups predicted post-test scores significantly ($p < 0.01$).

Kurt Gökçeli (2015) used interview and observation methods, a personal information form, and an environmental awareness evaluation form for children aged 48-66 months developed by the researcher in a study that examined the effects of an environmental education form on environmental awareness of preschool children. In the study, which compared experimental and control groups, it was concluded that the environmental education program developed and applied by the researcher created a statistically significant difference in the environmental awareness of children in favor of the experimental group.

Bakar (2019) used a word association test in a master’s thesis in which the effects of an environmental education program were examined on 5-year-old children’s cognitive structures about the concept of environment. The author concluded that the environmental education program conducted with the experimental group developed the children’s cognitive structures about the concept of the environment positively. Postgraduate theses that included adults in study groups can be seen in Table 3. In this context, five postgraduate theses conducted with teachers, prospective teachers, and parents were examined. Two of these were conducted with prospective teachers, two were conducted with preschool teachers, and one was conducted with children attending preschool institutions and their parents.

In light of the data, when the postgraduate theses in which children were included in the study group were examined, it was determined that the attitudes and awareness towards the environment were emphasized. The data collection tools used for these measurements varied. The studies had an experimental pattern because a training program was given. In the thesis

studies examining the attitudes and awareness of preschool children towards the environment, positive significant differences were found in the attitudes and awareness levels of the children. It can be interpreted that environmental education positively affects children's attitudes and awareness towards the environment. When the table 2 is examined, it is seen that the children in the study groups are aged 48 months and over. This situation can be explained by the fact that the age group under 36 months is not accepted to kindergartens affiliated with the Ministry of National Education. Chu et al. (2007) and Wilson (1996) states that the starting age for environmental education should be 3 years.

Table 3. Postgraduate theses that included adults as the study group

Year	Type of thesis	Researcher	Title of the study	Sample	Data collection method/technique/tool
2013	Master's	Güner, Z.	Environmental education in early childhood teacher training programs: perception and beliefs of pre-service teachers	470 teacher candidates were enrolled in the training program	Quantitative study, Qualitative study, Perceptions of Pre-service Teachers towards Environmental Education in Teacher Training Programs (PTEE), Beliefs of Pre-service Teachers about Integration of Environmental Education into Early Childhood Education (BIEE) scales
2018	Master's	Şahinpinar, D.	Opinions and competences of preschool teachers on environmental education	324 preschool teachers working in the center and districts of Tokat	Quantitative study, Scanning model, Personal information form, Affective tendencies scale, Behavior scale, Environmental knowledge test
2018	Master's	Yıldız, F. A.	Pre-school teacher candidates investigation of ecological footprint and environmental education points for environmental education	124 teacher candidates from each class studying at Ahi Evran University, Faculty of Education, Department of Pre-School Education	Quantitative study, Scanning model, Ecological Footprint Calculation Survey, Environmental education scale
2019	Master's	Karahan Aydın, B.	Perceptions of preschool teachers toward sustainable environmental education	22 preschool teachers working in MEB schools in Tuzla, Pendik, Maltepe, Kadıköy and Ümraniye districts of Istanbul province.	Phenomenology (phenomenology), one of the qualitative research designs, Interview form, Observation, Event plan review

When the four postgraduate theses on the subject with adults were examined, it was seen that all of the studies were conducted as master's degrees, and two studies (Şahinpinar, 2018; Yıldız, 2018) were conducted in 2018.

In a postgraduate thesis that examined the perceptions of prospective teachers on environmental education programs, Güner (2013) used the preservice teachers' Perceptions Towards Environmental Education (PTEE) scale in the teacher training program, the scale for Beliefs of prospective teachers on the Integration of Environmental Education (BIEE) with preschool education. The results showed that prospective teachers had beneficial beliefs about integrating environmental education into preschool education. It was also found that there was a positive association between perceptions and beliefs of preschool teachers, and preschool teachers had beliefs that environmental education could be integrated with different activities. Karahan (2019) examined the perceptions of preschool teachers about sustainable environmental education, using an interview form and observation techniques, and analyzed activity plans. As a result of the study, it was concluded that teachers did not have sufficient information about sustainable environmental education (SEE), they did not consider the 2013 MoNE preschool education program effective in terms of SEE, they did not have difficulties while making practices, they considered family participation and education important for SEE, and they thought that open-air spaces and transportation facilities were not sufficient.

Şahinpinar (2018) used a personal information form, the sensory tendencies scale, a behavior scale, and an environmental information test in a study that examined the views and competence of preschool teachers regarding environmental education. As a result of the study, no association was found when preschool teachers' sensory tendencies and the information scale, behavior scale, and information scale results were compared. However, a positive association was found between the sensory tendencies scale and the behavior scale. It was also found that preschool teachers' interest in environmental education was reflected in their attitudes.

Yıldız (2018) used the Ecological Footprint Calculation Survey and Environmental Education Scale to examine the ecological footprint and environmental education scores of prospective preschool teachers. It was found that preschool teachers had a lower ecological footprint than the Turkish population.

When the theses, the samples of which were teachers and teacher candidates, were examined, it can be stated that teachers were open to practicing in the field of environmental education, but environmental education activities were limited in terms of both the education they received and opportunities.

DISCUSSION AND CONCLUSION

In this study, which was performed to analyze the postgraduate theses conducted on environmental education in preschool between 2011 and 2020, it was concluded that there was a large increase in the number of related postgraduate theses conducted, especially in 2015. There were no postgraduate theses in line with the key terms determined in 2011, 2012, 2014, and 2017. There were fluctuations and uneven distribution in the numerical thesis data of the last ten years. These fluctuations can be interpreted as a reflection of the criteria determined in the research as a limitation.

When the findings were examined, it was seen that the postgraduate thesis studies, which were scanned in line with the criteria determined in the last 10 years and included in the study group, were mostly conducted at the master's level, and only four of the 12 postgraduate theses were doctoral theses; this is another important finding. The initiation criteria and the long educational process may explain the limitations of studies at the doctoral level. Similar results were found in postgraduate theses conducted on different subject areas in the field of preschool education; there were fewer doctoral thesis studies (Ahi and Kıldan, 2013; Altun, Şendil and Şahin, 2011; Bahçacı Önal and Türkoğlu, 2019; Can Yaşar and Aral, 2011; Karaoğlu and Esen Çoban, 2019; Kaytez and Durualp, 2014; Tanju Aslışen and Yıldırım Hacıibrahimoğlu, 2020). It was found that the overwhelming majority of the postgraduate thesis studies examined in the study were

conducted using quantitative research methods, only one study included a qualitative method (Karahan, 2019), and two studies used both qualitative and quantitative methods (Güner, 2013; Ahi, 2015). Using the two methods together can be interpreted as a desire to conduct in-depth research. This result is similar to other studies conducted in the field of preschool education (Bahçacı Önal and Türkoğlu, 2019; Durukan, Atalay and Şen, 2015; Kesicioğlu and Yıldırım Hacıbrahimoğlu, 2019; Taştepe, Öztürk Serter, Yurdakul, Taygur Altıntaş and Bütün Ayhan, 2016).

When the study groups of postgraduate theses reviewed in the study were examined in terms of study groups, it was found that a great majority were performed on children. This result is similar to other studies in which different fields were examined within a preschool context (Can-Yaşar, İnal, Kaya and Uyanık, 2012; Dilli, Bapoğlu-Dümenci and Turgut-Kesebir, 2018; Demirtaş İlhan and Tantekin Erden, 2019; Gülay Ogelman, 2014; Kahriman-Öztürk, Olgan and Güler, 2012; Kiremit, 2019; Tanju Aslışen and Hakkoymaz, 2019). On the other hand, the limited number of postgraduate theses conducted with adults mostly included preschool teachers (n=2) and the research group consisted of teacher candidates. Studies with parents were not identified. This situation has been interpreted that the expressions "environmental education" and "environmental education program" used in the criteria of the study include the theses conducted in educational institutions. No parent-supported environmental education program was identified. This situation does not coincide with the fact that education is more efficient and generalizable. In new studies on environmental education, it will be beneficial for parents to participate in the education process at home, where the child receives the first education, for children to apply the environmental education in their daily lives.

When the postgraduate theses conducted with children in the field of environmental education were reviewed, it was determined that theses mostly employed an experimental design. For this reason, like in all of the studies that used an experimental design, the effects of environmental education prepared and applied for the purpose on the group studied were examined and the results discussed. In studies that included adults, the perceptions, opinions, and competencies of environmental education were mostly included.

When data collection tools used to measure the efficacy of educational programs performed in postgraduate theses including children were examined, it can be seen that a standard measurement tool was included in all studies. Some of the scales used were developed by the researchers and the efficiency of the program used was measured using a pre-test post-test method. In this sense, new measurement tools have been brought to the field, and training programs with different subtitles have been developed. When environmental education is considered as a whole, studies in which parents are included in the educational process as a study group and those performed in nature will support parents and children in the lifelong learning dimension.

In the present study, which covered a period of 10 years, it is noteworthy that the number of postgraduate theses in the field of preschool environmental education was low. Studies should be conducted on diversified subjects in environmental education, which has a very wide content.

The limitations of the present study are that the postgraduate theses conducted in the field of environmental education used in the study comprised theses with access permission registered in the education index and HEC National Thesis Centre. The scope of the study can be varied by including postgraduate studies conducted abroad meeting the study criteria. In addition, future studies can examine and compare projects performed with preschool children on environmental education and supported by the Scientific and Technological Research Council of Turkey and theses registered in the Higher Education Council National Thesis Centre.

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INVESTIGATION OF PROFESSIONAL BURNOUT LEVELS OF SECONDARY SCHOOL ADMINISTRATORS ACCORDING TO SOME VARIABLES

Abstract: This study aims to reveal the burnout levels, emotional exhaustion, depersonalization, and personal accomplishment of school administrators according to their genders, seniority in the administration, marital status, education levels, school types and the settlement of their schools. The data were collected using Maslach Burnout Inventory in the 2019-2020 academic year and 186 secondary school administrators participated in the study from Ağrı and İzmir provinces in Turkey. In the study, the frequencies, percentages, and arithmetic averages of the data were handled to determine the burnout levels. Non-parametric statistical analyses such as Spearman's Rho correlation coefficient, Mann Whitney U and Kruskal Wallis tests were performed in the research. It was concluded that school administrators experienced burnout in the dimensions of emotional exhaustion, depersonalization, and personal achievement. In addition, it was observed that the emotional exhaustion and depersonalization scores of those with a postgraduate education were significantly higher than those with a graduate education. According to the results regarding the settlement, the emotional exhaustion and depersonalization subscale scores of people living in İzmir are significantly higher than those living in Ağrı. And the personal achievement scores of people living in İzmir are significantly lower than those living in Ağrı.

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Keywords: School administrator, burnout, emotional exhaustion, depersonalization, personal achievement.

INTRODUCTION

Burnout syndrome as a complex of physical, emotional, cognitive, and behavioural symptoms was scientifically defined by the psychoanalyst Herbert Freudenberger in 1974 (Freudenberger, 1974). In other words, burnout was defined as the failure to cope with stressful situations (Farber, 1984, Cherniss, 1980). On the other hand, burnout is identified in individuals as a decrease in their excitement and alienation towards their work and showing a cynical attitude. There are other similar definitions emphasizing burnout as a psychological syndrome. It is also seen that burnout is considered as a reaction to the result of stress-increasing factors at work.

In today's modern life, stress, especially organizational stress, is a very common situation. Thus, not only school principals, but also people working in other business lines are constantly faced with stress. Burnout is a concept closely related to stress. According to Cüceloğlu (1994), "stress is the effort that an individual spends beyond his physical and psychological limits due to incompatible conditions in the physical and social environment". Kaçmaz (2005), on the other hand, "states that long-term job stress causes burnout". Maslach (1982) defined burnout "as a professional's detachment from the genuine meaning and purpose of his profession and no longer fully interested in the people he serves". According to Maslach, "the main features of burnout include loss of energy, lack of motivation, negative attitude towards others, and actively withdrawing from others".

According to Kanel (2008), "the physical diseases that are the distinctive effects of burnout syndrome are anaemia, iron deficiency, hypothyroidism, diabetes, adrenal insufficiency, heart failure, copd, kidney failure, Lyme disease, HIV, tuberculosis, malignancies, lymphoma, leukaemia, inflammatory system diseases". Besides, Kanel (2008) has stated the psychosomatic / psychiatric diseases that are the distinctive effects of burnout syndrome as follows: chronic fatigue syndrome, sleep disorders, nervous weakness, somatization disorder, depressive disorders, generalized anxiety disorder, post-traumatic stress, eating disorders and substance abuse.

"It has been stated in studies on this subject, the symptoms observed in individuals suffering burnout syndrome occur in personality traits and working conditions. Initially, the prevailing view was that burnout and emotional stress occur in people with regular income". (Bauar et al. 2003). Today, it is seen that people working in many different professions could suffer from this syndrome.

According to Freudenberger (1974), burnout is the sum of the individual's feelings of failure, weariness, and exhaustion. There are also studies that define burnout as a decrease in an individual's energy due to work conditions (Cüceloğlu, 1994; Baltaş and Baltaş, 1993). The most widely accepted definition of burnout today is the three-dimensional definition made by Maslach and Jackson (1981). Burnout has been defined as a state of emotional exhaustion, depersonalization, and loss of sense of personal accomplishment that frequently occur especially in those working in professions that require interaction with others.

Human behaviours are not so simple as it seems from the outside, moreover, have a complicated and multivariate structure. Burnout is also one of these complex human behaviours. Various models have been put forward to understand this complexity and one of these models is the Cherniss Burnout Model. This model considers burnout as a process spread over time. According to the Edelwich and Brodsky Burnout Model, burnout occurs because of work, wages, lack of appreciation, problems related to the current situation and some bureaucratic pressures. In the Pines Burnout Model, burnout is handled as the effects of environments that exhaust individuals emotionally on them. In the Perlman and Hartman Model, they paid attention to personal variables and the way individuals interpret their environment. In the Scott Meier Burnout Model, burnout is a situation arising from the expectation of punishment in the reward-punishment expectation system of the employees. The Susan and Sheridan Burnout

Model, based on Ericson's theory of personality development, considers burnout as a four-stage developmental structure. Leiter Burnout Model focuses on emotional burnout in employees. In the Maslach Burnout Model, Maslach considered burnout as emotional exhaustion, depersonalization, and lack of personal accomplishment.

“Burnout manifests itself in various ways in individuals. Emotional exhaustion refers to the feeling of being tired and emotionally worn out, and the feeling of being overloaded at work” (Özer, 1998). “It occurs as a lack of energy and the feeling that the individual's emotional resources are exhausted” (Torun, 1995). Emotional burnout is one of the negative aspects of emotional attitudes. Emotional attitude shows the level of commitment of individuals towards something like their jobs. It is often seen that there is a deep change in the emotional attitudes of people towards their freshly started jobs over time. It is difficult to attribute this change to one or more factors. It is thought that the burnout indicators of administrators working at schools, in which individuals are the main input and processing factor, show more complexity. “Depersonalization is one of the stages of burnout in individuals. The depersonalization stage is when employees make derogatory remarks to people dealt with and display a careless and cynical attitude” (Seligman, 1990). “The individual fails to provide the necessary assistance and service. They sincerely desire that other people leave their lives and leave them alone” (Örmen, 1993). It has been thought that this dimension of burnout in school administrators can have negative consequences for both school administrators and other stakeholders such as students, parents, and so forth. School administrators who experience this dimension of burnout behave offensively to people in their relations, do not give a value for people and do not be considerate of their unique behaviours, and do not give importance to their feelings.

“Another dimension of burnout is the lack of personal achievement. At this stage, negative thoughts about people push individuals to think negatively about themselves. Individuals perceive themselves as inadequate in various work-related events” (Seligman, 1990). In such cases, negative emotions in individuals reduce their motivation. However, when we look at educational institutions human is the raw material of educational institutions working with an objective and goal-oriented approach. Individuals with a decreased sense of personal achievement cannot be beneficial to their institutions in a competitive age. Such administrators delay and ignore the problems, instead of overcoming them.

“According to the research conducted by the American Stress Institute, teaching was determined as one of the groups with high stress levels” (Baltaş & Baltaş, 1993). “The fact that teaching is a profession that involves high level of stress has been discussed in many previous studies” (Pearson & Moomaw, 2005; Pearson & Hall, 1993). In Turkey, school administration has not seen as a professional profession. Teachers are the main resource of school administration. According to studies conducted in Turkey and in the world, teaching is one of the highest burnout level professions. Teachers can get in the process of burnout while teaching. Thus, it is thought that some of the school principals experiencing burnout syndrome experience this process while they are teaching. According to Baltaş (1993), “since the teaching is a profession that requires constant effective communication and exhausts the individual emotionally, it is considered as one of the professions with a high probability of burnout”.

To understand what stress is and how it leads individuals to burnout, it is necessary to know the source of it. The dominance of the source of stress varies from person to person; chiefly, the source of stress is viewed as internal and external stress. External stress is mostly seen as pressure from family, friends, institutions, workplace. On the other hand, the internal stress is determined by the pressure and expectations of the individual. The daily lives of individuals include various processes. In this process, there are social factors that lead individuals to burnout. These factors show themselves mostly in the form of economic, political, war and terror. Another important factor that leads individuals to burnout is environmental factors.

Environmental factors, on the other hand, can be said to be negative changes in the structure of climatic conditions, weather, and natural resources.

“Individuals develop various reactions when they stressed. The alarm reaction is one of these reactions. At this stage, the individuals decide to resist or run away from stress. The alarm reaction is the organism's perception of the external stimulus as stress” (Altıntaş, 2014). In the resistance stage, the individual struggles to cope with stress, and at this stage, changes occur in the individual's emotions and behaviours. If the sources of tension in the adaptation phase do not decrease, the individual's power decreases and the individual passes to the stage of disappointment, where serious deviations in his behaviour takes place. (Güçlü, 2001; Cüceloğlu, 1994).

The last point that Maslach and Jackson (1981) determined is the feeling of personal failure that increases with the burnout syndrome. In the burnout stage, individuals begin to feel unhappy and no longer find themselves inadequate. When determining the level of professional burnout, the decrease in the sense of personal achievement has a negative effect. These three dimensions interact with each other.

Table 1. Burnout Syndrome Process in 7 Phases (Kanel, 2008)

Progress	Phase	Symptoms
Chronic Stress	1. First Symptoms	Increasing Desires, Increasing Overtime, Fatigue, Involuntary Overreaction
Burnout	2. Declining Engagement	Decreased Social Relationships, Reluctance to Work, Concentration on Self Benefit
Depressive Symptoms	3. Emotional Reactions	Feelings of Inadequacy, Pessimism, Emptiness, Hopelessness, Lack of Energy, Despair, Blaming Others or the System
	4. Decreasing	Cognitive Ability, Motivation, Creativity and Discernment
	5. Abnegation	Ignoring Emotional and Social Life, Cognitive Interests
Clinic Depression	6. Psychological Reactions	Tension, Pain, Sleep Disorders, Digestive Complaints, Lack of Recovery in Leisure, Changed Eating Habits, Substance Use
	7. Depression and Despair	Sense of Meaninglessness, Negative Life Attitude, Existential Helplessness, Suicidal Thoughts, or Intentions

Burnout is a very common syndrome among workers. In today's world where living conditions are getting more complicated, a significant part of the employee experience burnout syndrome at any stage of their work or private lives. Individuals with burnout syndrome may not suddenly encounter in this situation. Especially the problems that they cannot solve in a certain period of their lives bring them to this stage. Individuals working at the administration level take important decisions in their daily lives. Decision taking is the vital part of administration. Administrators may have to take decisions with high managerial power. Both the decision-taking the implementation process of the decision put administrators under stress. Sometimes administrators may have to take vital decisions. Especially in such cases, it is thought that the burnout process accelerates.

Burnout is one of the most important problems faced by school principals today. It is witnessed that the digital age makes people's lives easier; however, sometimes complicates their behaviours. The increasing importance of technology in human life forces schools to change. This change process leads to increased expectations of teachers, parents, and students, as well as time pressure and stress, which in turn reveals burnout.

Schools are people-oriented institutions. It is seen that the existence of problems arising from both inside and outside of the institution lead school administrators to the burnout process by producing long-term emotional and interpersonal stress in the workplace. The ability of school

administrators to show the desired performance in their profession depends on their mental well-being. Excessive burnout is one of the most important problems they encounter while working.

It is crucial to determine the burnout experience in school management and to evaluate how it develops, as well as to reveal the organizational reasons for it. Therefore, determining the burnout levels of school administrators and revealing the factors that cause burnout can ensure that school administrators are least affected by this syndrome. In this study, burnout of school administrators at different levels was discussed in terms of different variables.

This study aims to reveal the burnout levels and their reasons of school administrators working in secondary education institutions according to some variables such as gender, marital status, age, seniority, etc. In line with the problem statement, answers were sought for the following sub-problems:

1. What is the burnout level of school administrators?
2. Do school administrators' burnout levels differ according to the following variables?
 - a. Gender
 - b. Seniority in administration
 - c. Marital status
 - d. Educational background
 - e. School type
3. Does the relationship between the burnout levels of school administrators in İzmir and Ağrı differ according to the following variables?
 - a. Gender
 - b. Seniority in administration
 - c. Marital status
 - d. Educational background
 - e. School type

METHOD

RESEARCH DESIGN

Since this research aimed to describe the burnout levels of school administrators working in secondary education institutions, the quantitative survey model was used.

POPULATION AND SAMPLE

The population of this research consists of 277 high schools in İzmir and 51 high schools in Ağrı provinces in the 2019-2020 academic year, in Turkey. Both provinces, which constitute the population of the research, have their own sociological characteristics. The population and sample of the research were determined in cooperation with the provincial national education authorities. Data about the population were obtained by using the official data of the national education directorates.

A sample of administrators was formed from the population randomly, which consists of 186 administrators working in the state high schools located within the borders of İzmir and Ağrı in the 2019-2020 academic year. The sample size was considered when determining the schools in İzmir. On the other hand, because Ağrı has a few numbers of secondary schools, 41 of the 51 high schools that responded to the questionnaires were included in the study.

DATA COLLECTION TOOLS AND DATA ANALYSIS

The data collection tool in the research consists of a personal information section and a scale. Maslach Burnout Inventory was used in the second part. The reliability of the subscales used in the study was examined with the Cronbach's Alpha coefficient. Cronbach Alpha was 0.835 for Emotional Exhaustion, 0.716 for Depersonalization and 0.761 for Personal achievement.

Analyses were made using the SPSS 23.0 program. In the data analysing process, frequencies (number, percentage) are given for categorical variables (e.g., gender), and descriptive statistics (mean, standard deviation, minimum, maximum) are given for numerical variables. Normality assumptions of numerical variables were examined by Kolmogorov Smirnov analysis, and it was seen that these variables did not show a normal distribution ($p < 0.05$). Thus, non-parametric statistical methods were used in the study.

The relationship between two independent numerical variables was interpreted with Spearman's Rho correlation coefficient. Differences between two independent groups were analysed with the Mann Whitney U and differences between more than two independent groups were analysed by Kruskal Wallis tests. Analyses were at 95% confidence level and 0.05 significance level.

FINDINGS

Table 2. Distribution Gender of Participants

Gender	Frequency	Percentage
Male	156	83,9
Female	30	16,1
Total	186	100,0

Table 2 shows that 156 male (%83,9) and 30 female (%16,1) administrators participated in this research. This states that the majority of those who prefer school management in Turkey are male. There is a common belief in the society that teaching is a female profession. It is interpreted females do not prefer taking part in administration, which is a difficult profession, especially because the role of motherhood is difficult.

Table 3. Distribution According to Marital Status

Marital Status	Frequency	Percentage
Married	163	87,6
Single	23	12,4
Total	186	100,0

As it is viewed in Table 3. 163 of the participants (%87,6) in the study are married and 23 of them (%12,4) are single. It is seen that a significant part of administrators is married because they have a certain period of teaching process before working as an administrator.

Table 4. Distribution According to High School Type

	Frequency	Percentage
Regular High School	109	58,6
Vocational High School	77	41,4
Total	186	100,0

As it is viewed in Table 4. 109 Regular high school teachers (%58,6) and 77 vocational high school teachers (41,4) participated in the study. Considering the percentage of vocational high schools, it is observed that the number of them is higher in İzmir than Ağrı.

Table 5. Distribution According to Age Groups

Age range	Frequency	Percentage
20-30 years	46	24,7
31-40 years	71	38,2
Over 40 years	69	37,1
Total	186	100,0

Table 5 shows that 24.7% of the participants in the study are in the age range of 20-30, 38.2% are in the age range of 31-40 and 37.1% are in the age range of 40 and over. Although school administration is perceived as a job after a certain age by the society, according to these data, it is seen that it is preferred by younger teachers. Therefore, it can be said that younger teachers also prefer school administration.

Table 6. Distribution According to Education Levels

Education Level	Frequency	Percentage
Graduate	152	81,7
Postgraduate	34	18,3
Total	186	100,0

As it is viewed in Table 6. 152 graduate (%81,7) and 34 postgraduate (%18,3) administrators participated in this study. It was observed that most of the administrators did not get any training after their graduation from faculty. It is conducted that the number of postgraduate students among school administrators and the tendency of teachers to receive postgraduate education have increased in recent years.

Table 7. Distribution of Seniority of Participants

Experience	Frequency	Percentage
1-10 years	72	38,7
10-20 years	49	26,3
20-30 years	65	34,9
Total	186	100,0

Table 7 states that 38.7% of the participants have 1-10 years, 26.3% of them 10-20 years and 34.9% of them 20-30 years of seniority.

Table 8. Distribution by Place of Residence

Provinces	Frequency	Percentage
Ağrı	41	22,0
İzmir	145	78,0
Total	186	100,0

Table 8 shows that 41 of the participants (%22) live in Ağrı and 145 of them (%78) live in İzmir. According to population ratios, İzmir is Turkey's third largest city, while Ağrı is one of Turkey's smaller cities.

Table 9. Descriptive Statistics, Reliability, and Normality of Maslach Burnout Inventory

	Mean	Sd	Minimum	Maximum	Cronbach Alfa	Kolmogorov Smirnov(p)
Emotional exhaustion	29,61	5,77	12	37	0,835	.000
Depersonalization	12,02	3,36	5	20	0,716	.000
Personal Achievement	22,05	5,26	17	40	0,761	.000

Table 9 shows that Items of 1, 2, 3, 6, 8, 13, 14, 16 and 20 in the scale are in emotional exhaustion, items of 5, 10, 11, 15 and 22 in depersonalization, and items of 4, 7, 9, 12, 17, 18, 19 and 21 are intended to measure the dimension of personal achievement. Scores were obtained by summing each subscale separately among themselves. High scores on emotional exhaustion and depersonalization indicate that burnout is high in these sub-dimensions. In the personal achievement dimension, since the scores are recoded in reverse, getting a low score indicates low burnout in this sub-dimension, in other words it shows high personal achievement. Emotional exhaustion levels of the participants were 29.61 ± 5.77 , depersonalization levels were 12.02 ± 3.36 and Personal Achievement levels were 22.05 ± 5.26 . According to the Cronbach's Alpha reliability analysis, it was observed that the reliability of the three subscales was sufficient ($\alpha > 0.700$). Kolmogorov Smirnov test was performed to check whether the sub-dimensions were normally distributed, and it was observed that all three sub-dimensions did not show normal distribution ($p < 0.05$).

Table 10. Results of Mann Whitney U Test According to Genders of Participants

		Frequency	Mean	Sd	M.U.	p
Emotional exhaustion	Male	156	30,00	5,97	1723,5	.022*
	Female	30	27,57	4,10		
Depersonalization	Male	156	12,05	3,23	2306,5	.900
	Female	30	11,83	4,05		
Personal Achievement	Male	156	22,14	5,43	2248,0	.731
	Female	30	21,60	4,31		

*p<0,05 (Statistically significant)

According to the results of Mann Whitney U test, Table 10 shows that there was no statistically significant difference between male and female participants in terms of depersonalization and personal achievement dimensions ($p>0.05$); however, a statistically significant difference was found in dimension of emotional exhaustion ($p<0.05$). Accordingly, the emotional exhaustion subscale scores of male participants were significantly higher than female participants.

Table 11. Results of Mann Whitney U test According to Marital Status

		Frequency	Mean	Sd	M.U.	p
Emotional exhaustion	Married	163	29,31	5,66	1271,5	.012*
	Single	23	31,74	6,21		
Depersonalization	Married	163	12,03	3,43	1712,0	.497
	Single	23	11,91	2,86		
Personal Achievement	Married	163	22,10	5,29	1873,0	.995
	Single	23	21,70	5,11		

*p<0,05 (Statistically significant)

Table 11 indicates that there was no statistically significant difference between married and single participants in terms of depersonalization and personal achievement dimensions ($p>0.05$). On the other hand, a statistically significant difference was found in the dimension of emotional exhaustion ($p<0.05$). Hereunder, single participants' scores of emotional exhaustions were higher than married ones.

Table 12. Results of Mann Whitney U Test According to School Types of Participants

		Frequency	Mean	Sd	M.U.	p
Emotional exhaustion	Regular High School	109	29,26	6,48	4179,0	.961
	Vocational High School	77	30,10	4,59		
Depersonalization	Regular High School	109	12,02	3,93	3626,5	.111
	Vocational High School	77	12,01	2,37		
Personal Achievement	Regular High School	109	22,92	6,37	4179,0	.961
	Vocational High School	77	20,83	2,64		

Table 12 shows that According to the Mann Whitney U test results, there was no statistically significant difference between Regular and Vocational High Schools in all dimensions ($p>0.05$).

Table 13. Results of Kruskal Wallis Test According to Age Periods of Participants

		Frequency	Mean	Sd	K.W.	p
Emotional exhaustion	1.20-30 Years	46	32,63	4,64	17,624	.000* Diff: 1-2,3
	2.31-40 Years	71	28,48	6,12		
	3.Over 40 Years	69	28,75	5,43		
Depersonalization	1.20-30 Years	46	13,76	2,57	26,803	.000* Diff: 1-2,3 2-3
	2.31-40 Years	71	10,89	3,35		
	3.Over 40 Years	69	12,01	3,38		
Personal Achievement	1.20-30 Years	46	21,11	4,40	8,366	.015* Diff: 2-1,3
	2.31-40 Years	71	23,35	5,88		
	3.Over 40 Years	69	21,35	4,89		

*p<0,05 (Statistically significant)

Table 13 indicates that According to Kruskal Wallis test results, statistically significant differences were found between age groups in emotional exhaustion, depersonalization, and personal achievement dimensions ($p < 0.05$). Table 13 shows that participants of 20-30 years' period have significantly higher scores in the Emotional exhaustion and depersonalization dimensions than the period of 31-40 years and the over 40 years. The depersonalization subscale scores of the participants over the age of 40 were significantly higher than those in the 31-40 age group. Participants of 31-40 years' period have significantly higher scores in the personal achievement dimension than the period of 20-30 years and over 40 years' old.

Table 14. Results of Mann Whitney U Test According to Educational Backgrounds of Participants

		Frequency	Mean	Sd	M.U.	p
Emotional exhaustion	Graduate	152	28,34	5,59	594,0	.000*
	Postgraduate	34	35,29	1,70		
Depersonalization	Graduate	152	11,35	3,34	595,0	.000*
	Postgraduate	34	15,00	1,02		
Personal Achievement	Graduate	152	23,00	5,36	517,5	.000*
	Postgraduate	34	17,82	0,90		

* $p < 0,05$ (Statistically significant)

Table 14 indicates that there is a statistically significant difference between graduate and postgraduate participants in emotional exhaustion, depersonalization, and personal achievement dimensions ($p > 0.05$). Emotional exhaustion and depersonalization subscale scores of participants with a postgraduate education level are significantly higher than those with graduate education. Personal achievement subscale scores of participants with graduate education level are significantly higher than those with postgraduate education.

Table 15. Results of Kruskal Wallis Test According to Seniority Periods of Participants

		Frequency	Mean	Sd	K.W.	p
Emotional exhaustion	1.1-10 Years	72	30,76	6,74	12,429	.002* Diff: 1-2
	2.10-20 Years	49	27,47	5,72		
	3.20-30 Years	65	29,94	4,03		
Depersonalization	1.1-10 Years	72	12,53	3,62	20,761	.000* Diff: 2-1,3
	2.10-20 Years	49	10,33	3,43		
	3.20-30 Years	65	12,72	2,52		
Personal Achievement	1.1-10 Years	72	22,81	5,71	21,379	.000* Diff: 3-1,2
	2.10-20 Years	49	24,16	5,97		
	3.20-30 Years	65	19,63	2,65		

* $p < 0,05$ (Statistically significant)

Kruskal Wallis test results in Table 15 indicates that there are statistically significant differences between participants regarding their seniority periods in emotional exhaustion, depersonalization, and personal achievement dimensions ($p > 0,05$). Participants with 1-10 years of seniority have significantly higher scores on the Emotional Exhaustion dimension than those with 10-20 years of seniority. Also, participants with 10-20 years and 20-30 years of seniority have significantly higher scores in the Depersonalization dimension than those with 10-20 years of seniority. Moreover, participants with 1-10 years and 10-20 years of seniority have significantly higher scores in the Personal Achievement dimension than those with 20-30 years of seniority.

Table 16. Results of Mann Whitney U Test According to Settlements of Participants

		Frequency	Mean	Sd	M.U.	p
Emotional exhaustion	Ağrı	41	23,66	6,62	1086,5	.000*
	İzmir	145	31,29	4,21		
Depersonalization	Ağrı	41	8,98	3,87	1324,5	.000*
	İzmir	145	12,88	2,64		
Personal Achievement	Ağrı	41	29,73	4,66	201,0	.000*
	İzmir	145	19,88	2,82		

* $p < 0,05$ (Statistically significant)

Mann Whitney U test results in Table 16 shows that there are statistically significant differences between participants regarding their settlements in emotional exhaustion, depersonalization, and personal achievement dimensions ($p < 0,05$). Emotional Exhaustion and Depersonalization subscale scores of the participants living in İzmir are significantly higher than those living in Ağrı. However, Personal Achievement subscale scores of the participants living in Ağrı are significantly higher than those living in İzmir.

Table 17. Spearman's Correlation Results Regarding the Correlation between Sub-Dimensions of Maslach Burnout Inventory

		Emotional exhaustion	Depersonalization	Personal Achievement
Emotional exhaustion	r			-0,402*
	p			0,000
Depersonalization	r	0,615*		
	p	0,000		
Personal Achievement	r		-0,536*	
	p		0,000	

* $p < 0,05$ (Statistically significant)

Table 17 indicates that as a result of the correlation analysis, there is a strong positive correlation between the Emotional Exhaustion and the Depersonalization sub-dimensions. Moreover, there is a moderately negative correlation between the depersonalization and personal achievement dimensions. There is a moderately negative relationship between Personal Achievement and Emotional Exhaustion dimensions.

DISCUSSION AND CONCLUSION

Burnout has been one of the trendy research topics in recent years. In this study, burnout levels of administrators of secondary schools were studied. According to the results of the research, school administrators show burnout behaviours in the emotional exhaustion, depersonalization, and personal achievement sub-dimensions of burnout. Many studies have been conducted on burnout; however, there are strictly limited studies with school administrators. Following studies in the literature support the research results.

Sarros examined the factors affecting burnout in his study with more than 120 school administrators in Western Canada in 1988. It was found that school administrators were affected differently by burnout styles related to both organizational and individual characteristics such as interpersonal relationships, workload and need for recognition. In a study conducted on teachers by Droogenbroeck, Spruyt, and Vanroelen (2004) in Belgium, it was found that workload irrelevant to education causes emotional burnout. In the study conducted by Babaoğlu, Altun, and Çakan (2010), it was concluded that administrators experienced burnout mostly in the sub-dimension of emotional exhaustion and at least in the sub-dimension of depersonalization. In their study, Aksanaklu and İnandı (2018) obtained low level of burnout in the dimensions of emotional exhaustion, depersonalization, and personal achievement of school administrators.

According to the results of the study conducted by Levinson, Thomas and Orf with a total of 512 school administrators in Ohio in 1996, it was concluded that the administrators wanted school psychologists to spend less time than they thought they spent in assessment and management activities, and they wanted them to spend more time than they spent in all other roles. They concluded that these perception differences lead both administrators and school psychologists to burnout. In the study conducted by Beusaert, Froehlich, Devos, and Riley, (2016), it was noticed that the decrease in social support in school principals predicted stress and burnout correspondingly, but burnout differed according to the type of social support.

DeMatthews, Carrola, Reyes and Knight found in their study in 2021 that the covid-19 epidemic, school closures, reopening and social distance protocols make burnout more violent for administrators.

Lim, in their study in Singapore in 1995, stated that school administrators experienced high levels of mental and physical health problems due to pressures at work. Wadesango and Gudyanga (2016) conducted a study on how stress affects school principals and how this effect turns into burnout. They stated that the consequences of stress and burnout are blood pressure, diabetes, dizziness, ulcers, heart disease, headaches, anxiety, frustration, fatigue, tension, boredom, irritability, threat, depression, low self-esteem, guilt, and shame. Also, it was suggested to change the school environment to minimize the professional stress of school principals. Swanson and Douglas found in their study in 1987 that stress factors and behavioural symptoms of stress lead to burnout in administrators.

According to the research findings, the emotional exhaustion dimension scores of male participants are significantly higher than female participants. Yıldırım, in his study in 2009, stated that male administrators experienced a significantly higher level of emotional exhaustion than female administrators, which support the findings of the present study. Özer (1998) explained that women experience more burnout than men. İnandı, Tunç, and Uslu (2013) revealed that female academics had difficulty in taking the responsibilities of family and business life together, were exposed to career barriers much more, and experienced loneliness. In this respect, the studies are not similar to our study.

According to the findings of the research, the emotional exhaustion levels of single administrators are higher than that of married ones. The results of the studies conducted by Yıldırım (2009) and Ensari and Tuzcuoğlu (1999) do not coincide with the results of the research. People can alleviate some of their problems by sharing them with their families. According to the study, marriage has a positive effect on solving personal problems. These results of the research can be interpreted in this way.

Participants of 20-30 years period have significantly higher scores in the Emotional exhaustion and depersonalization dimensions than the period of 31-40 years and the over 40 years. While the results of Bilgetekin's studies in 2020 support this, it does not coincide with the results of Koçak's study in 2009.

Emotional exhaustion and depersonalization subscale scores of participants with a postgraduate education level are significantly higher than those with graduate education. Personal achievement subscale scores of participants with graduate education level are significantly higher than those with postgraduate education. As the education level of people increases, their expectations increase. It is thought that people experience burnout when they cannot find a living space that meets their expectations. These results of the research do not coincide with the findings of the research conducted by Bilgetekin in 2020.

According to the findings regarding the seniority of participants having 1-10 years of seniority have significantly higher scores on the Emotional Exhaustion dimension than those with 10-20 years. Also, participants with 10-20 years and 20-30 years of seniority have significantly higher scores in the Depersonalization dimension than those with 10-20 years of seniority. The study conducted by Yıldırım in 2009 supports these findings.

Mann Whitney U test results indicate that there are statistically significant differences between participants regarding their settlements in emotional exhaustion, depersonalization, and personal achievement dimensions. Emotional Exhaustion and Depersonalization subscale scores of the participants living in İzmir are significantly higher than those living in Ağrı. However, Personal Achievement subscale scores of the participants living in Ağrı are significantly higher than those living in İzmir. We can interpret these results in different ways. Ağrı has the lowest share of national income in Turkey. Ağrı is a settlement where there is no complexity in the modern sense, and parents in Ağrı have a low level of education, which may

cause a decrease in demands from school administrations. Because Ağrı is small and has few pressure groups may reduce the stress factors affecting school administrators. For the reasons, it is thought that the factors that stress the school administrators and lead to burnout in Ağrı are less than those in İzmir. On the other hand, İzmir is the third largest city of Turkey and has a high level of complexity. There are many factors of pressure on school administrators. It is thought that these and similar factors push administrators to burnout. Aksu and Baysal, in their study in 2005, found that primary school principals suffered from burnout in the sub-dimensions of emotional exhaustion and personal achievement, depending on the settlement, which supports the results of the present research.

SUGGESTIONS

1. Future studies should be researched on the burnout of school administrators.
2. The burnout levels of school administrators working in different places should be compared.
3. Burnout studies should be compared according to secondary school type.
4. Solutions should be suggested, according to the results of these studies,

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HOW IMMIGRANT AND REFUGEE PARENTS' EXPERIENCES RELATED TO THEIR CHILD'S SCHOOL SYSTEM DIFFERENT IN CANADA

Abstract: The purpose of this qualitative research study was to determine the experiences of a group of immigrant and refugee parents related to their child's school system and interactions with the school personnel, including the teachers, administrators, and school counselors in Canada. Twelve parents who immigrated from Turkey and living in the Greater Toronto Area participated in semi-structured interviews. Results showed that these parents' experiences were surprisingly much more positive compared to the experiences of immigrant parents in many other parts of the world, including in the U.S. These parents felt welcome and accepted by their child's school personnel. They also reported not experiencing any discrimination due to their cultural, ethnic, and/or racial backgrounds. The reasons for this difference, and recommendations in relation to how to make immigrant and refugee parents' experiences related to their child's school system positive, are discussed.

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INTRODUCTION

The immigrant population in the world has increased significantly in recent years. Immigrant families face a number of adjustment and acculturation issues (e.g., Van Oudenhoven et al., 2006) and are considered at-risk for developing psychological problems (Fung & Wong, 2007). The children of immigrants face an additional set of challenges in school. While trying to adjust and acculturate, these children, in many cases, are expected to take on adult roles by serving as a translator for their parents (Trickett & Jones, 2007). These children are further put at risk when their parents do not actively involve themselves in their schooling process due to race, class, cultural differences, adjustment issues, and/or a low level of acculturation into the mainstream host culture (e.g., De Gaetano, 2007; Farver et al., 2007).

For some parents, even though they may want to be involved in their children's school system, navigating their children's school system could be challenging, especially for the parents who are not familiar with the Canadian school system (Perreira et al., 2006). Moreover, low English proficiency and not having access to a translator might also impede the parents' engagement level with their children's school (Ramirez, 2003). In one particular study, bilingual communication and general communication problems were reported by Latinx parents as two major barriers that caused them to be less active with their child's school system (Lynch & Stein, 1987).

A meta-synthesis by Baquedano-Lopez et al. (2013) also indicated that the majority of immigrant parents face two specific obstacles: "language barriers and insufficient familiarity with the educational system of the host country" (p. 369). This finding has been confirmed by another meta-synthesis (Antony-Newman, 2019). Parents who have a lower level of formal education and are working-class could face additional challenges when they try to participate in their child's formal education (Al-deen & Windle, 2015; Carreon et al., 2005).

Evidence from the literature also suggests that the cultural belief, especially among low-income families, that all school matters related to a child's education should be deferred to teachers may further prevent parents' willingness to get involved (Sohn & Wang, 2006). Operating with their educational experiences back home, immigrant parents may have misunderstandings in relation to their role in their child's learning compared to parents who are native to the host country (Baquedano-Lopez et al., 2013; Yakhnick, 2015).

Finally, the perception of parents in relation to whether they are welcome in their child's school and the overall school climate could affect their involvement in their child's school (Baquedano-Lopez et al., 2013). Immigrant parents often report being discriminated against due to their race and ethnicity (see e.g., Martin Romero et al., 2021). The fear of being discriminated against may deter immigrant parents from interacting with the school personnel at their child's school. An additional factor that might exacerbate the problem is that teachers may lack knowledge related to the culture of immigrant groups (Andrews, 2013), and this may negatively affect their approach or attempts to make parents feel welcome in their child's school.

Academic underachievement of some of the immigrant children has been well-documented in the literature (e.g., see Alberta Advanced Education and Technology, 2006 for immigrant and refugee children; Goldenberg, 1996 for Latino/a immigrant children). In addition, the research question of how parental school involvement helps children's academic success has been examined by different researchers. The literature presents strong evidence that parental involvement affects adolescents' learning and academic achievement (Hill & Tyson, 2009). Fan and Chen (2001), for example, analyzed quantitative data presented in the literature regarding students' academic achievement and parental school involvement, which included home supervision and assistance with homework, educational expectations and values for academic achievement, and school contact and school participation. Their meta-analysis

showed that a higher level of parental involvement was related to higher levels of academic achievement.

The literature shows that the size of the immigrant population from Turkey is rising rapidly in North America, particularly in Canada (Ataca & Berry, 2002; Senyurekli & Detzner, 2008). While European countries have been a traditional destination for immigrant families from Turkey, as the process of immigration to these countries became harder, Canada turned into another popular destination. There is some evidence in the literature indicating that immigrants from Turkey show different acculturation outcomes in Canada. For example, immigrants that belong to low socioeconomic status and are working-class experience lower levels of acculturation (e.g., Ataca & Berry, 2002). Lower levels of acculturation, in return, may affect parents' level of school involvement. In addition to what the literature presents, Turkish parents may hesitate to get in touch with their children's school due to having a cultural belief that any educational matters about the child should be decided by the school and due to feeling embarrassed by their level of English proficiency. However, in order to improve these immigrant families' adjustment and acculturation outcomes related to their child's schooling, we first need to empirically identify their experiences and the challenges they may be facing in their new country.

Based on the research and shortcomings of the literature presented above and the observation of general difficulties immigrant parents experience in the Greater Toronto Area, it would be important to study parental involvement to generate more knowledge and to determine how factors related to parents or the school system may be helping or hurting the parents' willingness and/or the type of interaction with their child's school system.

PURPOSE OF THE STUDY

The general purpose of this research study was to collect data to contribute to the overall literature concerning the acculturation and adjustment experiences of newcomer families. The study focused on immigrant/refugee parents from Turkey as there is very little research related to these families in North America. More specifically, the study explored experiences of these parents in interacting with their children's school system in order to:

- a. Determine immigrant parents' level of involvement with their children's school
- b. Determine the level of comfort immigrant parents have and the challenges these parents face when interacting with their children's teachers, principal, or other school personnel
- c. Determine the nature of these experiences (positive versus negative)
- d. Determine the needs of immigrant parents in relation to interacting positively with their children's school system.

METHOD

SAMPLE

Twelve parents living in the Greater Toronto Area in Canada participated in this study. This location was chosen for data collection because it is one of the metropolitan areas in North America housing the largest number of immigrants/refugees from Turkey. Either the father or the mother of the school-aged child was interviewed. There were five fathers and seven mothers. Half of the participants had only completed a 5th-grade level education. Two parents had completed the 8th grade, one 9th grade, and two parents were college graduates. Their age ranged from 29 to 48. The parents worked in a number of different professions/jobs (e.g., engineer, auto technician, beautician, construction worker). The length of time they had been in Canada since immigration ranged from 5 years to 24 years.

PROCEDURES

After receiving approval from the research ethics board, recruitment of participants was done with the help of several community organizations in Canada (e.g., the Turkish Society of Canada). Potential participants were contacted and asked to participate in the study only if they had school-aged children living with them. The ones who wanted to participate in the study were contacted by phone to set up an appointment and were visited by the researcher to conduct the interview.

Interviews were conducted with parents from different backgrounds (e.g., different educational levels, different levels of English proficiency). One parent wanted to be interviewed in English; the others were interviewed in Turkish. The participants were asked open-ended questions, with prompts, regarding to their experiences with their children's school system, whether they experienced discrimination while interacting with their child's school personnel, barriers to positive interaction, and proposed solutions.

DATA ANALYSIS

In order to gather more in-depth information about the parents' experiences, qualitative data were gathered through interviews. The interview data were analyzed using thematic coding (Babbie & Benaquisto, 2010; Patton, 2002) in order to determine commonalities among different concepts and ideas that are shared by the immigrant parents. First, the researcher in this study reviewed the original data and created categories and themes. Later, another trained researcher reviewed these categories/codes against the data to confirm the validity of the analysis (Long & Johnson, 2000). The two researchers came together to resolve any disagreements.

FINDINGS/RESULTS

Below are the major themes that were determined based on the data analysis. Detailed information about each theme and quotes from the participants illustrating these themes are presented.

1. METHOD OF COMMUNICATION WITH SCHOOLS

Parents shared information about how the communication between themselves and their child's school system takes place. Before the students start high school (9th grade), the school sends a letter to the parents, with the dates of parent-teacher meetings and possible time slots that the parents could choose. If the document with the preferred appointment time is not returned to the school, a teacher will call the parent to follow up. Beginning in high school, parents receive a phone call, inviting them to come in for the parent-teacher conference. The parents also reported additional invitations to get in touch with the teachers. For example, one parent shared that their child's teacher sends them a note with the report cards, asking them if they would like to meet to discuss the report card.

"Every three months there is a parent-teacher day. Every teacher stays in their classroom. I visit each one of them and receive information about my child's progress."

"They send emails constantly. How we can work as a volunteer, volunteer opportunities...[like] fundraising, school trips." Haydar

"Until the 8th grade, the teacher sends a paper home and we choose the time to meet. In high school, they call us and give us an appointment...Twice a year we go see the teacher. But if there is a problem, they call us." Baki

"When teachers want to see parents, they send a paper home. They say they will give us appointment based on our availability. We tell them what time and go and see the teacher." Fatma

“When they send the report card home, they also ask there if we would like to meet.”
Mustafa

2. FEELING WELCOME IN THE CHILD’S SCHOOL SYSTEM

The parents reported feeling comfortable getting in touch with and speaking with their child’s teacher. They also reported feeling that they have easy access to the teachers, the principle, and the other school personnel such as the school counselors whenever they need to get in touch with them for additional reasons beyond the parent-teacher conferences, which are held twice a year.

“I feel like we are a family.” Funda

“They say welcome...with a smile on their face. When I take my son to school in the mornings, I run into his teacher. He says good morning and smiles.” Mehmet.

“[School personnel] usually say positive things, they treat us nicely.” Murat

When the parents present suggestions, the teachers take them seriously and try to address their request or feedback.

“[I asked] for more spelling activities and vocabulary homework for my son. The teacher said okay. I’ll write 7-8 words on a paper, study at home, and then we’ll practice more in school they said to my son.” Mehmet

Some parents used food to express their appreciation for having felt welcome.

"[The principal] is Greek...I make *börek* for him." Zeynep

3. COMPARISON OF EDUCATION AND SCHOOLS IN THE HOME COUNTRY WITH THE ONES IN CANADA

Majority of the parents found their education back home more rigorous. They expressed concerns and complained that the amount of homework given in Toronto schools was not sufficient. Some parents accepted later on that the system in Canada is different and that giving less homework may not necessarily be problematic.

“There is more discipline in the schools in Turkey. They give more homework. Here it is too much fun. But perhaps we are wrong. It does look like the [Canadian] system is better.” Mustafa

“My son had very little homework to do. I went to school and told the teacher to increase the amount of homework. He said to me that they follow a certain program and amount of homework. But he gave a book. He said my son could read it at home.” Mehmet

“I sometimes complain about the amount of homework. They assign very little in the elementary school. The kids say, daddy, we do a lot of homework during school, we study at school. I guess the school systems are different. I don’t worry about it anymore.” Murat

Parents enjoyed the school system in Canada more because they were not asked or made to donate money to the school for the purchase of supplies and other necessities.

“They treat us nice. They don’t discriminate. In Turkey, when they call the parents to school, they ask for money donations all the time. They say this is missing, that’s missing in school. Here, they say “what would you like us to do, how can we help you?”
Fatma

4. FEELINGS OF INCLUSION AND NONDISCRIMINATION

When asked about whether they felt discouraged getting in touch with their child’s school or felt discriminated against by the school personnel (teachers, administrators, school counselors, staff) due to their nationality or immigration status, all participants answered “no” or “not at all.” In fact, they expressed feeling welcome and being encouraged to contact the school.

"I never felt discriminated against. It's usually multicultural. From teachers to the janitorial staff, they are all from different races, religion. Because both groups, the one that serves and the one that is served are all different, I never felt or witnessed discrimination. Like we are one of them. We feel like a part of them." Haydar

"[Our] principal would recognize me as soon as he would see me. He would pay special attention to me." Baki

"We never felt discriminated against. We didn't witness any discrimination related to our children. My son's teacher was also my daughter's teacher. Whenever she sees me on the street, she'll start a conversation with me right away." Mustafa

"They know I am from Turkey, but I never felt being discriminated against because I am a foreigner." Murat

Even when the parents didn't speak English and went to the parent-teacher meeting with a translator, they still felt respected and not discriminated against.

"I go with a translator... I didn't feel discriminated against. They want to include the family. They want the child to be academically successful." Elif

"There is no discrimination here. Maybe there is, but I never experienced it. I've been living here for 16 years." Funda

There seemed to be many reasons for the fact that the parents felt respected, had a sense of inclusion, and felt not discriminated against.

4.1. RESPECT FOR THE PARENTS' CULTURE

The parents reported a general sense of being respected for their cultural background.

"They know about my culture...They do...I share food during my children's birthdays...I feel respected because of my culture." Zeynep

"At the end of the school year, they do an entertainment activity for the whole school. Everybody does something related to their own culture. For example, one of my friend's daughters performed the Turkish folk dance, *halay*." Funda

4.2 THE TEACHER BODY

The teacher body is quite multicultural. There are teachers who are Italians, Indians, Jewish, Iranian, French, Korean, etc.

"I know one French teacher, one gay teacher, one maybe Jewish teacher. There might be some Chinese background...Black, White." Zeynep

"There is Korean, Italian, French, Spanish. There was also a Turkish one." Baki

"Teachers themselves are usually either immigrants or children of immigrants. Their mom, grandfather, etc. would have taught them about their culture." Funda

4.3 MULTICULTURAL EVENTS

There are events where multiculturalism is celebrated. For example, the parents will be invited to the school for a social gathering, and they will be asked to cook something that belongs to their culture and bring this dish to the school to share.

"They do activities and get-togethers at school. They tell us to bring our own food, cuisine. *Kömbe*, *baklava*, if you know how to make them, bring them they say. Whatever you make in your kitchen and normally eat, bring them they say." Mehmet

4.4. VOLUNTEER ACTIVITIES

Parents reported that there were many volunteer opportunities at their child's school. They also reported receiving written and verbal invitations to volunteer in different activities.

“There is parent-teacher organization. You can volunteer there. I help with planning only because I have a small child at home. I attend meetings.” Funda

4.5 GOVERNMENT’S ATTITUDE TOWARD IMMIGRANTS

The parents reported that gathering background information about the nationality or ethnicity of the parents of students in schools is not legal. In Canada, immigrants are celebrated and welcomed. As part of the citizenship test, many questions about respecting multiculturalism are asked. These requirements of the citizenship tests may be planting the idea that the Canadian government accepts tolerance and inclusion of individuals with different cultural backgrounds.

“When you take the citizenship test in Canada, they focus on multiculturalism and nondiscrimination. The last five questions were about this. Following the Canadian rules and laws, there are a lot of people living here, everybody is equal, you can’t discriminate. If you don’t know these, even if you answer the other questions correctly, they don’t pass you.” Funda

“They don’t know we immigrated from Turkey until they speak with us because our kids were born here. Also, they don’t have the right to ask us where we are from. If they ask, we have the right to complain to the Ministry of Education.” Baki

5. DISCRIMINATION IN OTHER SETTINGS

While the parents themselves did not report any personal discrimination they experienced in their child’s school system, they did report about how discrimination could manifest itself in different settings. The participants reported hearing about discrimination in other settings such as in smaller towns where there are more White Canadians than immigrants. They also shared some incidents they heard taking place in schools and college settings, emphasizing that the discrimination was shown by White Canadian students to immigrant students, not by faculty or staff. The parents also reported that the teachers intervene and prevent this type of discrimination as much as possible.

“The biggest discrimination in Canada is between White people and Black people. Not by the teachers, but from students to the other students. Teachers try to prevent this, though.” Funda

“[We heard] some problems in colleges. My nieces are college students. Immigrant students experience problems. Not by the professors, but by the Canadian students.” Baki

“I am sure there are teachers that discriminate against the kids or the parents, but we never witnessed any.” Mustafa

DISCUSSION AND CONCLUSION

The main purpose of this research study was to try to partially fill the gap in the literature related to Turkish immigrant and refugee families living in Canada by determining these families’ nature of parental involvement in their child’s school system and the experiences/challenges they may be having in doing so.

The most important, yet surprising, finding in this study was that all of the parents indicated not having experienced any type of discrimination from their child’s school system, which included the teachers, administrators, school counselors, and staff. This finding contradicts previous research, showing that immigrants face different types of discrimination due to their race-ethnicity or culture in many parts of the world (e.g. Martin Romero et al., 2021).

While this finding is plausible, the parents’ statements help us understand the reasons or the factors that were in place that made these parents feel not discriminated against and have a sense of inclusion. First, parents reported about how they communicate or get in touch with

their child's school. It seems like the school system has it in place that if they do not hear from the parents in response to their written communication (e.g., invitation to attend parent-teacher conferences), they make it a priority to contact the parents by phone. This commitment and persistence by the school staff gave the parents the message that their participation/feedback is valued. Second, the parents felt respected for their ethnicity and culture. They were invited to participate in multicultural events at school where they shared information and performance (e.g., dancing) related to their culture. They were also invited to demonstrate and share the type of food they cook. This invitation and interest in the parents' culture helped the parents have a sense of feeling accepted and respected. Third, the teacher body and the other staff at the schools were rich in terms of cultural background. Interacting with school personnel that presented with a multicultural background made these parents feel accepted and welcome. Finally, the Canadian government's attitude toward immigrants further contributed to these parents feeling appreciated and accepted. As it is attested in the literature and stated by many organizations (e.g., Council on Foreign Relations, 2021), Canada is known as a country that values multiculturalism and welcomes immigrants. This positive attitude toward immigrants is clearly made known to others and expected of everyone. For example, the parents in this study stated that in order to pass the citizenship test in Canada, an individual would need to demonstrate a positive attitude and acceptance toward multicultural people.

Another important finding in this study was that even when the parents did not speak English and went to parent-teacher conferences or to different school meetings with a translator, they did not feel discriminated against and, on the contrary, felt respected. Previous research does indicate that language barriers and a low-level of host-country language proficiency may serve as barriers for immigrant parents to get involved and stay involved in their child's school (e.g., Baquedano-Lopez et al., 2013; Lynch & Stein, 1987)). The parents in this study felt comfortable and encouraged to interact with the school personnel even when they were relatively new to the country and had a very low-level of English proficiency. This finding underscores a crucial implication that the school personnel (teachers, administrators, school counselors, etc.) should approach these parents from a developmental perspective, know that their proficiency in the host-country's language will only increase as the time progresses, show patience as they are interacting with these parents, and accept and advocate the fact that communicating with parents through the help of a translator is perfectly fine.

In this study, only two participants had college degrees, and the rest of the parents had a limited level of formal education and held blue-color jobs. As it is reported in the literature, immigrant parents who have a lower level of formal education and are working-class could face additional challenges when they try to participate in their child's formal education (Al-deen & Windle, 2015; Carreo et al., 2005). The participants in this study may have successfully been able to deal with these challenges as a result of the welcoming attitude from their child's school system and a persistence that is displayed by the school to encourage parents to build a connection and to stay in touch with the school personnel.

Analyses in this study showed that the parents liked the volunteer system at schools, and volunteering itself may have helped with their feelings of being included and accepted; therefore, the school personnel should be encouraged to establish and maintain parent volunteer opportunities.

In this study, while the majority of the parents had a lower level of formal education, they did display a strong commitment to their child's schooling and academic success. This commitment may be related to the fact that in the Turkish culture, education is highly valued and there is a general belief that having a higher level of formal education, especially a college degree, will help a child to have better prospects in life.

Another result in this study indicated that parents were generally concerned and displeased with the amount of homework that was given to their children. They compared their education in

Turkey to the one they observed in Toronto and believed that the amount of homework given to their children was not sufficient. However, these concerns seem to have been calmed by the teachers' explanation about how they deliver an education based on the learning objectives and that some homework is completed during the school day. As a result, the school personnel working with Turkish immigrants could be informed about these cultural/educational differences and be encouraged to help with these parents' acculturation and adjustment processes by providing psychoeducational information in regard to how a level of homework lower than what the parents themselves had may not necessarily be problematic.

While the parents indicated not experiencing discrimination themselves, they did, however, report about discrimination taking place elsewhere and/or to other groups. Black students being discriminated against by the White students in schools was one observation they shared. One parent also shared his nieces experiencing some discrimination in college. Because the Turkish parents in this study were Caucasian, the race of their children may be helping them to avoid discrimination by their peers. Further research should be carried out to see how immigrant children themselves may be perceiving discrimination or what it is about a college setting that may be causing some immigrant students to experience discrimination. It should also be noted that the parents in this study lived in the Greater Toronto Area, a city with a large immigrant population. The experiences of immigrant parents living in other cities or smaller places where the number of immigrants is lower may be different and should be explored through further research.

In conclusion, the results of this study may be used around the world to help student-teachers and teachers understand the factors that contribute to the level of immigrant families' involvement in their children's education and learn ways to help parents get involved. The school-based involvement, as was gathered from the data, can include involvement in parent-school associations for event planning, participation in school events that are cultural-based, and regular attendance to parent-teacher conferences to review the student's educational outcomes. The findings of this study could also be used in the training and continued education of mental health practitioners (e.g. school counselors) in order to help them understand the experiences of these families and to increase their multicultural competency. The results in this study can further be used to help the teachers and the school mental health practitioners to develop multiculturally appropriate intervention methods and psychoeducational work with immigrant parents.

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COMPETENCY-BASED EDUCATION: THEORY AND PRACTICE

Abstract: This study aimed to reach a pro on Competency-Based Education (CBE) through the opinions of Educational Sciences experts and to review the literature on CBE. In this study, convergent design, one of the mixed methods research, was used, and a semi-structured questionnaire was used to collect data. The sample was selected through convenience sampling and consisted of 28 participants. In the study, the documents related to National and International Qualifications Frameworks, history of CBE, its comparison with traditional education, its implementation, and the challenges of CBE practices are reviewed. The findings revealed that there is a conceptual consensus among the experts on the concepts of skill and learning outcome, but no agreement on the use of “competence,” “proficiency,” and “qualification.” The study showed that the experts adopt the most up-to-date definitions of CBE, but it is often confused with Proficiency-Based Education. The study revealed that CBE focuses on the demonstration of competence when considering students' progress and measures it by formative assessments and that, in CBE, students' learning gaps are eliminated by supporting them at each stage.

Keywords: competency-based education, competency, skill, proficiency, qualification

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INTRODUCTION

Regarding the role and function of knowledge, the goal which Atatürk set in 1926 for teaching and learning is a goal that every educator should pursue. It is true that sometimes we as the country drift away or deviate from the goals Atatürk pointed to in the opening ceremony of the 4th legislative year of the 2nd Term of the Turkish Grand National Assembly. However, the aim of education in Turkey has been not only to turn knowledge into a tool, but also to enable students to develop certain skills. For example, as Bıkmaz (2013) stated, some of the aims of 1924 Elementary Schools Curriculum were to enable students develop inquiry skills through Agriculture and Health courses, observation skills through Geography, and communication skills through Musahabat-ı Ahlâkiye, a course on moral values, and it can be said that the integration of knowledge and skills was promoted through education. Apart from these, education has other functions. According to Moon (2007), education, by its nature, has two functions: it identifies and cultivates the potential abilities of each student, and it produces the manpower which is needed to carry out the maintenance of society and to support its development. While the former is the self-actualization function of education, the latter is the manpower production function. Keeping the balance between these two has been one of the major problems of nations. The amount of manpower lost its importance in the 21st century: improving the abilities and competencies of all individuals and developing further their potential have assumed importance. In other words, two functions of education conjoined by centering around the individual. Developing an individual's abilities and competencies is regarded as the only goal both for the business world and for the individual's self-realization. Unfortunately, nations are still in quest of providing an education pursuing this goal. One of these quests is Competency-based education.

As Gervais (2016) stated, Competency-based education (CBE) is “a synthesis between a liberal arts education and the professional education movement.” Briefly, it is the redesign of the system that has developed over the last two centuries (Everett 2019). Also, this reform has been considered among “innovative approaches and best practices” by the US Department of Education (ED 2011). In addition, increasingly, organizations such as the Carnegie Institute and the United Nations focus primarily on “competency-based learning” in education reform efforts (Sullivan and Downey 2015).

CBE puts forth the theory that the majority of students will achieve competence in the specified content area as long as they are given the opportunity and freedom to progress at their own pace and their learning experiences are structured according to their interests and needs (Priest, Rudenstine and Weisstein 2012; Steele, Lewis, Santibanez, Faxon-Mills, Rudnick, Stecher and Hamilton 2014; Sturgis and Casey 2018). With this theory, CBE challenges the notion that learning takes place at a certain speed and place (Le, Wolfe and Steinberg 2014; Ryan and Cox 2017; Spady 1977). In CBE, all students try to gain the desired level of mastery. For some, this will take a short time, while others will need more time to do so. In addition, some students may have already acquired the knowledge and skills before starting their current education level. They may have achieved these competencies through their previous experiences. However, showing their mastery of these competencies will be sufficient for them to progress in their learning. As can be understood, according to CBE, which is an outcomes-focused approach, time is seen as the variable, while performance as the constant (Stafford 2019).

In the literature, the term competency can be used with standards and learning outcomes, or they can be used interchangeably. Then, what is the difference between standards and competencies? Put simply, the standards are what students learn, while competencies are why they learn (Bramante and Colby 2012). Stating that competencies are widely applicable skills of which students need to achieve mastery in high school and beyond, and that they are more comprehensive than content standards, Sturgis and Casey (2018) distinguished competencies from content-specific standards. CBE is sometimes referred to as skill-based education.

Competencies, however, often represent more than knowledge and skill levels: they require the effective applications of existing knowledge and skills in certain context (Egodawatte 2014). Another example of "substitution" can be seen between learning outcomes and competencies. According to Klein-Collins (2013), competencies mean more than learning outcomes: they can be measured, verified by evidence of student achievement, and applied in different situations. CBE is used in conjunction with such approaches as student-centered learning and personalized learning, is also used interchangeably with the terms of mastery-based education, proficiency-based education, and performance-based education (Le, Wolf and Steinberg 2014; Patrick, Kennedy and Powell 2013). At this point, it is necessary to state that there is no single definition of CBE that scholars have agreed on even though various definitions of CBE have much in common (Kelchen 2015; Gervais 2016; Evans, Landl and Thompson 2021). The absence of agreement on the definition of CBE forms the basis of this study and emphasizes the importance of the study.

PURPOSE AND SIGNIFICANCE OF THE STUDY

With the advances in learning technologies, interest in CBE continues to grow in both K-12 and post-secondary education, but research on CBE lags behind practice (Ryan and Cox 2017). Previous studies have focused on the implementation of CBE and examined the effects of different CBE approaches on student achievement. In addition, factors that hinder and contribute to the implementation of CBE have frequently been examined. However, these studies have failed to accumulate scientific knowledge on CBE and to integrate the relevant literature. Studies carried out also do not provide information about what is known about CBE and how the research on the factors affecting implementation should progress. Morrison (2018, 25) states that CBE and Competency-Based Learning are used interchangeably and this results from "the lack of a common framework and vernacular". Levine and Patrick (2019) think that there is a problem of sameness between the concept and definition of CBE. Evans, Landl and Thompson (2021) thoroughly examine the research on CBE between 2000 and 2019 to integrate the literature. They draw attention to the absence of a common definition and language in the studies examined and state that this causes CBE to be interwoven with concepts such as personalized learning, student-centered learning, proficiency-based education. They mention the difficulties policymakers, researchers, and practitioners experience in identifying research topics and filling knowledge gaps without integrity. They suggest that research should be carried out to thoroughly examine the literature and to reach a conceptual consensus.

The CBE's aim from past to present is to improve the overall quality of education and to eliminate or reduce the learning gaps that have accumulated over the years (Lewis, Steele, Santibañez, Stecher, Hamilton, Faxon-Mills, and Rudnick 2013). Like many educational reform initiatives, CBE aims to reduce inequalities in education systems and achievement gaps among students (Evans, Graham, and Lefebvre 2019), to identify and cultivate the unique intellectual, emotional and physical abilities of all individuals to lead successful lives (Moon 2007). This set of aims is also shared by researchers who are education specialists. However, in order to achieve these goals, it has been seen that it is necessary to understand CBE with a qualitative paradigm, to ensure that it is understood and to provide a conceptual consensus. It is thought that the policies implemented without understanding do not reach the aim.

On the other hand, it is thought that, in Turkey, the elements of CBE are intertwined in concepts such as "skill-based education", "skill-based questions" and "qualifications-based education", there is no common language and there is not enough discussion on it. Considering these, there are two primary aims of this study: to reach a conceptual consensus on Competency-Based Education in the light of the opinions of the experts in Educational Sciences and to compile existing literature on Competency-Based Education by reviewing international literature. To achieve this aim, this study seeks to investigate the following questions:

- 1) How do experts in Educational Sciences perceive and these concepts of skill, ability, competence, proficiency, qualification, learning outcome, and competency-based education?
- 2) How do qualifications frameworks and competency-based education relate?
- 3) How is competency-based education seen in theory and practice?

METHOD

In this study, convergent design, one of the mixed methods research, was used. Convergent design is a mixed methods design in which the researcher collects and analyses qualitative and quantitative data at the same stage of the research process, and then combines these data and makes a single interpretation. There are four major steps in the convergent design. First, qualitative and quantitative data are collected. This data collection is simultaneous and separate. Secondly, the collected data is analyzed separately. In the third step, the results obtained from these analyzes are tried to be combined. In the final step, the two result sets are compared and an overall understanding is sought (Creswell and Plano-Clark 2017). The research was conducted simultaneously and separately as qualitative and quantitative processes in order to reach conceptual consensus on CBE and to examine and compile CBE in line with international literature. The separate results illuminated the different problems of the research, and finally a single goal was achieved.

Convergent design variants may differ from the main design. There are three main variants of convergent design in the literature. These are the parallel-database variant, the data-transformation variant, and the data validation variant. In the questionnaire prepared by the researchers in the data validation variant, both open-ended and closed-ended questions are used and it is aimed to verify the results of the open-ended questions and the results of the closed-ended questions. Qualitative items provide the researcher with new themes and interesting quotes to validate quantitative research findings (Creswell and Plano-Clark 2017). Data validation variant was used in the quantitative part of the study. When it comes to CBE, the concepts of competence, qualification, proficiency, ability, skill, and learning outcome are frequently used in the literature. It is seen that concepts such as competence-based education, skill-based education, and proficiency-based education are used in similar meanings in relation to these concepts. In the questionnaire created to provide consensus in these concepts, multiple choice items and Likert scale items aiming to reach quantitative data and open-ended qualitative questions were used to confirm and support these items.

The scope of this study consists of the opinions of the experts in Educational Science about Competency-Based Education and the curriculum and instruction field in the literature. The implementation of CBE in the fields of medicine and human resources is excluded from the scope of the research.

STUDY GROUP

Convenience sampling, one of the non-random sampling methods, was used to recruit the participants of the study. Yıldırım and Şimşek (2013) state that this sampling method increases the speed and practicality of research is often preferred in cases where researchers are not able to use other sampling methods. The current Covid-19 pandemic has made it difficult to reach participants and to have face-to-face interviews. Convenience sampling method, therefore, was employed in this research. The experts who were expected to participate in the study were selected according to their expertise in the academic database of the Council of Higher Education in Turkey (i.e., YÖK Academic). In total, 120 faculty members from Curriculum and Instruction (CI) and 30 faculty members from Measurement and Evaluation in Education (MEE) were contacted via e-mail and 28 of these faculty members agreed to participate in the study. As a result, the sample consisted of 28 experts, 25 of whom were working in CI and 5 of whom were in MEE. In the study, experts from CI were coded from Pc1 to Pc23, and MEE

experts from Pm1 to Pm5. Demographics of the participants other than their area of expertise were not asked in the questionnaire.

DATA COLLECTION TOOL

The questionnaire used in the study was constructed by the researchers by reviewing the relevant literature. The questionnaire consisted of two sections. In the first section, there were 15 items related to the definitions of ability, qualification, competence, proficiency, skill, and learning outcome found in the literature and used in various studies. Participants were asked to choose one or more of the options available and to decide which of the given definitions would be appropriate to use with which concept. Participants were able to write their own concept suggestions in the open-ended questionnaire item when they believed that the concepts given in the options were not related to the definitions. In the second section of the questionnaire, 10 definitions of CBE found in the literature were presented as an option, and participants were asked to indicate their level of agreement on these definitions. In addition to this, their opinions about CBE were asked through an open-ended question. After this data collection tool was constructed, expert opinion on it was sought, and then, the questionnaire was edited and finalized accordingly.

DATA COLLECTION AND ANALYSIS

"Informed Consent Form", "Ethics Committee Report" and "Online Form of Data Collection Tool" were sent to the official e-mail addresses of 28 experts who accepted to participate in the study. Participants' responses to the questionnaire were accepted through the e-mail addresses of the researchers in the following fifteen days.

Descriptive statistics such as frequencies and percentages, content analysis, and descriptive analysis methods were used in the analysis of the data collection tool, which consisted of two sections. In the first section, the participants marked with which concept the definitions given should be used. In addition to this, they expressed their concept suggestions in the open-ended question through the "other" option. The data obtained from 15 items in this section were analyzed by using descriptive statistics including frequencies and percentages. The answers that the participants wrote in the "other" option were analyzed by using descriptive analysis and verbatim quotations from the participants were reported. In the second section, the participants' level of agreement on the definitions of CBE was described by using percentages and frequencies whereas content analysis and descriptive analysis were used to analyze their views on CBE. However, instead of an inductive approach, a deductive approach to content analysis was implemented in this process since it enables the examination of the concepts that are described clearly and theoretically. According to Yıldırım and Şimşek (2013), descriptive analysis consists of (1) creating a framework for descriptive analysis, (2) processing the data according to the thematic framework, (3) describing the findings, and (4) interpreting the findings. The stages of content analysis are described as (1) coding data, (2) finding themes, (3) organizing codes and themes, and (4) describing and interpreting findings. However, deductive content analysis was carried out in this study through the following stages: (1) identifying themes, (2) organizing codes and themes, (3) coding data, (4) describing and interpreting the findings. Identifying themes also functioned as the necessary framework to begin descriptive analysis.

The question in the section where participants' opinions on CBE were asked included two themes. First, it was about participants' opinions on the definition of CBE, and second, about their use of alternative concepts. The data related to this section were coded and analyzed in line with the themes in the question. Thirteen participants, all of whom were experts in CI, responded to this question. In the scope of the framework developed by content analysis, the opinions of the participants were analyzed through descriptive analysis and presented with verbatim quotations.

A systematic literature review was conducted in order to examine and compile the international literature. Key concepts such as "competence," "qualification," "competency-based education," "proficiency-based education", "qualifications frameworks" were investigated in many databases and the data obtained were analyzed descriptively and compiled. As a result of the literature review, studies carried out in the fields other than educational sciences were not included in the scope of the research.

In order to ensure the reliability of the data, an in-depth literature review was conducted to determine the concepts to be included in the questionnaire. Studies related to CBE were scanned and concepts closely related to this concept were included in the research. The opportunity to add to these concepts was provided to the participants with "other" options. For the survey items, an item pool was created as a result of the literature review and document review of the relevant documents, and the most understandable and most accepted items were selected from this pool. In the data collection tool, in accordance with the research method, quantitative items such as multiple choice items and Likert scale items and open-ended qualitative items were included to confirm and support them. Variation of data sources is one of the measures taken for reliability. Expert opinion was sought in order to ensure the content validity of the questionnaire draft form prepared by the researchers. Opinions of a faculty member who are experts in the field of CBE, Curriculum and Instruction, and Measurement and Evaluation in Education were received online. In line with these views, some items were removed from the questionnaire and certain formal arrangements were made. After the questionnaire was given its final shape, the trial and implementation processes of the questionnaire were carried out simultaneously. After the feedback from 150 faculty members, the final form of the questionnaire was applied to 28 faculty members. In addition to these, direct quotations were included as a result of the descriptive analysis of the qualitative data obtained in the research, and reliability was tried to be ensured by choosing the purposive sampling method.

FINDINGS

The findings obtained from the research are presented in this section according to the order of the research questions. The findings obtained with the data collection tool applied for the purpose of collecting quantitative and qualitative data together are presented as findings for the first research question, the findings obtained as a result of document review, in-depth literature review and compilation, as findings for the second and third research questions.

FINDINGS ON HOW EXPERTS IN EDUCATIONAL SCIENCES PERCEIVE AND DEFINE THESE CONCEPTS OF SKILL, ABILITY, COMPETENCE, PROFICIENCY, QUALIFICATION, LEARNING OUTCOME, AND COMPETENCY-BASED EDUCATION

The definitions of the concepts of competence, qualification, proficiency, ability, skill, and learning outcome in the literature were given to the participants in the data collection tool and they were asked to evaluate the appropriateness of the usage of these definitions. Figure 1 shows the matching percentage of the opinions of the participant with the definitions found in the literature.

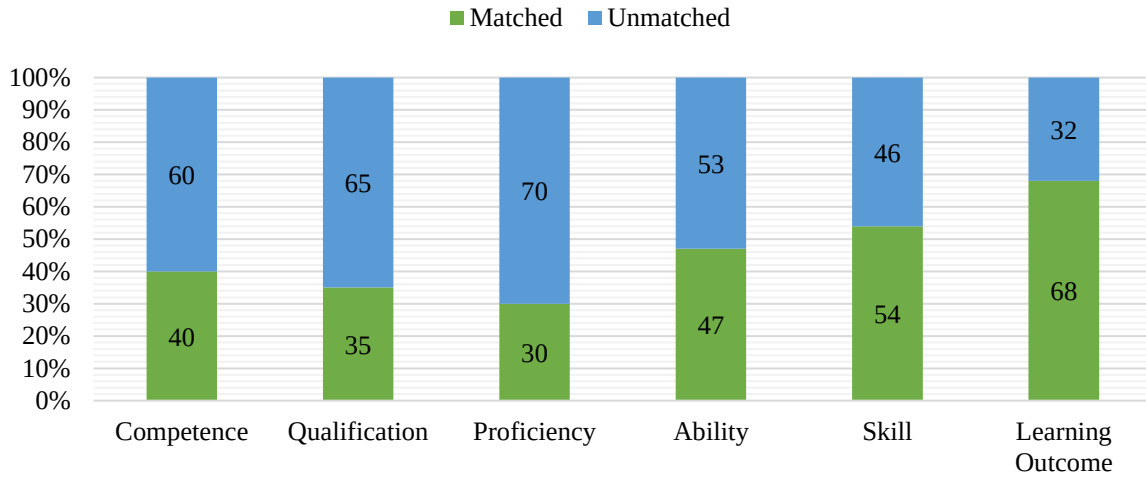


Figure 1. Matching percentage of the participants' opinions with the definitions in the literature

From Figure 1, it can be seen that the highest matching rate belongs to the concept of learning outcome and the lowest belongs to the concept of proficiency. The statement given in the options for the concept of learning outcome is the definition of the concept "learning outcome" in the European Qualifications Framework. Learning outcomes are defined in the Framework as "[the] statements regarding what a learner knows, understands and is able to do on completion of a learning process" (EU 2017, 20). This finding indicates that the definition of the concept "learning outcome" is adopted at a higher rate. The fact that the expression "learning outcome" has been frequently used in the educational programs and curriculum in Turkey since 2005 supports this finding. Also, the concepts of skill and ability have been frequently used with the constructivist approach to education that focuses on the individual, contributing to the adoption of the concepts.

However, it can be observed that the matching rate is quite low for the concepts of competence, qualification, and proficiency that began to be used frequently in education through the Turkish Qualifications Framework (TQF) (2015) which was prepared within the scope of the accession process of Turkey to the European Union and written in parallel with the European Qualifications Framework (EQF). The relevant findings are presented in Table 1 below for a deeper understanding of the results.

It can be seen from Table 1 above that there is no consensus among the participants on the concepts of competence, qualification, and proficiency. Those who matched the definitions of competence with the concept of competence constitute 40% of the participants, while the remaining thought that they were the definition of the concept of qualification (21%), proficiency (18%), ability (11%) and skill (8%). A similar situation exists with regard to the definitions of the concept of proficiency. While 30% of the participants thought that the definitions of proficiency found in the literature were related to the concept of proficiency, there is a significant number of participants who linked them especially with the concepts of competence (16%) and qualification (21%). The most striking aspect of the findings is in the responses given to the concept of qualification. The percentage of the participants who associated the definitions of qualification found in the literature with the concept of qualification is 35% whereas the percentage of those who matched them with the concept of proficiency is 37%, which is a higher percentage than that belongs to the concept of qualification. The next concept matched with the definitions of proficiency is the concept of competence (16%). Closer inspection of the results showed that one of the definitions of qualification that was considered to be the definition of proficiency is defined in the TQF as "the official document obtained when the responsible body, at the end of a process of

assessment and validation, recognizes that an individual has accomplished the learning outcomes according to certain criteria" (MYK 2015, 4). The number of the participants who matched this definition with the concept of proficiency is higher than that of the participants who associated it with the concept of qualification.

Table 1. Percentages of Faculty Members' Agreement on The Concepts and Suggestions

%	Competence	Qualification	Proficiency	Ability	Skill	Learning Outcome
Competence	40	16	16	12	12	3
Qualification	21	35	21	4	9	7
Proficiency	18	37	30	9	7	7
Ability	11	1	5	47	9	3
Skill	8	1	6	20	54	11
Learning Outcome	1	0	20	7	2	68
Others*	1	10	2	1	7	0
Total	100	100	100	100	100	100
*Diploma-Certificate ***		5				
*Habit					2	
*Reflex					2	
*Academic Progress				1		
*No Response	1	5	2		1	

The participants were asked to choose the "Other" option and add their own concept suggestions in the open-ended question box when they thought that the definitions given in the items were not related to the concepts in the options. The responses written in this open-ended part mostly consist of the concepts of qualification (10%) and skill (7%). The participants Pc1, Pc3, Pc9, and Pc4 suggested the concept of "diploma-certificate" for an item including the definition of the concept "qualification". Although the definition given in that item explains the concept of qualification, it does not include the words "diploma" or "certificate;" therefore, the participants must have felt the need to make such corrections. The alternative concepts suggested by the participants for the definition of skill are reflex (Pc2) and habit (Pc11).

In addition to the opinions of the participants about the concepts separately, the participants were asked to share their opinions on the definitions of Competency-Based Education which is related to all of these concepts in some way and Figure 2 below shows the percentage of the agreement of the participants on the definitions of Competency-Based Education found in the literature. While coding, the definitions of CBE were assigned numbers in accordance with the order of items in the questionnaire, but they were presented in the Figure in chronological order. Therefore, Definition 9 and Definition 2 reflect the definition and understanding of CBE in 1970-2000, Definition 2 and 5 in 2000-2010, and the rest of the definitions from 2010 to the present day.

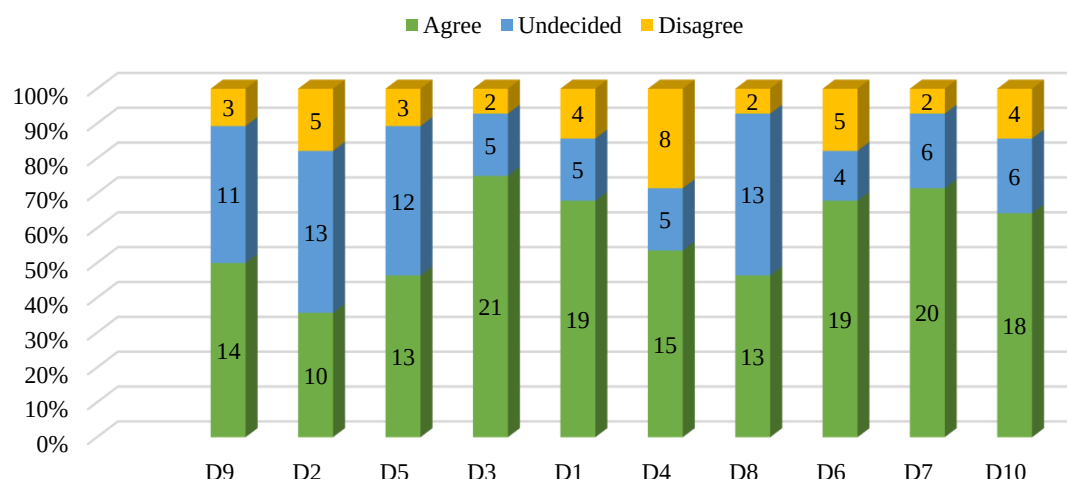


Figure 2. Percentages of faculty members' agreement on the definitions of Competency-Based Education

As can be seen from Figure 2, it can be said that the agreement rate of the participants in Definition 9 by Houston (1974) and Definition 2 by Spady (1977) is relatively low. As stated by Houston (1974, 9);

"competency-based programs (a) instruction is individualized and personalized, (b) the learning experience of the individual is guided by feedback, (c) the program as a whole is systemic, (d) the emphasis is on the exit, not on entrance, requirements, (d) instruction is modularized, (e) the student is held accountable for performance, completing the preparation program when, and only when, he demonstrates the competencies that have been identified as requisite for a particular professional role."

On the other hand, Spady (1977, 22) defined CBE as *"data-based, adaptive, performance-oriented set of integrated processes that facilitate, measure, record and certify within the context of flexible time parameters the demonstration of known, explicitly stated, and agreed upon learning outcomes that reflect successful functioning in life role."* As can be understood from the definitions of Houston (1974) and of Spady (1977), the concept of CBE in the 1970s is more focused on accountability and evaluation. Stating learning outcomes as behaviors and demonstrating them are among the primary tasks. Therefore, it seems possible that the changes in the understanding of CBE from the 1970s to today might be the reason why the participants' agreement rate on these definitions is low whereas their disagreement rate on them is high.

With the development of technology, a change in the definitions of CBE in the 2000s can be observed. Definition 5 (D5) in the questionnaire presented DeLorenzo's definition of CBE. DeLorenzo (2009) defines competency-based education as a standards-based, student-centered, individualized and data-driven learning environment. DeLorenzo (2009) also describes CBE as a system where learning is constant, and time is variable. Albanese, Mejicano, Anderson and Gruppen (2010) states that CBE is more concerned with what students should do with what they learn than what they should learn, and their definition of CBE was given in Definition 3 (D3) in the questionnaire. This is the definition on which the participants agreed most (n=21). When examined thoroughly, it can be understood that this definition is more concerned with practice than abstract concepts and the emphasis that the definition of Albanese et al. place on practice might be the reason why the percentage of the participants' agreement on this definition is high.

In the 2010s, Le, et al. (2014) expresses that CBE is essentially a teaching and learning approach in which competencies that the students need for academic, professional, and civic success are described with measurable learning objectives, and in which students progress to the next level

by mastering what is described in the content, and this was the definition given in Definition 1 (D1) in the questionnaire. As can be understood from the definition, competencies are associated with lifelong learning. While the percentage of the participants' agreement on this definition is 68%, the percentage of the participants' agreement on Definition 4 (D4) and Definition 8 (D8), which were written around the same time, decreases. The common feature of these two definitions is that they both reduce CBE to course-related documents. Therefore, it is possible to conclude that the participants thought that CBE corresponds to something more than these definitions. As presented in Definition 6 (D6), Sturgis and Casey (2018) define CBE as a system designed to ensure that all students gain academic knowledge, achieve competence to apply to real-world problems, and develop life-long learning skills for future success, and to provide equality in student achievement. Similarly, in Definition 7 (D7), Rezgui and Mhiri (2018) describe the learning objectives of CBE with specific and measurable explanations of the knowledge, skills, and attitudes expected to be shown after the learning process is completed. They also state that this approach focuses on the ability of students to use and effectively mobilize what they have learned throughout their lives in new and complex situations. Finally, Definition 10 (D10) in the questionnaire included the definition offered by Competency Works in 2019 after a participatory process. As stated in Levine and Patrick (2019, 3), Competency Works describes all the features of CBE as follows:

(a) Students are empowered daily to make important decisions about their learning experiences, how they will create and apply knowledge, and how they will demonstrate their learning. (b) Assessment is a meaningful, positive, and empowering learning experience for students that yields timely, relevant, and actionable evidence. (c) Students receive timely, differentiated support based on their individual learning needs. (d) Students progress based on evidence of mastery, not seat time. (e) Students learn actively using different pathways and varied pacing. (f) Strategies to ensure equity for all students are embedded in the culture, structure, and pedagogy of schools and education systems. (g) Rigorous, common expectations for learning (knowledge, skills, and dispositions) are explicit, transparent, measurable, and transferable.

D6, D7, and D10 which were similar in meaning were considered as close to each other with higher agreement rates. In parallel with the literature, these results suggest that a conceptual consensus might have been reached on these definitions. To examine closely how this consensus differs according to the participants' fields of expertise, the distribution of the participants' responses to CBE definitions according to their field of expertise, namely Curriculum and Instruction (CI) and Measurement and Evaluation in Education (MEE), are presented in Table 2.

Table 2. Distribution of Responses to CBE Definitions According to Participants' Fields of Expertise.

	CI						MEE					
	Agreed		Undecided		Disagreed		Agreed		Undecided		Disagreed	
	n	%	n	%	n	%	n	%	n	%	n	%
Definition 9 (D ₉)	13	56	8	35	2	9	1	20	3	60	1	20
Definition 2 (D ₂)	9	39	11	48	3	13	1	20	2	40	2	40
Definition 5 (D ₅)	10	43	11	48	2	9	3	60	1	20	1	20
Definition 3 (D ₃)	17	74	4	17	2	9	4	80	1	20		
Definition 1 (D ₁)	15	65	5	21	3	13	4	80			1	20
Definition 4 (D ₄)	13	57	3	13	7	30	2	40	2	40	1	20
Definition 8 (D ₈)	12	52	9	39	2	9	1	20	4	80		
Definition 6 (D ₆)	15	65	4	17	4	17	4	80			1	20
Definition 7 (D ₇)	15	65	6	26	2	9	5	100				
Definition 10 (D ₁₀)	14	61	6	26	3	13	4	80			1	20

As can be seen from Table 2, there is a parallelism between the opinions of the participants from Curriculum and Instruction (CI) and from Measurement and Evaluation in Education (MEE) on several definitions. The closest rates are seen in Definition 3 (D3). While the agreement rate of the participants from CI on this definition is 74%, the participants from MEE agree with this definition at a rate of 80%. On the other hand, there is a difference in the opinions of the participants from both fields with regard to Definition 8 (D8) and Definition 9 (D9). The responses given to these two definitions show that the number of the participants from CI who "agree" with the definitions is higher than the number of those who are "undecided" whereas it is the opposite in the responses of the participants from MEE. In both items, the number of the participants from MEE who are "undecided" about the definitions is higher. When (D8) and (D9) are examined together, it can be understood that the idea that the emphasis in education is not on the inputs or the learning processes, but on the outcomes prevails in both definitions. It can be concluded that the participants from CI agree with this idea more than the participants from MEE do.

After determining the orientation of CBE to teaching and learning by reviewing the definition statements given to the participants in the questionnaire, the opinions, ideas, and definitions about CBE were analyzed and the results of this analysis are presented in Table 3.

Table 3. Participants' Opinions on The Definition of Competency-Based Education.

Themes	Frequency (f)
Being outcome-oriented	5
Enabling knowledge, skill, and attitude acquisition	5
Enabling competence development	3
Being individual-oriented	3
Including process evaluations	3
Including flexible learning experiences	2
Requiring group work	1

The participants who expressed their opinions about CBE consider it an outcome-oriented education ($n = 5$). The faculty members from the field of Curriculum and Education (CI) stated that the outcome is of the utmost importance in education and the skills and behavior expected to be seen in the individual at the end of the education are determined before the education process begins. Regarding this, two faculty members commented:

"The most important feature of this educational approach is that it is outcome-oriented, that is, what is important in learning is performing the target [skill/behavior], not acquiring the knowledge..." (Pc21)

"Competency-based education is an educational process in which the patterns of behavior including knowledge, skills, and attitudes that are expected to be seen in individuals are determined tangibly before the education process begins and special [individualized] but flexible experiences are offered for the acquisition of these behaviors." (Pc16)

The findings indicate that, according to the participants, individuals acquire the target knowledge, skills, and attitudes through Competency-Based Education ($n = 5$). As one of the faculty members from CI put it in his/her own definition of CBE:

"The purpose of Competency-Based Education is to ensure that individuals can fulfill their responsibilities, roles or duties related to a certain area more efficiently by increasing/improving their performances. Competency-Based Education can be defined as providing education for the purpose of enabling individuals to acquire the necessary knowledge, attitudes, and skills so that they can achieve competence." (Pc23)

According to the participants, CBE is an individual-oriented education ($n = 3$). With regard to this, the participants stated that learning objectives should be determined by taking account of the individual characteristics, or individual learning needs, of learners. The comment below illustrates this view:

“Competency-Based Education is a process that aims to educate individuals within the scope of the twenty-first-century skills in accordance with the desired and expected qualifications and that enables individuals to achieve the [learning] objectives determined according to their own characteristics or gain the qualifications...” (Pc22)

According to the faculty members from Curriculum and Instruction, CBE is an educational process that requires working with a group ($n = 1$), is supported by process evaluations ($n = 3$) and has flexible learning experiences ($n = 2$). The CBE definition below written by one of the participants summarizes these themes:

"I think Competency-Based Education is a process that is supported by process evaluations as well as outcomes and that requires working with a group as well as progressing individually ..." (Pc8)

Based on the literature, Table 4 below presents the findings obtained from the participants' responses to the questions about determining the concepts that the faculty members use instead of CBE.

Table 4. Concepts The Participants Use As an Alternative to Competency-Based Education.

Themes	Frequency (f)
Qualifications-based education	6
Standards-based education	1
Proficiency-based education	1
Competency-based education instead of proficiency-based	1
Skills and literacy	1

As can be seen in Table 4, the most frequently mentioned concept that can be used instead of Competency-Based Education is Qualifications-Based Education ($n = 6$). All of the participants who expressed their opinions are experts in Curriculum and Instruction, and all except for one participant stated that Qualifications-Based Education can be used as an alternative to CBE. As three of the participants put it:

“... Standards-Based Education and Skills-Based Education cannot be a good alternative to Competency-Based Education, but I can mostly use Qualifications-Based Education as a satisfactory alternative.” (Pc16)

"... Qualifications-Based Education can be used as an alternative." (Pc22)

"I think that the expression Qualifications-Based Education can be used instead of Competency-Based Education." (Pc3)

In parallel with the literature, the participants stated that more than one different concept can be used instead of CBE, and these are the concepts of proficiency-based education, standards-based education, skills, and literacy. One participant, on the other hand, expressed that it would be more appropriate to use “proficiency-based education” as “competency-based education”.

“...I think it is more appropriate to use ‘competency-based’ instead of ‘proficiency-based.’” (Pc1)

“... the word ‘competency’ in English is close to ‘proficiency’ [when translated into Turkish]. It means performing a behavior/task in the way and level aimed at. Therefore, it would be better and more appropriate to call ‘competency-based education’ by ‘proficiency-based education.’” (Pc21)

"... I believe that the aspect [of CBE] that focuses on the outcome-oriented evaluation and individual progress is called standards-based education." (Pc8)

“... I am not using an alternative concept. However, in the same context, I generally use the concepts of skills (creative [or] critical thinking) or literacy (scientific, mathematical, reading, [or] digital) in current educational programs." (Pc15)

On the other hand, one of the participants who is an expert in Curriculum and Instruction stated that he/she does not interchangeably use the concepts of competency-based education, skills-

based education standards-based education, and qualifications-based education and provided a definition for each concept:

"... Competency-based education can be defined as providing education through which individuals can gain the necessary knowledge, attitude, and skills so that they can acquire competence... In standards-based education, [individuals] are expected to reach the pre-set standards. While the standards of the program are being set, acquiring certain competencies comes before gaining competence... In skills-based education, the aim is to enable individuals to acquire the skills necessary to perform a job or task. Skills-based education is one of the sub-dimensions of competency-based education... When it comes to qualifications-based education, it can be said that it to some extent includes skills-based education, standards-based education, or competency-based education because it is about identifying whether learning takes place according to certain standards set beforehand to obtain a qualification. However, the concept of qualifications-based education is a suitable concept for higher-level education received to continue specializing in a subject." (Pc23)

FINDINGS ON HOW QUALIFICATIONS FRAMEWORKS AND COMPETENCY-BASED EDUCATION RELATE
In order to examine this relationship in the literature, first, the curriculum currently being used in schools were examined in terms of competencies. Then, in the light of these, CBE's relation to national and international qualifications frameworks was established.

A GENERAL OVERVIEW OF CURRICULUM IN TURKEY

Curriculum serves as a means of achieving national goals of Turkish education system. The curriculum, in written form, is a guide to teachers. It fulfills this function not only by containing learning outcomes and units, but also by incorporating explanations related to with which objectives and approaches the teaching should be carried out. The curriculum, prepared by the Ministry of National Education Board of Education, includes curriculum objectives, its perspective, individual development, and approaches to measurement and evaluation. In addition, the points and instructions that should be considered while implementing the curriculum are included. Therefore, such descriptive information included in the curriculum can provide insights into the intended teaching.

The main purpose of the Turkish National Education system is to raise individuals with knowledge, skills and behaviors coalesced around national values and competencies. While the curriculum strives to teach knowledge, skills and behaviors, competencies function as the link that provides the integrity of the knowledge, skills, and behaviors (MEB 2018). Competencies represent more than knowledge and skills do. They explain the effective application of students' existing knowledge and skills in a certain context (Egodawatte 2014).

Knowledge, skills, and competence included in the curriculum are expanded on the National Qualifications Framework of the countries. Qualification frameworks are among the strategic documents on which the curriculum is based. A range of competencies that students would need in their academic, social, and personal lives in both national and international context are included in the Turkish Qualifications Framework (TQF) (MEB 2018). Understandings and definitions regarding competencies vary from country to country. Therefore, studying the national and international qualifications frameworks will be enlightening about what the competencies are.

QUALIFICATIONS FRAMEWORKS

Various qualifications frameworks have been developed to provide information about what students who graduate from different education levels know and can do. Like CBE, qualifications frameworks are not a new concept either. When examining the literature, it can be seen that qualifications frameworks have been used at national, institutional and program levels for more than 25 years (Steele et al. 2014). When talking about CBE, it is understood

that a qualifications framework forms the basis of the curriculum. Competencies consist of a set of knowledge, skills and attitudes integrated together. When an education based on competencies is targeted at, CBE utilizes qualifications frameworks as a road map. Briefly, qualifications have become part of the planning and development processes of curriculum and teaching (Mulder and Winterton 2017).

Qualifications are documents in the form of a certificate or diploma which are issued by an official and authorized institution as a result of the verification and evaluation processes. They certify that individuals have achieved the learning outcomes according to criteria specified in a qualifications framework (MYK 2018). Qualifications frameworks can be prepared at national and international level. The most well-known of these at the international level is the European Qualifications Framework (EQF).

The European Qualifications Framework is an example of qualifications frameworks being institutionalized. Pursuant to the Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning, a reference framework consisting of eight reference levels on qualifications has been developed. The reference levels stated in the framework are described in terms of learning outcomes with progressive levels of mastery. The aim of the EQF is to promote the comparability, transparency, and portability of qualifications that individuals possess. Thus, the EQF functions as a translation device between different qualification systems and their levels (MYK 2018). The European Qualifications Framework describes eight levels which apply to different education levels from primary education to master's and doctorate degrees and serves as a reference framework for these education levels across the EU. In addition, all the qualifications frameworks within the European Union must consider the qualification levels defined in the EQF when organizing their education (Mulder and Winterton 2017).

National qualifications frameworks show variation in parallel with the diversity in education systems. This diversity occurs even if they have the same reference framework. For example, the National Qualifications Frameworks of Germany, France, and the UK in the European Union differ from each other. German Qualifications Framework describes two main categories and four sub-categories: professional competence is related to knowledge and skills, while and personal competence is about social competence and autonomy. Looking at the example of France, we can see that it is a national certification framework, not a national qualification framework, and this framework is more about the labor market rather than education or knowledge. On the other hand, the UK is using its own way of creating its own national framework. The framework here has a plural concept or structure: the Qualifications and Credit Framework (QCF) for England and Northern Ireland, the Credit and Scottish Credit and Qualifications Framework (SCQF), and Qualifications Framework for Wales (CQFW) constitute the national qualifications frameworks in the UK. As can be seen, the framework in the UK includes the concept of "credit", as well. QCF, for example, include the following headings: summary, autonomy and accountability, application and action, and knowledge and understanding. The term "competence" is not used among the descriptors of competencies in the frameworks in the UK, which is intriguing, and probably this is a reflection of skills development agenda in the UK (Mulder and Winterton 2017). Creating a national qualifications framework and aligning it with reference frameworks must be a difficult process; however, according to the research carried out by the European Center for the Development of Vocational Education and Development (CEDEFOP), 28 EU Member States and Albania, Bosnia and Herzegovina, Republic of Macedonia, Iceland, Kosovo, Liechtenstein, Montenegro, Norway, Serbia, Switzerland and Turkey have established their national qualifications frameworks (CEDEFOP 2017).

The Turkish Qualifications Framework (TQF) is a national qualifications framework which is created on the basis of the European Qualifications Framework. The TQF is a national

qualifications framework providing all the descriptors of competence gained through vocational, general and academic education and training programs including primary, secondary and higher education, and through other learning paths. The TQF will create a higher added value, especially due to qualified labor force, provide more employment opportunities for individuals, present quality references for the institutions providing education and training, and enable individuals to have a better access to different means of learning. The necessity of referencing qualifications is related to the concept of competence. According to the TQF Regulation, the term “qualification” refers to “the official document obtained when the responsible body, at the end of a process of assessment and validation, recognizes that an individual has accomplished the learning outcomes according to certain criteria.” The term “qualification” in the TQF is defined in a way that it would be compatible with its definition of “qualification” in the EQF because one of the most important steps in TQF development process is to prove the referencing to and alignment with the EQF (MYK 2015).

Learning outcomes approach has a key role in the development of the EQF and the TQF. Learning outcomes are defined as the knowledge, skills and competence that an individual has after a learning process is over. Therefore, the level descriptors in the EQF and the TQF are structured around these three components stated in the learning outcomes. In these two frameworks, each of the 8 level descriptors is defined in terms of these three components. Although there are many definitions of knowledge, skills and competence in the literature, it is useful to state the definitions within the scope of the TQF. The TQF defined knowledge as “theoretical and/or factual knowledge involving the comprehension of facts, principles, theories and practices related to an area of work or learning”, skill as “utilization of knowledge and problem solving which requires the ability to use logical, intuitive and creative thinking and dexterity, method, material, tools and instruments acquired in an area of work or learning,” and competence as “utilization of knowledge and skills in an area of work or learning by taking responsibility and/or displaying autonomy, determination and satisfaction of learning requirements; taking into consideration the social and moral issues and responsibilities” (MYK 2015, 22). In parallel with this definition, Egodawatte (2014) explained competence as the effective use of knowledge and skills in specific and complex situations.

In the TQF, qualifications are split into eight levels, from pre-school participation certificate to doctoral diploma. Some of these documents are issued by the Ministry of National Education. In addition, eight vocational qualification certificates are issued by the Vocational Qualifications Authority. Qualifications set for each level are included in the TQF by receiving quality assurance. The qualifications included in the TQF are stored in the Qualifications Database.

Qualifications for Lifelong Learning is an essential element of both European Qualifications Framework and Turkish Qualifications Framework. Lifelong learning comprises competencies developed on the basis of skills. These skills are also called higher order learning skills, the 21st century skills, and transferable skills. Critical thinking, creativity, collaboration, problem solving, and reasoning skills are examples of these skills. Lifelong learning skills enable students to become successful, adaptable, independent, self-directed individuals throughout their lives (Casey 2018). Eight different key competencies are defined within the scope of the TQF for Lifelong Learning. These are as follows-communication in mother tongue, communication in foreign languages, mathematical competence and key competencies in science/technology, digital competence, learning to learn, social and civic competence, sense of initiative and entrepreneurship, and cultural awareness and expression. Each key competence is described as a complement of knowledge and skills (MYK, 2015). These key competencies are included in the curriculum prepared by the Board of Education and are used in conjunction with values while constructing the learning outcomes. To summarize, individuals receive qualifications in the form of documents after completing general or vocational education. These

qualifications are determined according to their success in relevant learning outcomes. Learning outcomes, on the other hand, consist of competence which is a complement of knowledge and skills. Thus, education should include knowledge, skills, competence, and learning outcomes, and all if its aim is to enable individuals to receive qualifications. Competency-based education is regarded as one of such education.

FINDINGS ON HOW COMPETENCY-BASED EDUCATION IS SEEN IN THEORY AND PRACTICE

With regard to this research question, the historical development of Competency-Based Education, its comparison with traditional education, its implementation, and the challenges of CBE practices and their possible causes are examined.

HISTORICAL DEVELOPMENT

Competency-based education is as old as education itself (Mulder and Winterton 2017). Although it emerged in the 1960s, its origins date back to the 1910s. Prior to the emergence of the concept, John Dewey's theory of progressive education, Taylor's Scientific Management approach, and behaviorism theory have laid the theoretical foundations for CBE. Mulder and Winterton (2017) stated that the educational philosophy of the CBE movement dates back to John Dewey. Dewey's understanding of progressive education emphasizes a student-centered education approach driven by experience and discovery rather than lesson and memorization (Meier 1995). Instead of the deductive approach that emphasizes the application of methods and principles, John Dewey called for empowering students to inductively build their own learning through real life participation. Dewey's understanding of education was influenced by the conditions of the period and at certain points it evolved into vocational education. In about the same years, Charles Prosser emphasized the need for better and more comprehensive vocational education as a result of the post-World War I and the Industrial Revolution. Taylor's (1911) behavior-oriented approach to enhancing performance also serves as the foundation of CBE. Principles in Taylor's Scientific Management approach were applied to separate, arrange and facilitate teaching in classrooms. Competency standards were applied to students and effective teaching was determined according to these standards in teacher preparation programs (Curry and Docherty 2017). At the same time, efficient, effective and standardized educational practices were needed for social efficiency and essentialism (Schilling and Koetting 2010). Finally, behaviorism theory has profoundly affected the concept and practices of competency-based education and training. Behavioral theory was a strong influence over the development of CBE, emphasizing the expression of competencies in behavioral terms and the evaluation of observable behaviors. However, despite both advantages and disadvantages, behaviorism provided a solid theoretical foundation background for the CBE (Hodge 2007).

The first-wave CBE movement took place between the 1960s and the 1980s. Competency-based education was brought to the fore in the United States in the 1960s in response to international issues related to competition, including the space race after the successful launch of Sputnik. In addition, the dissatisfaction of the public with the schools and the thought that the teachers are inadequate in the society brought the need for reform. Rosner and Kay (1974) also claimed that the CBE derives from accountable, relevant and cost-effective education at school. Many educators have seen the CBE approach as a means of meeting the demand for accountability at schools (Mulder and Winterton 2017). As a result, towards the end of the 1960s, the U.S. Department of Education formalized the CBE as a direct measure of learning (Tuxworth 2005). The first-wave CBE movement which took place in the 1960s-1980s hinged on the concept of "mastery learning" by Benjamin Bloom (Evans et al. 2019; Mulder and Winterton 2017; Steele et al. 2014). Bloom is a leading figure in the competency-based movement. Based on his research with students in Chicago, Bloom (1976) argued that performance gaps among low-achieving, high-achieving and naturally-gifted students would close and almost all students would achieve mastery of the content as a result of adapting the

education to students' individual skills and learning rates (Steele et al. 2014). The first-wave CBE movement included three reform movements: mastery learning, competency-based education and outcome-based education. These reforms actually indicate a chronological order. Basically, they all share common principles. Mastery learning evolved into CBE in the course of time since both reform movements shared a similar philosophy in terms of the objectives and skills aimed at supporting students' individual learning needs. In addition, they both emphasized that students should not progress without mastery (Spady 1977). In the late 1970s and early 1980s, the competency movement was renamed outcome-based education, mainly because educators believed that focusing on “minimal competence” would urge teachers to base their curriculum on lower-order thinking skills and processes (Guskey 1994). Basically, Outcome-Based Education is a form of education in which learning outcomes are specified in advance and the education continues recursively until the students achieve these outcomes. The popularity of the first-wave movement eventually started to fade due to several reasons, including lack of conceptual clarity, piecemeal implementation which hindered the effectiveness of the reforms, and focusing more on standards-based reform and test-based accountability (Evans, Graham and Lefebvre 2019).

The second-wave CBE movement has been prevailed from the 2000s to the present. The movement began to pick up steam after some schools included demonstration of mastery on the requirements for high school graduation and/or excluded the Carnegie unit, which was developed in 1906 to improve preparation for college admission by standardizing the number of credit hours required for high school graduation, from the basic requirements for graduation (Steele et al. 2014). The second-wave movement is more student-centered than the first-wave movement. CBE has often been associated with other reforms such as personalized learning, deeper learning, and student-centered learning. CBE also uses formative assessment forms, including portfolio and performance-based assessment. In recent years, due to advances in online learning, analytical learning and adaptive learning technology, CBE has caused an evolutionary change in education, especially in university degree programs. The increasing demand for efficiency, effectiveness and verifiable outcomes in education has resulted in a growing global interest in CBE (Ford 2014). The latest development regarding K-12 was that a group of practitioners and policy makers who gathered in 2011 and 2019 set the framework of CBE and described it (Levine and Patrick 2019).

COMPARISON OF COMPETENCY-BASED EDUCATION WITH TRADITIONAL EDUCATION

Compared to traditional education system, Competency-based education is a paradigm shift: it requires changes in basic policies, practices, and structures. It challenges many of the fundamental beliefs and assumptions that the traditional education system has emphasized over the years. In the context of CBE, competency-based learning is an innovation at the center of schooling, and teaching and learning in competency-based systems is significantly different from the traditional system (Casey 2018).

Traditional public schools today consist of fixed 40-45-minute lessons, 180-day school calendar, and a teacher- and content-oriented education provided to all students at the same time regardless of their individual differences (DeLorenzo 2009). In addition, in the traditional education system, students advance to the next grade level without learning thoroughly. Receiving 50 points for the end-of-year grade is enough for a student to get to the next level. However, no one says anything about what should be done about the failure of the remaining 50 points. Those who graduate with honors and with their individual efforts and skills can attend university, but what awaits those students who could not do this remains uncertain. As a result, new groups of students who do not have the necessary pre-requisite skills and knowledge to receive the content offered by their teachers can be filled every year. The statements of Tom Rooney from Lindsay United School District, quoted by Sturgis and Casey (2018, 12), unearth the fact which we all are aware of:

“The reality for many of our graduates is that they soon find out they didn’t get what they needed. Some of the kids fall into deep despair when they realize they have been betrayed. They were told that they are ready, but they’re not.”

CBE supports different forms of instruction, face-to-face, online, and a combination of the two (Burnette 2016). Thus, it provides a larger learning space. Most CBE programs enable students to progress at their own pace through the learning opportunities provided outside of school hours and walls, rather than to progress at a standard pace or time set for every student. In addition, personalized or adaptable learning strategies are used in the contemporary CBE. Advances in adaptive learning technologies have added another dimension to personalized learning and have made way for personalized learning to be implemented more. Adaptive learning tools identify the problem that the student is experiencing and direct the student to the modules that will help student overcome the problem and learn the skills before moving on to the next. As a result, while mastery learning occurs, learning gaps are closed (Klein-Collins 2013).

Here are the differences between Competency-based education and Traditional Education (Levine and Patrick 2019; Sturgis and Casey 2018; Worthen and Patrick 2014):

The traditional system is time-bound. In schools, students are grouped according to their age and they progress at the same pace at the same grade level. Progress continues regardless of whether students need more time to master the content covered. In most cases, teachers strive to realize the learning outcomes specified in their lesson plans within the allocated time even though the students have not been able to achieve the mastery of the content or skill. On the other hand, competency-based education is based on learning and recognizes that students might need more time to learn the concepts and skills deeply. When learning gaps are detected, their previous learning is revisited, and prerequisite learning is supplemented. When students are ready, they are promoted to the next level of competence. Depending on the field/domain and learning objectives, students can follow personalized learning paths instead of linear progression.

The traditional education system focuses on a narrow set of academic outcomes that emphasize academic skills, memorization and understanding of the content, and it does not acknowledge that student success depends on more than just academic knowledge.

–In the traditional educational system, students' projects, written and oral exams, and behaviors are assessed through a points-based grading system. In addition, teachers often have their own grading system, which causes variability in determining success. Although the grading in the traditional system reflects recognition, it is difficult to say that the learning takes place completely. In a competency-based system, on the contrary, the grading is based on learning and competence. Failures and mistakes are seen as part of the learning process. In CBE, grading is designed to promote students' academic skills and their progression in the content and to improve the skills they need to become lifelong learners. No questions are left in students' mind regarding what they should learn, what mastery looks like and how they can demonstrate learning.

–Traditional education system is based on a fixed mindset which is the belief that individuals' "abilities are carved in stone," and it maintains the practice of ranking students which perpetuates models of inequity in society by creating winners and losers among students. CBE, on the other hand, CBE is based on the idea of providing higher standards and better career prospects for each student.

–The traditional system is organized by age and it is based on external motivation. Traditional systems were developed earlier than the research on how children learn and are motivated, but it is impossible not to apply what research has revealed to education

systems. In contrast, in CBE, everything is based on what we know is currently best for students with regard to participation, motivation and learning.

COMPETENCY-BASED EDUCATION PRACTICES

As stated earlier, Competency-Based Education includes online learning environments along with face-to-face instruction to enable students to progress individually and to remediate learning deficiencies. In the literature, it is possible to come across several examples of education with face-to-face instruction only, with online instruction only, or with both. There is evidence that education which is carried out via both online and face-to-face instruction causes higher student performance compared to education with face-to-face instruction only. For example, Scholastic READ 180 program which was implemented in Department of Defense Education Activity Schools through both face-to-face and online instruction was found to be more effective in increasing students' success in reading compared to similar literary intervention programs (Loadman, Moore, Ren, Zhu, Zhao and Lomax 2011). Diversity in CBE is not limited to these. Peer learning, cooperative learning and self-directed learning are also included in learning environments by teachers. As a result, an ideal system consisting of 40% direct instruction, 40% peer teaching and 20% self-directed learning can be achieved (DeLorenzo 2009). When primary education, secondary education, tertiary education and related distance education are included in this diversity of instruction, it can be said that CBE has spread across a wider spectrum. In this section, examples of competency-based learning carried out in various environments and levels are given, relevant research is examined and some important points in CBE design are mentioned.

Interest in the implementations of CBE is increasing year after year, especially in America. On a global scale, its implementations in medical education attract attention; in fact, a new literature has emerged as "Competency Based Medical Education." The implementation of CBE has been made mandatory at the undergraduate and graduate levels of medical education. Take the USA, for example - the US Department of Education and other accreditation institutions have started to demand the expectancy and implementation processes of CBE from higher education institutions. According to Fain (2015), 600 universities and colleges actively use a competency-based education program. These figures in 2015 were limited to only 52 institutions in 2014 (Curry and Docherty 2017).

As mentioned in the historical development section, the second-wave of CBE started after the 2000s, and since then its implementations have continued to proliferate. Serving 214 students in a remote part of Alaska, the Chugach School District won the Malcolm Baldrige National Quality Award in 2001. A 41 percent increase in the reading, English and Math scores of the students over a 4-year period was reported after adopting a competency-based approach (Steele et al. 2014). In a recent example, it was stated that Young Women's Leadership Charter School of Chicago, which serves disadvantaged students and uses a competence-based model, has 35 percent higher graduation rates than the entire Chicago Public Schools. The Diploma Plus program, a network of 27 alternative education programs across the USA, has 17 years of experience in using a model of CBE that offers students the flexible pacing they need for learning (Steele et al. 2014).

The state of New Hampshire in America is known for its state-wide implementations of CBE. In 2005, New Hampshire updated the legislations on education. It started to change these legislations from a system based on "seat time" which was developed in the 19th and 20th centuries to a system based on competencies. New Hampshire eliminated the Carnegie Unit, the standard used to award academic credit on the amount of instructional time and passed legislation requiring the demonstration of mastery. Its implementations in high schools made it possible for schools to award academic credit to the learning that takes place anytime, anywhere and at any speed. The success of Fred Bramante, the former chair of the New Hampshire State Board of Education, in CBE is remarkable. Bramante and Colby (2012) stated in their book

“Off the clock: moving education from time to competency” that the high school dropout rate across the state fell from 20 percent in 2009 to 4 percent in 2011 after CBE was implemented in schools. In addition, students at the state high schools mastered competencies to earn their diplomas and did that in non-traditional ways. The fact that CBE places the learner at the center of education has contributed to this success (Bramante and Colby 2012).

Implementing CBE in only K-12 schools is not enough; teachers who will guide students in a competency-based education should also receive a competency-based education or training. Similarly, it would be ideal if doctors to whom we entrust our health earn their diplomas according to their competencies, not to the time they spend at medical school. Actually, this applies to many professions. For this reason, it can be difficult to separate CBE from vocational education. In short, if competency-based K-12 schools are to be effective, higher education should switch to a competency-based model (Everett 2019).

Implementations of CBE in tertiary education are carried out as a combination of formal education and distance education. For example, Sinclair Community College, Austin Community College and Broward College started implementing competency-based programs in 2013. They have transformed their existing formal and distance education into CBE. The study conducted with the students studying at these universities revealed that the students found the education offered by their university useful. The students also emphasized that the programs enabled them to learn at their own pace and they were cost-effective. In addition, the students stated that CBE is more suitable for students who are mature and disciplined and who can direct their own learning (Rainwater 2016). It is possible to see more examples of CBE in higher education level. Some of the institutions engaged in CBE, especially in distance education, are Western Governors University, Northern Arizona University, Southern New Hampshire University and University of Wisconsin (Kelchen 2015).

While introducing Competency-based education, the importance of conducting formative assessment and the criteria for assessment were mentioned, as well. Considering the examples of assessment in the implementations of CBE in different states, Louisiana allows students to take exams and earn credits for the courses they have previously failed. This policy provides greater flexibility for students, especially in programs where credit-based approaches do not work, but does not make major changes in the structure of learning. In Oregon, CBE is not only used for awarding credits. The state provides many opportunities for students to demonstrate their learning. Teachers carry out formative assessments during instruction and collaborate with their colleagues to improve their practices (Torres, Brett and Cox 2015). Some competence-based schools use a unique grading system, an example of which can be seen in the Spaulding High School in Rochester, New Hampshire. In this high school, students received their grades in A, B, C, NCY, or IWS format. It is probably easy to understand what A, B, and C indicate. NCY stands for "Not Competent Yet" and when students receive this, they go into a relearning and reassessment plan for the course in which they are unable to demonstrate their mastery. In re-learning process, a teacher coach is assigned to the student who has failed, and extended learning and online learning opportunities are provided so that the student can demonstrate competence. Once the student is thought to have developed competence, the student is re-evaluated. Receiving IWS means "insufficient work submitted," which means that the teacher cannot determine the level of student's competence. In that case, the student is asked to participate in some form of credit recovery like receiving online education or retaking the course. As it can be seen, the relearning and reassessment opportunities are an integral part of enabling students to achieve competence in this high school (Bramante and Colby 2012). CBE attaches importance to using minimum success criteria. Broward College allowed its students who passed the unit challenge of the online program with an 81% to take the unit assessment, and the students who earned 81% on that exam were considered to have achieved mastery and completed the course (Rainwater 2016). According to Malan (2000), the student must

demonstrate mastery with 90 percent accuracy in order to eliminate the concerns related to the assessment of the competence (Mulder and Winterton 2017).

One way to evaluate the success of CBE in schools is to conduct research at schools where CBE is implemented. One of such research was carried out by "RAND Corporation" funded by Bill and Melinda Gates Foundation and was about the personalized learning approaches used in foundation-funded schools. Personalized learning is described in a way that it covers basic elements of CBE. A 2-year study conducted by Pane, Steiner, Baird and Hamilton (2015) found that the implementation of personalized learning practices varied significantly among schools. In the study, it was observed that there were several practices employed by the schools to support personalization; however, some practices like progression based on competency were challenging to implement, and they were not very common. They also found that these practices are not unique to schools implementing personalized learning. Another study was conducted in 8 high schools from three New England states in America, four of which were identified as competency-based, while the other four was not. The study was funded by the Nellie Mae Education Foundation and carried out by the American Institutes for Research (AIR). The research focused on students at the 9th grade, teachers, and administrators. Haynes and colleagues (2016) developed surveys to evaluate the experiences of students, teachers, and administrators (Evans et al. 2019). In line with the previous research, the researchers found that CBE applications differ between schools. It was seen that the teachers working at the schools which were not identified as competency based also implemented some CBE practices and that the students from such schools experienced CBE practices. As a result, researchers concluded that the comparison between CBE and schools that were not implementing CBE was in fact false as CBE practices are widespread in high schools (Evans et al., 2019). One last study compared the ACT scores of students in New Hampshire schools which implemented CBE and with the scores of students in California schools offering traditional education. The study found that there was no significant difference between the two groups of students. However, the results revealed the fact that the competence-based education was as effective as the traditional education although it was not found to be more effective. These three studies reveal that each of the practices called as Competency Based is not new, unique or miraculous. However, it can be said that CBE lays the foundations for these practices and causes integrity among them (Everett, 2019).

CHALLENGES OF CBE AND THEIR POSSIBLE CAUSES

Although there is a growing interest in Competency-Based Education, a number of difficulties and problems related to its implementation have been reported (Curry and Docherty 2017; Evans et al. 2019; Everett 2019; Ford 2014; Kelchen 2015; Klein-Collins 2013; Rainwater 2016; Rezgui and Mhiri 2018; Steele et al. 2014; Torres et al. 2015). Some of these difficulties and related problems are failure to settle on a common concept, different practices, lack of authentic and formative assessment, the notion of flexible pacing and students' progression at their own pace, and lack of necessary educational technology.

CBE puts the student at the center of education and takes the context of the school into account; therefore, that CBE practices vary from region to region is normal or expected. However, the variability in how competency is described or referred and how it is used causes a lack of consensus on its definition. As Ford (2014) stated, the lack of clarity in what competency is and of a common definition vocabulary related to CBE causes confusion about the purpose and value of CBE efforts, and such confusion can hinder a collaborative work on education reform and a consensus on a model enabling collaboration. Reaching a conceptual consensus will pave the way for sharing CBE models or practices and implementation of CBE in different places or context (Rezgui and Mhiri 2018).

One of the most critical components of CBE is assessment, which is the part about which most discussions and questions arise. Practitioners have a harder time figuring out how to assess the

competencies rather than identifying them. The challenges related to assessment can be grouped under two headings: assessment strategy and assessors. Steele et al. (2014) stated in their report that how CBE models can best evaluate competencies is a big question mark. Even in a school where teachers shared common grading expectations, the teachers pointed out the difficulties inherent in grading for evidence of competency. The teachers expressed that the evaluation of a successful student was easier than of an unsuccessful student and that it was difficult to distinguish between the students who failed because they did not study and the students who failed despite their work. Another challenge experienced, especially in CBE models where the essence of CBE is not well-understood, is that only observable results are observed on the basis of behaviorism. As Curry and Docherty (2017) stated, “CBE measures only observable results and ignores the complex connections across thought, performance, and context”. In CBE, all the competencies can be reduced to observable performances, and there can be one single, preferred pathway for the achievement of competency. Another criticism of CBE is the assumption that the assessors are always objective. It is believed that there may be observer bias and differences, especially in the evaluation of performance. In order to eliminate these challenges and concerns, it is necessary to find effective answers to the following questions: Which methods will be used to evaluate performance? Who is responsible for the assessment? How will these evaluations be used? Assessment can no longer be the weakest link in CBE, only when we find reasonable and satisfactory answers to these questions (Curry and Docherty 2017; Stafford, 2019).

Another challenge experienced in CBE, perhaps the most inevitable one, is the removal of seat time from the measure of progress and the difficulties students experience while progressing at their own pace due to this removal. One of the principles of CBE is to bring education and students together anywhere, and progress through learning that takes place outside the school also causes some difficulties. Torres et al. (2015) expressed that policies on the ways how students earn credit outside school and on the time schedules by which students earn credit can create difficulties for CBE implementations. Regarding the variability of time, some problems have also been reported in the adoption of CBE in higher education. Another challenge that research pointed out is that CBE may not fit into fixed academic timetables or schedules because students might spend different amount of time on achieving competency (Everett 2019). Sometimes this even take longer than the fixed timetable schedule. Of course, the opposite is also true; a student can demonstrate competence earlier than the other students in the same level. Since these students' progress cannot be prevented, it is believed that existing systems will stress on the instruction. In addition, students progressing at their own pace also need immediate feedback. Trevino, one of the faculty whom Rainwater (2016) interviewed in qualitative research, said "when you have this volume of work, things can get unmanageable." As mentioned above, another difficulty experienced in CBE is the lack of necessary technological systems. That is, there is especially a lack of package courseware products necessary to monitor students' progress on competencies. The existing systems do not provide necessary feedback about the students who need support according to the evaluation of their performance (Priest et al., 2012).

As it is understood from the difficulties and problems, the most important concern regarding CBE is not the rejection of the concept, but how the competencies which occur at the end of CBE are used. Challenges may also vary depending on how competencies are used. Competency-based models can contribute to the clarity of teaching domains and the personalization of learning. CBE also increases resource efficiency. Allowing students to advance to the next level as they already have the required knowledge, skills, and competence can accelerate their learning. Besides, education has long been seen as a bridge for upward social mobility, and CBE is a reform that widens that bridge (Stafford, 2019). Then, what lies at the root of such problems related to CBE? The answer is trying to implement new systems

with old habits. The notion of 9-month school period still prevails in the USA and many other countries. The competency-based models implemented have also been used to give a passing grade and credit. It is seen as a behaviorist/behavioristic reform and limited to assessment. In short, as the review of the literature indicates, these difficulties are experienced because of the persistence in the practices (i.e., accountability and excessive emphasis on assessment) that caused CBE to lose its momentum of first-wave movement in the 1960s, s of power of YTE's first movement in the 1960s.

DISCUSSION AND CONCLUSION

As the findings of this study indicate, there is a broad consensus on the concepts of skill and learning outcome and they are in widespread use. However, the same cannot be said for the concepts of competency, qualification, proficiency, and ability. Although the concept of ability has a higher matching rate compared to the other three concepts, more than half of the experts in Educational Sciences do not use the concept of ability as the way it is stated in the literature. The experts who participated in the study expressed different opinions on the definitions of the concepts of competency, qualification, and proficiency. The participants state that the definitions of the concept of proficiency found in the literature belong to the concept of qualification rather than proficiency. Similarly, they associate the definitions provided with regard to the concept of qualification with the concepts of competency and proficiency, rather than the concept of qualification. Although the findings indicate that there is a broader consensus on the concept of competency, the number of the experts in educational sciences who think that these are not the definitions of the concept of competency is higher. In addition, as the findings show, some of the experts express the definitions of qualification are associated with certificate and diploma and the definitions of skill are with habit and reflex. This confusion among the concepts of competency, proficiency, and qualification causes the approaches such as CBE and Proficiency-Based Education which center these concepts to be used interchangeably. Evans et al. (2021) have concluded that it is difficult to completely separate the CBE approach and its implementation from other concepts. They have put forth that the facts that CBE is in some ways related to other concepts and some CBE definitions overlap with them make it difficult to differentiate CBE with personalized learning, student-centered learning, and proficiency-based education. This result is thought to be in parallel with the findings of the current study.

It is possible to come across studies in which the concept of competency is used in different meanings. For example, while Adıgüzel (2017) and S. Yıldırım and Yıldırım (2019) use "competency" as "proficiency", Özkal (2018) uses it accurately as "competency." Based on this, in this study which aims to reach a conceptual consensus, the agreed definition of "competence" is the definition provided in the TQF (MYK 2015, 19). According to this, *"competence is the use of knowledge and skills in an area of work or learning by taking responsibility and/or displaying autonomy", identifying and meeting learning needs, and taking account of social and moral issues and responsibilities"*.

This study set out to identify experts' orientation towards the definitions of Competency-Based Education and to reach a consensus on them. As the results have indicated, among the definitions of CBE which have been suggested since the 1970s, the experts who participated in this study agreed mostly with the recent ones. In addition, the fact that these definitions contain concepts related to practice increases the rate of agreement. Another striking finding of this study is that the rate of "undecided" was very high in some definitions. Although these definitions are found in the literature, the experts were not sure whether to agree or disagree with them. This result is consistent with what Evans et al. (2021) have expressed, which is the view that the literature is not integrated.

CBE is an outcome-oriented and individual-oriented process which includes group-work, process evaluation, and flexible learning experiences and enables learners to acquire knowledge, skills, and attitudes. The definition by Levine and Patrick (2019) includes this synthesis. As the researchers, although we believe that a conceptual consensus on the definition of CBE can be reached by using this definition, the CBE definition that we put forth to contribute to the literature is as follows: "Competence-Based Education is the process in which learners progress according to their competencies certified by formative process evaluation rather than the time they spend at school, they are supported in every stage of their education for mastery learning, and they gain the knowledge, skills, and attitudes necessary for them to become lifelong learners."

The experts from Educational Sciences stated that they mostly use Qualifications-Based Education as an alternative to CBE. There are also examples in the literature where Competency-Based Education and Proficiency-Based Education are used interchangeably. However, this usage is considered to be wrong (Klein-Collins 2013; Silvernail, Stump, Atkinson Duina, and Moran Gunn 2013; Levine and Patrick 2019). According to Silvernail et al. (2013), qualifications-based system standards are used to guide the educational program and teaching. Students have to progress by verifying their qualifications through educational standards. Unlike Qualifications-Based Education, CBE defines standards as broad expressions of competence that students must demonstrate throughout a learning process, rather than as isolated standards lists that are evaluated separately (Sturgis 2012). Therefore, using Qualifications-Based Education and CBE interchangeably is not appropriate.

After achieving conceptual clarity about CBE, this study pursued other sub-objectives and sought to trace competencies, starting with the educational programs and curriculum in Turkey, and to examine CBE in theory and practice.

All that has been shared about CBE can be summarized through three descriptive features stated by Steele et al. (2014). 1) Instruction takes place wherever the student is (flexible pacing and progression). CBE takes students' existing level of competence as the starting point, not their age. 2) Students have the opportunity to personalize their learning. CBE is based on the notion that students learn in different ways, have different competency levels, and have different opportunities to learn outside school. 3) Students demonstrate competence by applying their knowledge and skills and earn credit. This reflects three distinctive dimensions of CBE: flexible pacing, student-centered approach, and mastery learning.

After examining CBE through its historical foundations, questions like "why is there a need for reform?" and "how is CBE different from traditional education?" became the focus of the study. Sturgis and Casey (2018) asked the following question after stating the failures revealed by The National Assessment of Educational Progress "are such results really shocking?" A similar question can arise out of the poor results of Turkish students in PISA or university entrance exam: are we really surprised? The vicious cycle of getting disappointing results continues, but how can we expect different results when the traditional education system is designed to rank students in order of success rather than provide opportunities for all students to learn? Another similar question is asked by Bramante and Colby (2012): when you ask a question to any high school math teacher about their students' mastery of mathematics, the answer to your question will probably be no because most students never showed competence in the subject in elementary education; in other words, because the students have a weak foundation in the subject. Then, why do we even think that students will learn it on their own after demonstrating failure, not competence, in the third grade? It is impossible to get satisfactory answers to these questions. The sad truth is that Aytuna (1929, 72), who contributed greatly to Turkish National Education almost 100 years ago, gave a striking answer to this question. In his book, *Didaktika*, he expressed:

“It is unlikely to expect an education based on materialism to cultivate students because most comprehensive subjects which actually overload the program are covered by means of lectures only: they are covered rapidly, without satisfactorily comprehended, studied or experienced, and regardless of checking if the students understand them or not. Students' comprehension and learning are left to their individual efforts, accomplishing this by studying the subject at home from the books. Even if the students are able to learn the subject with their individual efforts, learning that is not related to real life is useless and dead. In an education provided in this way, the success achieved is for the school. However, education should be for life, not for school.”

Although this fact was expressed a hundred years ago, we are still trying to maintain the current system. Educators and students in many countries, especially in Turkey, have already accepted the idea that some students are successful, and some are not. Perhaps due to this understanding, we are maintaining the existing system. Regardless of their curriculum approach or instructional strategy, educators should seek a reform and turn to CBE when they realize that the traditional education system is never designed in a way that all students should and/or can succeed (Sturgis and Casey 2018).

When CBE practices and existing models are examined, it is concluded that there are differences among competency-based schools. In addition, some studies have demonstrated that some practices associated with CBE are implemented in schools which are not competency-based, as well. It is also stated that a consensus on the concepts or vocabulary related to CBE has not achieved yet. Some of the existing concepts consist of words that have been stripped of their meaning (Ryan and Cox 2017). A similar situation can be observed in Turkey: concepts like result, performance, outcome, acquisition, goal, competence, competency, skill and qualification are frequently used interchangeably. In fact, it is normal for CBE to be so diverse in practice. When the relevant literature is examined, it can be seen that CBE does not have a properly packaged model. As Ford (2014) stated, various forms of CBE are adopted to various educational environments. Whether a right form of CBE is applied or not can be understood through successful demonstration of the specified competencies. Casey (2018) stated that educators and leaders who set educational policies accept that there is not one single "right" set of competence; therefore, competencies can be and should be customized according to local conditions.

Every reform that is considered necessary today has always been anchored in recent developments in technology because technology has advanced faster than ever in recent years. This study split the history of CBE in two and set out that the essential difference distinguishing the second-wave of the movement than the first is online education. In addition, technology makes it easier to assess students' competence effectively and give necessary feedback to them. Similarly, technology makes it possible for students to progress at their own pace and for educators to identify and eliminate learning gaps. Ford (2014) also expressed that as a result of institutions' desire to improve their effectiveness and efficiency, the ability to sustain a competency-based education model is dependent on their ability to successfully utilize while integrating the processes for CBE design, delivery, assessment, and reporting. Thus, a consistent, unified, and systematic model that aims to produce graduates who have achieved competence specified by the institution can be developed. In addition, there is a growing need for a comprehensive record-keeping system to publish, store, and process data about students' learning and for online technologies to use these data at the program level in real time. Rainwater (2016) gives the following advice to institutions that want to implement the Competency-Based Education model; Decide if the CBE is right for the organization, build a competency-based model, develop authentic assessments of competencies, develop learning paths to achieve the desired competency, and finally ensure that the organization managers have a system to monitor and report on students' progress in competencies. As can be understood from these recommendations, it is not easy to design and implement a CBE model. It is

particularly difficult to identify competencies and to identify appropriate, authentic, formative assessment pathways for them. For this reason, creating a competency-based systematic model can be started with applications such as planning the courses in the curriculum at smaller scales or preparing certificate programs.

Bringing education to students everywhere is no longer a choice, but a necessity. Changes occur not only in technology but also in nature. Disasters one after another and the Covid-19 pandemic experienced at the time of this study imprisoned students and educators in their homes. As is known, this is neither the first nor the last epidemic. It became apparent that the only way to sustain education in a situation in which all the workplaces, institutions and schools were closed was to use online learning and distance education tools. Countries with online or distance learning systems instantly switched their education, from K-12 to higher education, from online settings to these platforms. Countries that lacked such systems had no choice but to cease all educational activities. Turkey, on the other hand, started to implement distance education via television channels and the internet only one week after the first coronavirus case in the country. Ministry of National Education in Turkey brought students and teachers together on its Education Information Network, known as EBA. This way, Turkey managed to bring education to students wherever they were, which is one of the key components of CBE. More importantly, the experiences of Turkey showed all countries that such education "is possible." Although distance education did not actually provide all the opportunities that face-to-face education offers, an invaluable tool for support and individual learning was obtained at the end of this process. Experience shows that online learning and distance education will become an inseparable part of education system in Turkey.

Success in Competency-based education is subject to many variables. Success in traditional education is measured by students' knowledge or lack of knowledge. However, what is important is not that the student knows, but that the student can transfer what is learned to unknown situations. Bramante and Colby (2012) stated that the student must demonstrate the ability to transfer the content and skills in a unique situation in order to be qualified as competent. Demonstrating or proving competence should not be confused with accountability policies. As Sturgis and Casey (2018) stated, accountability policies of first-wave CBE movement "made sense as an effort to create transparency and expose inequitable outcomes," but they do not help provide equal educational opportunities for students, let alone promote effective instruction and learning according to all what is known about the field of learning sciences. For this reason, the first-wave movement lost its power and retreated from the field for a while. As is seen, it is important to use CBE effectively. As Curry and Docherty (2017) pointed out, "when used effectively, CBE works as an advanced organizer and allows teaching (and learning) to focus beyond simple knowledge, skills, and attitude acquisition towards application, transfer, and impact assessment". However, when CBE is used ineffectively, it becomes nothing but a bureaucratic checklist limiting intellectual flexibility and creativity for both students and teachers. So, what should be done to develop an effective CBE system? Torres, et al. (2015, 23) shared the following four elements to have a successful and effective CBE system: *"1) defining and adopting competencies, expressed with unambiguous and specific statements 2) developing formative and summative assessments to measure progress toward mastery, 3) providing students and teachers with necessary support, 4) creating and adopting structures promoting competency-based learning"*. In short, achieving success is considered possible through following such steps as defining clearly, measuring effectively, supporting and ensuring continuity. A student-centered and progressive education approach should be pursued in order for these actions to suffice. Only then can we join the revolution started by John Dewey, who fundamentally changed the way we see things as Copernicus did.

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I WROTE, I WAS EVALUATED, AND I LEARNED AN ALTERNATIVE TEACHING PROCESS IN DISTANCE EDUCATION: WRITING-TO-LEARN

Abstract: Distance education has become an essential part of life on a global scale during the COVID-19 pandemic. This process has driven all education stakeholders, who focus on providing learning outcomes without any loss, to alternative teaching models. The aim of this study is to examine the extent of the effects of writing-to-learn activities integrated into the distance education process on learning. Conducted as an action research, this study consisted of 42 Year 4 undergraduate prospective teachers studying Social Studies Teaching. A variety of writing-to-learn activities and semi-structured interview forms were used as data collection tools. While writing-to-learn activities were evaluated with holistic rubric, the opinions of prospective teachers were analyzed by content analysis. As a result, it was concluded that writing-to-learn activities included in distance education made significant contributions to the development of students throughout the application process. The activities were found effective on learning since they involved students in the process and facilitated permanent learning. It is understood from the opinions of the prospective teachers that an enjoyable and quality learning can be achieved with such activities included in the study, even from a distance. Based on the results, it can be stated that the writing-to-learn model is an alternative learning approach that can be used in distance education.

Keywords: Distance education, COVID-19, writing-to-learn, cognitive learning, feedback, action research

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INTRODUCTION

With digitalization, having gained impetus in this century, information sources, information exchange, and interaction styles have changed considerably (Bulut, Delialioğlu & Lane, 2020). This rapid development of information and communication technologies has naturally caused a great change in people's lives as well as how they learn (Guo, 2010). One of the remarkable changes is the transformation of educational processes into distance education. As a requirement of digital transformation, distance education has become an indispensable element for many institutions (Rumble, 2019). Based on this need, distance education has developed rapidly in universities around the world (Allen & Seaman, 2010; Layne, Boston & Ice, 2013). The main reason for the rapid advancements is the great necessity for institutions, teachers and students to actively use digital technologies to create effective learning environments (Chuang, Thompson & Schmidt, 2003). Digitalization for learning and teaching purposes requires the effective use of digital technologies in all dimensions of education, and the acquisition of digital competencies by relevant stakeholders (Karakuş Yılmaz, 2020).

Although digitalization is not a new concept (Kopp, Gröbinger & Adams, 2019), it has had to be integrated into education very quickly with the sudden outbreak of the COVID-19 pandemic, due to which a new era began in many respects, affecting the whole world in an unprecedented way since the first half of 2020. Since then, the World Health Organization (WHO) has emphasized the importance of physical distance between people in order to prevent the transmission of the virus, and as a result, lockdown measures have been taken to get protected against the infection (WHO, 2020). The new circumstances have forced educational institutions to adopt a digital approach, and traditional face-to-face classroom education has been replaced by distance education, which is provided by using digital tools and resources (Armstrong Mensah, et al., 2020). In this regard, distance education has proved to be the only option for the sustainability of educational institutions (Hassan, et al., 2021). Consequently, teachers, students, and parents have had to face such a new situation (Huber & Helm, 2020). Although the concept of digitalization in schools was a prominent issue long before the pandemic (König, Jager Biela & Glutsch, 2020), the use and investment of educational technology has increased rapidly since the beginning of the COVID-19 pandemic (Li & Lalani, 2020). Despite that, this situation could not save approximately 1.5 billion students from the negative impacts (UNESCO [United Nations Educational, Scientific and Cultural Organization], 2020) of the pandemic. From its own perspective to the global efforts to reduce the negative effects of the pandemic, the present study has focused on an alternative teaching model that is believed to be applicable in distance education.

THEORETICAL FRAMEWORK

In this section, we firstly discussed the distance education process in relation to the theoretical background of the research. Then, we examined the relationship between learning and writing-to-learn method.

DISTANCE EDUCATION

With its history of almost three centuries, distance education (Bozkurt, 2017) has gone through a historical process that first started with teaching by correspondence and then went through various processes through radio/television, open universities, teleconferencing technologies, and internet/web usage as it is today (Moore & Kearsley, 2011). According to Williams, Pabrock and Covington (1999), distance education must be evaluated in three phases which consisted of printed materials, videotapes and radio broadcasts between 1860 and 1960, two-way audio and two-way video broadcasts, and computer floppy disks between 1960 and 1990s, and virtual classrooms, hybrid and internet technologies from 1990s to our day. In summary,

distance education has evolved from a process comprising the use of printed, audio and visual communication tools (Kaya, 2002) into a process carried out through web-based applications (Allen & Seaman, 2011). This transition has enabled the communication channels and styles that affect the whole society, as well as distance education practices, to gain a new form and to be widely sustained (Elitaş, 2017).

Distance education is an e-learning system independent of time and place (Lee & Lee, 2008) with the understanding of education provided “anytime” and “anywhere” (Shachar & Neumann, 2003). In this system, teachers and students are not physically in the same environment (Johnson, 2003), but they interact with each other and with teaching resources through communication technologies (Keegan, 1996; Simonson, et al., 2012). This interaction includes a planned arrangement in which special designs and teaching methods are applied to carry out the course (Moore & Kearsley, 2011). In addition to enabling distant students to have access to education by using various technologies (USDLA, 2021), distance education also allows teachers and students to interact (Yalın, 2001) as well as offering time flexibility (Bunker, 2003), space flexibility (Kaya, 2002), affordability (Pope, 2014), and individuality and independence as a systematic form of education (Uşun, 2006). Distance education includes many features such as multimedia-based teaching, interactive demonstration and guidance, keyboard control, monitoring, interactive classroom management and online exams (Guohong, et al., 2012). Thanks to these features, faster and permanent learning can be achieved (Kember, 1995). Simonson, et al (2003) defined the concept of distance education, drawing upon the following four elements: i) Formal education, which is different from traditional education, notwithstanding the existence of an institutional understanding; ii) the circumstances in which the learners and instructors are separate from each other in terms of time and place; iii) the way of communication achieved through letters, radio, television, and internet simultaneously or non-simultaneously; and iv) teaching design and theories effectively used through the LMS (Learning Management System) between teachers, students, resources, and relevant contents.

With the aim of eliminating the inadequacy of traditional education (Sadeghi, 2019), distance education primarily arose as an alternative to formal classroom settings, (Nakos, Deis & Jourdan, 2002), and turned out to be as effective as face-to-face education (Simonson, Schlosser & Orellana, 2011). Distance education provides a rich knowledge acquisition to the learner by transforming it from the process of passively recording external information into the learner’s knowledge selection process (Yangbin & Xinmin, 2010). Compared to conventional classroom education, it provides noteworthy advantages such as rich resources and sharing, as well as interaction and collaboration features of teaching activities (Guo, 2010). In addition to these, the distance education process also develops students’ critical and independent thinking, and decision-making skills (Yurdakul, 2015). Apart from the advantages of distance education, some disadvantages need to be considered as well (Altun et al., 2021). Some of the inevitable disadvantages are that since some specific equipment such as computers, webcams, and fixed internet network must be available in order to carry out the distance education process in a sound way, (Brown, 2017), it may be costly to meet them (Ally, 2008); any technical problem that may occur may restrict students and teachers educationally (İşman, 2008); the teaching of courses aimed at instilling in students certain skills and attitudes is difficult with distance education (Uşun, 2006); the creation of quality teaching content in distance education is an arduous process (Ally, 2008); and the amount of time devoted to applied courses is not sufficient and teachers are not competent enough to teach through distance education (Gökbulut, 2020). What is more, some other disadvantages are related to the arguments that social interaction in distance education is rather limited compared to formal education (Sadeghi, 2019) because teachers and students are not in the same physical environment (Uşun, 2006), and learners who lack self-regulation skills have problems in planning and self-study (Bartolome & Steffens, 2015).

Undoubtedly, the use of digital technologies in distance education offers a new set of opportunities for teaching and learning (Chauhan, 2017). However, using digital technologies alone is not enough to have quality distance education (Li & Ma, 2010). Therefore, it is important that the distance education process takes place through different models (König, et al., 2020). One of these learning models is the writing-to-learn model, which can be integrated into distance education.

WRITING-TO-LEARN MODEL

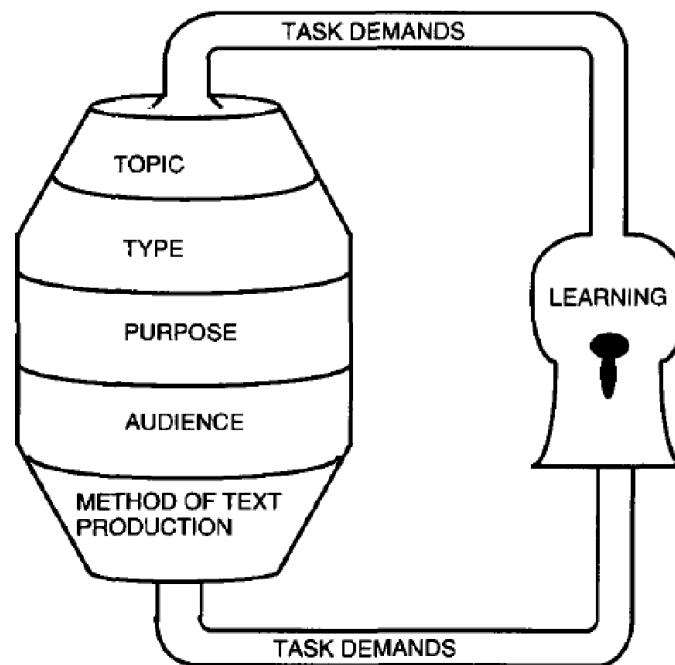
One of the effective tools in the development and settlement of scientific thought is writing (Norris & Phillips, 2003). Being an important part of life, writing is more comprehensive than just letters written on a piece of paper or screen (Deveci, 2018). It is an important tool for students to review, interpret, remember, and reinforce what they have recently learned, as well as transferring them to long-term memory, understanding theoretical information in depth, exploring alternatives outside the subject and developing communication skills. Writing is also an integral part of students' learning processes (Deveci, 2018). Just like reading, writing is the basis of academic learning at different learning levels (Phillips & Norris, 2009). Accordingly, the scientific writing pedagogy that emerged in the last quarter of the last century brought forward that writing is a natural tool of thinking and learning (Nückles et al., 2020). As a tool of learning, writing (Emig, 1977) first stood out with the education reform movement called "writing across the curriculum", and was then used in different education levels in different countries. Hence, since the beginning of 1970s, many educators have seen writing as a means of improving learning and have included it in their teaching processes (Bangert Drowns, Hurley & Wilkinson, 2004).

Writing-to-learn, which is based on the principle that writing can be a powerful strategy for learning the content (Myers, 1984), seems difficult to explain in common terms, yet there are different definitions (Kayaalp & Şimşek, 2021). As the name implies, writing-to-learn is a teaching strategy that includes two multiple complex activities such as learning and writing (Chmarkh, 2021). Writing-to-learn, which denotes learning how to think (Forsman, 1985), is the conscious structuring of existing information to produce a new product rather than transferring existing information into a text (Baaijen & Galbraith, 2018). At this structuring stage, the main purpose of the writing-to-learn approach is not to develop enhanced writing, but to boost enhanced learning (Myers, 1984). Drawing upon writing as a means of learning provides a variety of contributions to the development of students (Rouse, Kihara & Kara, 2021). Writing-to-learn activities can serve as a useful tool to fulfil knowledge-building processes that lead to students to understand the subjects deeply, to increase motivation to learn, and to keep the information in long-term memory (Nückles et al., 2020). In this way, writing ensures that what is learned become permanent by transforming ideas into structured knowledge (Rivard & Straw, 2000). The writing-to-learn model, therefore, does not take time from teaching, on the contrary, it improves the teaching content and encourages students to think and synthesize the information in the content (Myers, 1984). This encouragement enables students to reconstruct what they have learned in a completely different form (Klein, 1999).

Writing, which is a critical skill as well as an important tool for learning (Arnold et al., 2017), is generally presented in the form of grammar, syntax, and quotation in undergraduate programs, which strengthens the perception of students regarding writing as a prescriptive structure (Otfinowski & Silva Opps, 2015). However, writing-to-learn offers a unique structure far beyond these aspects (Kayaalp & Şimşek, 2020). Writing-to-learn is not learning how to write. Grammar, spelling and sentence structure are at the forefront in learning how to write, yet, in writing-to-learn, it is essential to focus on the learning content, not the writing skills themselves (Myers, 1984). However, most teachers do not know how to use writing more effectively in the classroom due to a lack of such training during their university education (Dolgin, 1981). Many educators and researchers, who went beyond the established perception

of the use of writing, have turned to research on models where they can easily implement writing-to-learn activities (Gunel, Hand & Mcdermott, 2009). The cognitive process that emerges as a result of the correlation between learning and writing has been discussed by different researchers with different models and theories (Bereiter & Scardamalia, 1987; Flower & Hayes, 1981; Klein, 1999). The most practical and usable model for how to practice writing activities with the purpose of learning is thought to be the writing-to-learn model developed by Prain and Hand (1996: 618). Figure 1 presents the five basic components of the writing-to-learn model developed by Prain and Hand (1996:618).

Prain and Hand (1996:618), who presented a model with the aim of integrating writing into the teaching process as a learning tool, aimed to convey the information acquired during the course to friends, parents, teachers, and consumers (*audience*) in the form of letters, diaries, poems, and stories (*genres*) with the purposes of researching, thinking, interpreting and explaining them etc. (*purpose*) by taking into consideration the connection between ideas or key concepts etc. (*topic*) and using handwriting or typing (*method of text production*). It is noteworthy that the multifaceted effects of writing activities for learning purposes, which can be implemented through these and similar models, have been mentioned in the literature over time in different education levels and disciplines.



(Prain & Hand, 1996:618)

Figure 1. The Writing-to-learn model

In the literature, there are a number of studies conducted on the use of writing for learning purposes at different learning levels (from primary school to university) in social sciences (Kayaalp & Şimşek, 2020; Kayaalp & Şimşek, 2021; Klein & Rose, 2010; Walp, 2013) and in other sciences (Gunel, Hand & Prain, 2007; Klein, Piacente Cimini & Williams, 2007; Nam, Choi & Hand, 2011) as well as on its versatile effects in different fields regarding *academic success* (Caukin, 2010; Greenbowe et. al., 2007), *concept teaching* (Alharbi, 2015; Hohenshell & Hand, 2006), *critical thinking* (Sinaga & Feranie, 2017), *deep learning* (Leffler, 2014), *metacognitive thinking* (Hand, Wallace & Yag, 2004), *attitude towards lessons* (Uzoğlu, 2014) and *communication skills* (Dummer et al., 2008). Among the current studies on writing-to-learn, Chmarkh (2021) reported that writing-to-learn is a teaching strategy that is effective on *learning* in different classes and disciplines, while Nückles et al. (2020) discussed the relationship between writing-to-learn and *self-regulation* and *cognitive load theory*. Taking into consideration the effects of writing on basic thinking processes, Kayaalp et al. (2020) revealed

the impacts of writing-to-learn activities on *critical thinking skills*. In another study, Rouse, Kiuahara, and Kara (2021) also examined the use of writing-to-learn strategy in teaching *subject contents* and *concepts*. Wright et al. (2019) concluded that writing-to-learn is effective in the development of *scientific literacy*. Similarly, Gupte et al. (2021) explained the effect of writing-to-learn activities on students' *meaningful learning*. Balasundram and Karpudewan (2021), who aimed to improve students' *concept learning* through writing, combined writing-to-learn activities with technology, while Sintiawati, Sinaga and Karim (2021) intended to improve students' concept learning and communication skills through the strategy of writing-to-learn. Examining the effects of writing on *academic achievement* in medical education, Kim et al. (2021) drew a conclusion that writing has positive effects on both learning and higher-order thinking skills. Finkenstaedt Quinn et al. (2021), who illuminated the importance of writing in the construction of *scientific processes*, developed a model for the application of writing in the classroom in accordance with this purpose.

THE SIGNIFICANCE AND RATIONALE OF THE RESEARCH

Having already been integrated into different teaching experiences from time to time, distance education has now become an indispensable part of life along with the pandemic, which suddenly appeared all around the world. All countries with or without infrastructure for distance education have faced some fundamental problems in this process. This situation has brought along some concerns such as how to assure a quality learning and teaching process, how to make students become active in their learning processes, and how this process can be evaluated objectively even if students are involved in the process. The relevant problems have led both national and international education policy makers, administrators and teachers to seek alternative teaching methods that will enable students to be active in the distance education process and provide them with quality learning and, in the same way, pass the process of objective evaluation of what has been learned. In this context, it is believed that it is important to carry out the course process by using different teaching models in order to increase the quality of teaching in distance education. From this point of view, when the multifaceted effects of writing-to-learn approach (*academic success, permanent learning, active participation, meaningful learning, deep learning, etc.*) are considered as a whole, it is believed that writing-to-learn will minimize learning losses in the distance education process, involve students in the process rather than regarding them as passive recipients of the process, and spotlight them as the dominant part of the process, and transform the assessment process from a result-oriented structure into a process-based evaluation structure. Based on this idea, it is thought that writing-to-learn can be an alternative teaching model in distance education.

The aim of this study is to examine whether writing-to-learn approach, which can be integrated into both face-to-face and distance education processes, is an effective teaching model in distance education. In the light of this aim, answers were sought to the following research questions in the study:

- How is prospective teachers' pace of development in terms of writing-to-learn abilities during the distance education process?
- What are the opinions of prospective teachers about writing-to-learn activities applied during the distance education process?

METHOD

RESEARCH DESIGN

The present study employed the action research design, which is one of the qualitative research approaches. Action research design is a planned and systematic research conducted with the participation of teachers and other stakeholders in educational environments in order to find answers to some questions such as the functioning of educational environments, how teaching

takes place, and what students' learning levels are (Mills, 2014). Action research design has an applied focus and collects data based on qualitative and quantitative approaches or both, as in a mixed research design, but it differs in that it offers solutions to a problem by considering a specific issue (Creswell, 2012). Patton (2014) stated that action research aims to solve some problems/issues that exist in a program or community with no aim to generalize. Action research, which is a process in which participants systematically and thoroughly examine their own educational practices using research techniques (Ferrance, 2000), involves the use of research methods by those who are to use them in order to examine current problems or issues (McMillan & Schumacher, 2014). It is noteworthy that action research is classified in different ways by different researchers. Berg (2001), for example, grouped the types of action research conducted by different researchers into the same category according to their similar characteristics and classified them as *Technical/Scientific/Collaborative Action Research*, *Applied/Mutual Collaboration/Deliberate Action Research*, and *Liberating/Developing/Critical Science Research*. The present research drew upon technical/scientific/collaborative action research from among the classification made by Berg (2001). In technical/scientific/collaborative action research, the primary goal is to test an application based on a pre-existing theoretical framework. In this respect, the reason why technical/scientific/collaborative action research was selected for the research is that there was a theoretical framework for writing-to-learn and the research process was carried out in accordance with this framework. In some other studies, the subject is an important factor in choosing action research as a research model. It is noteworthy that researchers who follow an action research model generally focus on three research topics. These research topics can be: i) *evaluating or studying a teaching strategy*, ii) *investigating or defining a problem*, and iii) *a topic of interest to researchers* (Johnson, 2014). In order to increase the quality of teaching in the distance education process and to make students more active during the lessons, the subject of “*evaluating and studying a teaching strategy*”, developed by Johnson (2014), was preferred as the research topic in the present study in order to evaluate the effect of writing-to-learn method on learning in the distance education process.

The literature shows that the process followed in studies conducted using an action research design is expressed in different ways by different researchers. Berg (2001) stated that the action research process/cycle has four stages: i) *identifying research questions* ii) *collecting information to answer the questions* iii) *analyzing and interpreting information*, and iv) *sharing results with participants*. The action research process/cycle created by Berg (2001) is presented in Figure 2.

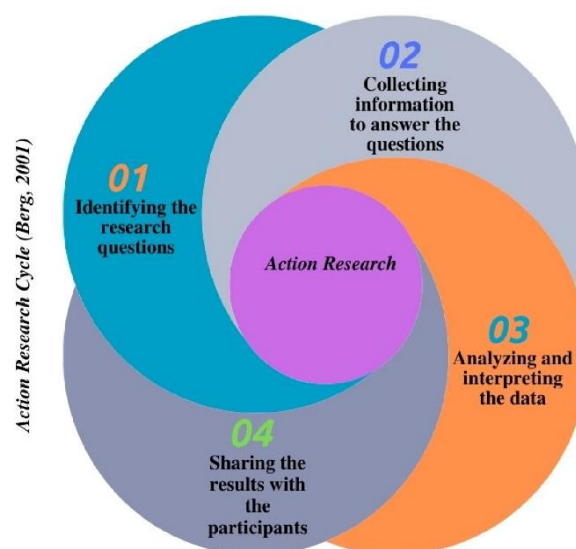


Figure 2. Action research process/cycle

Identifying the research questions/problems: The starting point of the research is the teaching process of prospective teachers in distance education throughout the pandemic. What the researchers considered significant were the concerns that student participation was not at the desired level in the lessons (as of March 2019-2020 spring semester), that this situation negatively affected the students' success as well as the inability to make an objective evaluation. It was determined that such issues stood out as a problem in the interviews with the prospective teachers. Example expressions of participants are given below:

PT3. *"Since our lessons are mostly verbal, we mostly spend time listening during distance education. This makes our learning process monotonous."*

PT11. *"I cannot predict what I have learned or how much I have learned in distance education. That's why I'm worried."*

PT14. *"Some technical problems I have experienced in distance education... For example, I get disconnected just as we are working on a subject. Even after watching the videos, I can't fully understand the subject."*

PT25. *"Since I had the chance to watch the lesson videos later in the distance education system, my desire to follow the lessons regularly weakened. During this process, my motivation dropped a lot."*

It is believed that it is of great importance to integrate different learning/teaching approaches into distance education in order to implement an effective teaching process, to ensure that prospective teachers participate in the course process, and to make an objective evaluation.

Collecting information to answer the questions: The research data were collected through writing-to-learn activities and interviews applied during the distance education course.

Analysing and interpreting the data: The analysis of writing-to-learn activities in the research was carried out simultaneously with the data collection process. The interviews made before and after the implementation were analyzed and interpreted with content analysis.

Sharing the results with the participants: The participants were given feedback about the activities every week, and an overall evaluation was made about their performances. Thanks to feedback, the participants were able to detect and correct their deficiencies.

The action research process prepared and followed accordingly is presented in Table 1.

Table 1. Action Research Process

Activity Application Time (Week)	Applied Activity	Application Process	Process Evaluation
19.11.2020 (Week 1)	I learn by writing letters	The topic of current global issues was discussed with prospective teachers in the online environment in general terms. Then, the participants were asked to write down the information they gained about current global issues in a letter format. The writing-to-learn activity form related to the topic was shared with them. They were also informed about the preparation process of writing-to-learn activities.	The letters sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.
26.11.2020 (Week 2)	I learn by writing diaries	The feedback about the letters were shared with the participants. The letters written in accordance with the purpose were examined online with the participants. Deficiencies and errors related to the subject were corrected. Then, the world population and population-related problems were discussed in detail. Afterwards, the participants were asked to write down the information they obtained during the course in a diary format. The writing-to-learn activity form related to the topic was shared with them.	The diaries sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.

03.12.2020 (Week 3)	I learn by writing stories	The feedback about the diaries were shared with the participants. The diaries written in accordance with the purpose were examined online with the participants. Deficiencies and errors related to the subject were corrected. Then, the migration in the world and the problems that arise due to migration were discussed with the participants in the online environment. Afterwards, they were asked to write down the information they obtained during the course in a story format. The writing-to-learn activity form related to the topic was shared with them.	The stories sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.
10.12.2020 (Week 4)	I learn by writing columns	The feedback about the stories were shared with the participants. The examples of stories written in accordance with the purpose were examined online with the participants. Deficiencies and errors related to the subject were corrected. Then, the topic of international terrorism was discussed comprehensively with the participants. Afterwards, they were asked to express what they learned in a column format. The writing-to-learn activity form related to the topic was shared with them.	The columns sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.
17.12.2020 (Week 5)	I learn by writing newspaper stories	The feedback given about the columns were shared with the participants. The examples of columns written in accordance with the purpose were examined online with the participants. Deficiencies and errors related to the subject were corrected. Then, the problem of human rights violations in the world was discussed. Afterwards, the participants were asked to write a newspaper story about this problem of rights violations in the world. The writing-to-learn activity form related to the topic was shared with them.	The newspaper stories sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.
24.12.2020 (Week 6)	I learn by writing interview texts	The feedback given about the newspaper stories were shared with the participants. The examples of columns written in accordance with the purpose were examined online with the participants. Deficiencies and errors related to the topic were corrected. Then, environmental problems in the world were discussed in detail with the participants. Afterwards, they were asked to write an interview article on environmental problems. The writing-to-learn activity form related to the topic was shared with them.	The interview articles sent by the participants via e-mail were evaluated with a standard rubric and the participants were given the necessary feedback.
31.12.2020 (Week 7)	The feedback given about the interview articles were shared with the prospective teachers. Samples of interview texts written in accordance with the purpose were reviewed online with the participation of prospective teachers. Deficiencies and errors related to the subject were corrected. Then the application process was terminated. The participants' opinions were taken on the process.		

STUDY GROUP

This study was conducted with a total of 42 (26 female, 16 male) Year 4 prospective teachers studying in Social Studies Teaching Department of a state university in the 2020-2021 academic year.

DATA COLLECTION

WRITING-TO-LEARN ACTIVITIES

The current study drew upon the writing-to-learn model developed by Prain and Hand (1996:618) regarding the utilization of writing as a learning tool for the purposes of reducing the learning losses of prospective teachers in the distance education process, ensuring their permanent learning, and activating them in the learning process. A variety of writing-to-learn activities were developed by the researchers, taking into account the basic principles of this

model, which was put forward to determine the writing-to-learn capacity of prospective teachers. The activities developed and the basic structure of the activities are given in Figure 3.

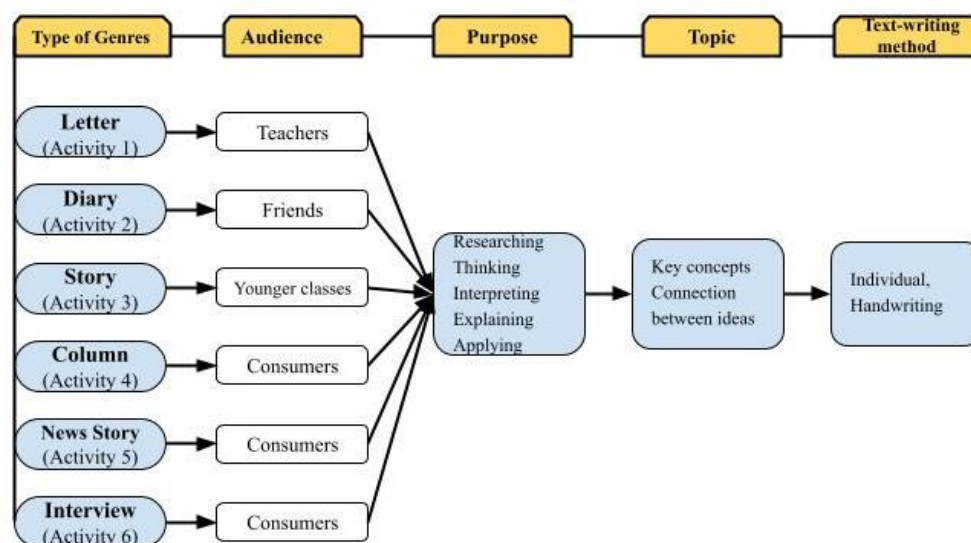


Figure 3. Activities and their bases

As can be seen in Figure 3, a variety of writing-to-learn activities integrated into the distance education process were prepared by the researchers as teaching material.

SEMI-STRUCTURED INTERVIEW FORM

A semi-structured interview form was prepared by the researchers in order to evaluate the prospective teachers' views before and after the application. In line with the prepared interview form, interviews were held with 30 prospective teachers. The participants were informed that the interviews would only be used for research purposes, their identity information would be kept confidential, and their names would be coded (e.g. PT/1, PT/2, PT/3, PT/4,...PT/30).

DATA ANALYSIS

ANALYSIS OF WRITING-TO-LEARN ACTIVITIES

Taking into account the basic components of writing-to-learn model (writing addressee, writing purpose, text production method, writing genre, writing topic) developed by Prain and Hand (1996: 618), "a holistic evaluation rubric for writing-to-learn activities", which was developed by Kayaalp (2020), was used in order to analyse the levels of ability concerning the writing activities created by participants in accordance with the writing-to-learn model. The holistic evaluation rubric for writing-to-learn activities is given in Table 2 below.

Table 2. The Holistic Evaluation Rubric for Writing-to-Learn Activities

Levels of Writing-to-Learn	Components
Level 1 (Weak)	The student is not aware of the addressee; his/her goals are unclear; s/he is insufficient in explaining the subject and far from the type of writing with poor handwriting.
Level 2 (Improvable)	The student writes without considering the addressee; his/her writing purposes are unclear; s/he is insufficient in explaining the topic; s/he is aware of the type of writing, but writes without considering that type, and is able to handwrite.
Level 3 (Strong)	The student is aware of the addressee, able to write scientifically appropriate to the subject, and to handwrite in a clear and understandable way, with a clear purpose of writing, and by being aware of the type of writing.
Level 4 (Very Strong)	The student is aware of the addressee, able to write scientifically appropriate to the subject by exemplifying and explaining with a clear purpose for writing, and by using a clear and understandable handwriting, with a distinctive approach, which is suitable for the writing type.

ANALYSIS OF SEMI-STRUCTURED INTERVIEWS

Content analysis was used to analyse the interviews with the prospective teachers. For the data analysis, firstly, the interview data were transcribed, and then, the data were analyzed and coded one by one by three researchers, after which the relevant categories were created. The coding and categorization of each researcher were compared. Upon determining whether there was consistency in the coding process, similar codes were collected under the specified categories. Reliability was calculated with respect to agreement and disagreement using Miles and Huberman's formula [(Reliability = number of consensus / (total number of agreements + disagreements)]. In general, a reliability coefficient of 90% is desirable (Miles & Huberman, 2016). In this study, a 97% score consensus (reliability) was achieved. The codes collected under the appropriate categories were visualized in the "GitMind" (<https://gitmind.com>) mind map maker. The views of the participants were presented through direct quotations.

RESULTS

The study examined the examples of writing-to-learn activities prepared by the prospective social studies teachers in the context of an online lesson in which current global issues were discussed, and then presented the developmental levels of the prospective teachers in the writing activities on a weekly basis. It also included the opinions of the prospective teachers about writing-to-learn activities applied in the process.

RESULTS RELATED TO THE ACHIEVEMENT LEVELS OF THE PROSPECTIVE SOCIAL STUDIES TEACHERS IN WRITING-TO-LEARN ACTIVITIES

The multiple writing-to-learn activities prepared by the participants in relation to the current global problems course and their achievement levels in the activities were given weekly. The examples of writing-to-learn activity written by the prospective teachers in the first week and their relevant ability levels are presented in Figure 4 and Figure 5.

As shown in Figure 4, the participants wrote a variety of letters in the Current Global Issues lesson.

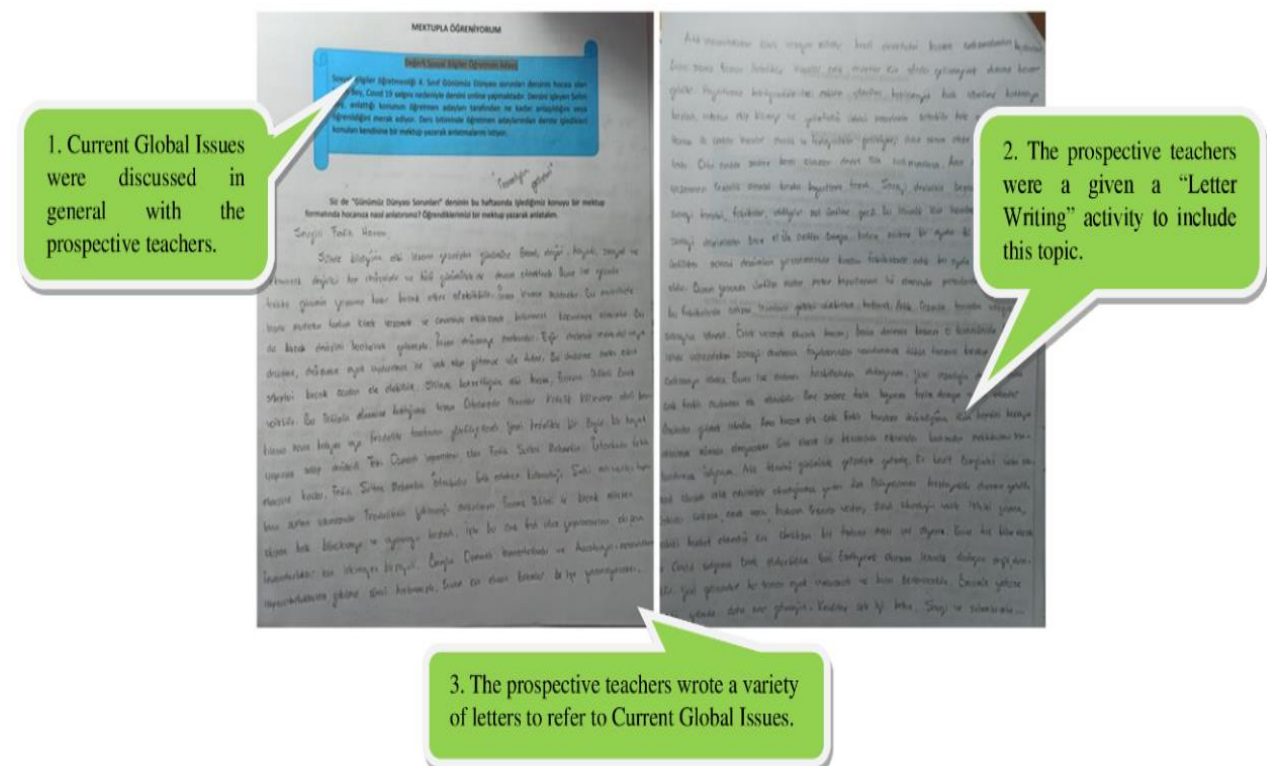


Figure 4. Letter-writing activity as to the writing-to-learn method

The evaluation regarding the letters prepared by the participants in terms of the basic principles of writing-to-learn is given in Figure 5.

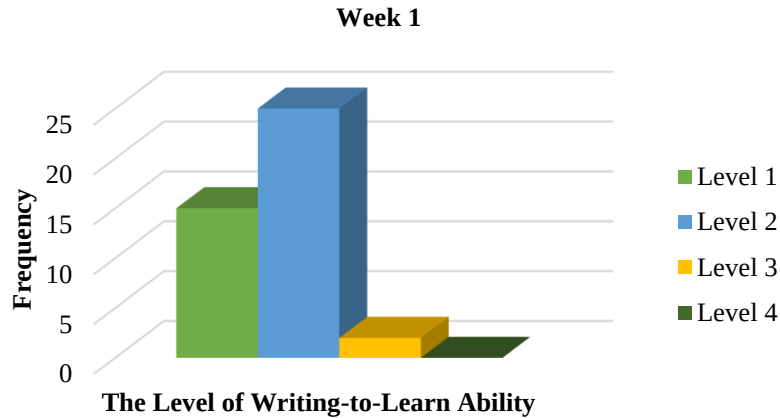


Figure 5. The prospective teachers' levels of writing-to-learn ability in Week 1

As seen in Figure 5, the prospective teachers' level of writing-to-learn ability is generally weak ($f=14$) and improvable ($f=25$), while only two prospective teachers ($f=2$) presented strong and one prospective teacher ($f=1$) presented very strong levels of writing ability. In other words, the participants tended to write haphazardly, by paying no attention to the type of activity. They created their written assignments independently of the subject, using sentences that give general meanings, without paying attention to the topics covered. They had a shallow writing style in their written products in which scientific knowledge was barely used. As there was no comprehensive information reflecting what they individually learned on the topic, it seems unlikely that any addressee of the article to be sufficiently informed or learn the subject.

The example of the relevant writing-to-learn activity prepared by the prospective teachers in week 2, and their writing proficiency levels are presented in Figure 6 and Figure 7.

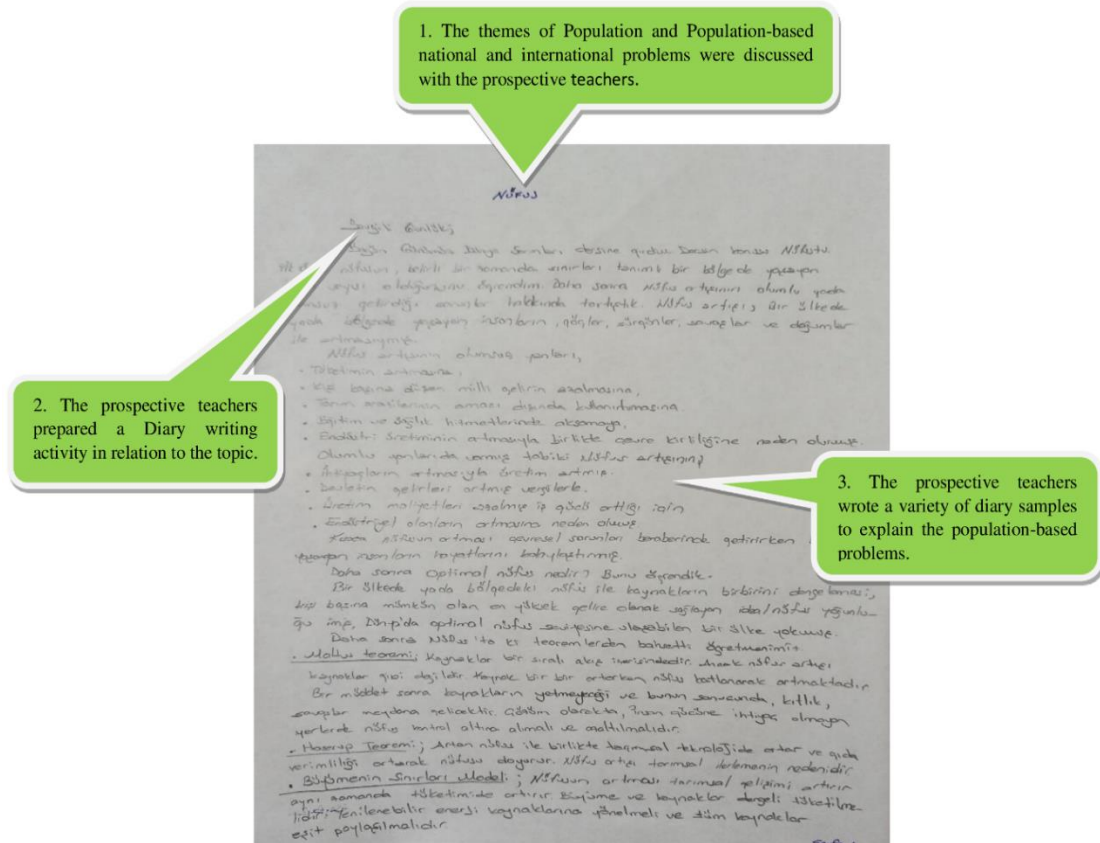


Figure 6. Diary-writing activity as to the writing-to-learn method

As shown in Figure 6, the prospective teachers prepared a variety of diaries on *population growth* and *population-based international problems*, based on the information they acquired in the lesson. Figure 7 presents the evaluation of the diary assignments prepared by the participants in terms of the basic principles of the writing-to-learn model.

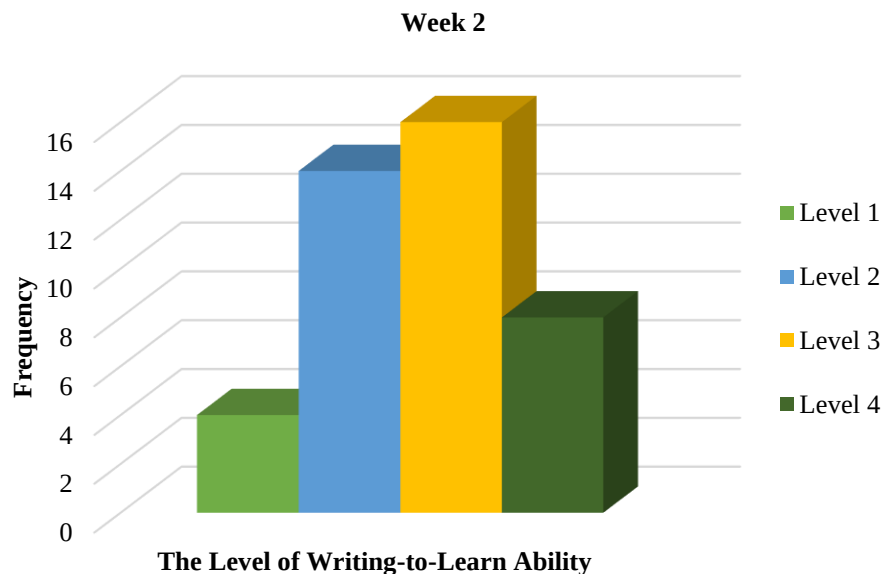


Figure 7. The prospective teachers' level of writing-to-learn ability in Week 2

Figure 7 shows that the participants in the present study gathered around two ability levels, namely improvable ($f=14$) and strong ($f=16$) in terms of writing-to-learn ability. The number of participants who were able write at a very strong level turned out to increase ($f=8$), and the participants moved away from the level referring to weak ability ($f=4$) in terms of writing-to-learn proficiency, thanks to the feedback they received. In other words, depending on the feedback given in the first week, the participants tended to write more specific to the type of activity that they were supposed to write. They also seemed more successful at accurately converting the learned information into a different writing form (diary). However, although most of the participants could achieve this in the introduction of their texts, they later tended to move away from the type of writing as they proceeded in the text. In addition, it was observed that most of the participants were still far from expressing the learned subject in a scientifically correct, comprehensive, and clear way.

The type of writing-to-learn activity prepared by the participants in week 3, and their writing ability levels are presented in Figure 8 and Figure 9.

1. The themes of International Migration and Migration-based problems including refugees and asylum seekers were discussed with the prospective teachers.

2. The prospective teachers prepared a Story-writing activity in relation to the topic.

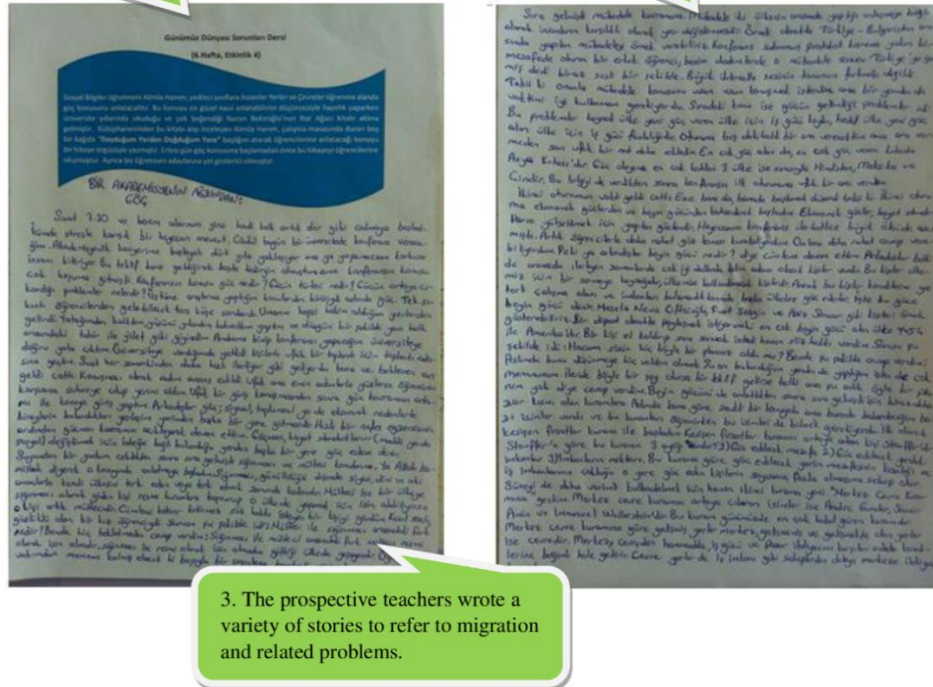


Figure 8. Story-writing activity as to the writing-to-learn method

As shown in the example in Figure 8, the participants prepared different stories about *migration* and *international problems arising due to migration*, based on the information they gathered in the lesson. The evaluation of the stories prepared by the participants in terms of the basic principles of the writing-to-learn model is given in Figure 9.

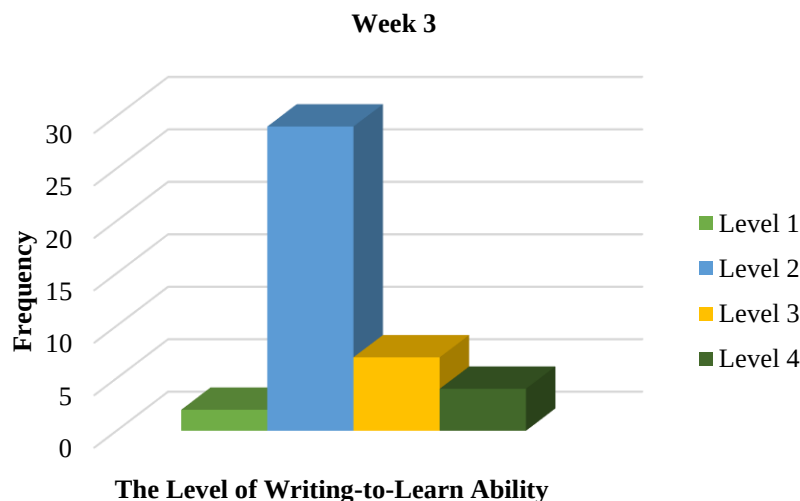


Figure 9. The prospective teachers' level of writing-to-learn ability in Week 3

Figure 9 demonstrates that the two-week feedbacks were effective on the improvement in the participants' level of writing-to-learn ability. While the number of participants at weak ($f=2$) level decreased, the number of those at the improvable ($f=29$) level remained constant.

Similarly, while seven of the participants ($f=7$) reached the strong level, four of them ($f=4$) reached being able to write at a very strong level. To put it differently, the participants started to include the appropriate subject content in accordance with the writing-to-learn model in the story-writing activity. In addition, it was observed that the participants began to write unique examples of story-writing that are scientifically effective and include plenty of examples and explanations. The type of writing-to-learn activity prepared by the participants in week 4, and their levels of writing-to-learn ability are presented in Figure 10 and Figure 11.

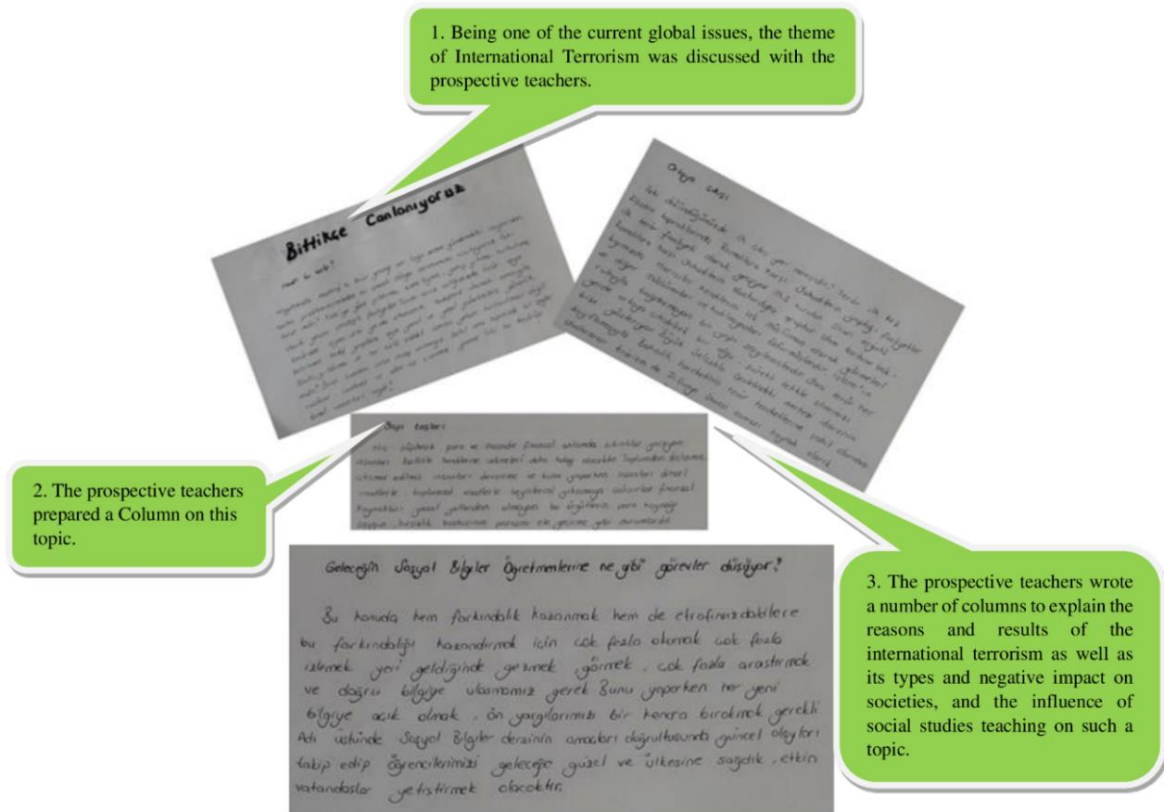


Figure 10. Column-writing activity as to the writing-to-learn method

As shown in the example in Figure 10, the participants prepared different newspaper columns on *terrorism* and *international problems arising from terrorism*, based on the information they learned in the lesson. Figure 11 presents the evaluation of the columns prepared by the participants in terms of the basic principles of writing-to-learn.



Figure 11. The prospective teachers' level of writing-to-learn ability in Week 4

Figure 11 indicates that the participants made significant progress as a result of the three-week feedback. While twenty ($f=20$) participants included what they learned in a type of writing at a very strong level (Level 4), thirteen ($f=13$) of them were able to write at a strong level (Level 3). While only 9 ($f=9$) participants were at the improvable (Level 2) level, there were no participants left at the weak level (Level 1). In other words, it appeared that the participants made progress in transforming the information they learned into a newspaper column. While conveying the relevant information, the level of using scientifically accurate and comprehensive information seemed to have improved considerably. Still, there were some participants who were undecided about the type of writing. Figure 12 and Figure 13 illustrate the type of writing-to-learn activity prepared by the participants in week 5, and their writing ability levels.

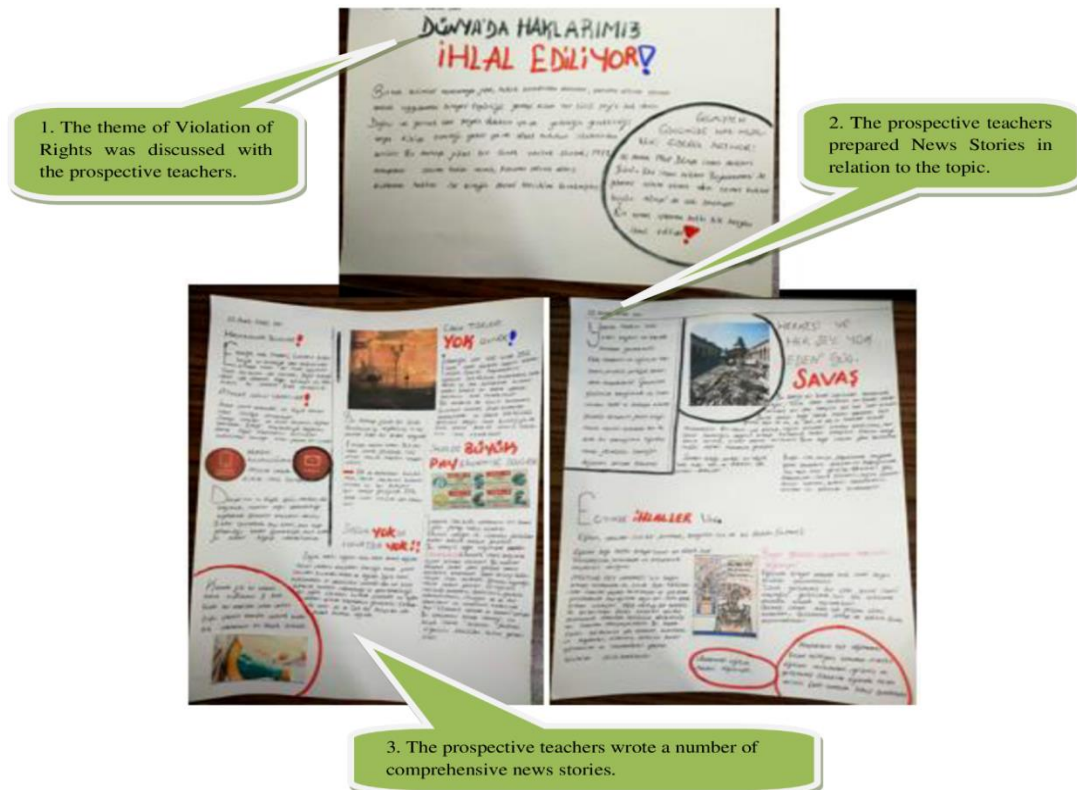


Figure 12. Newspaper story-writing activity as to the writing-to-learn method

As can be seen in the example in Figure 12, the participants prepared various newspaper stories on *international problems arising from the violation of rights* based on the information they learned in the lesson. The evaluation of the newspaper stories prepared by the participants in terms of the basic principles of writing-to-learn is given in Figure 13.

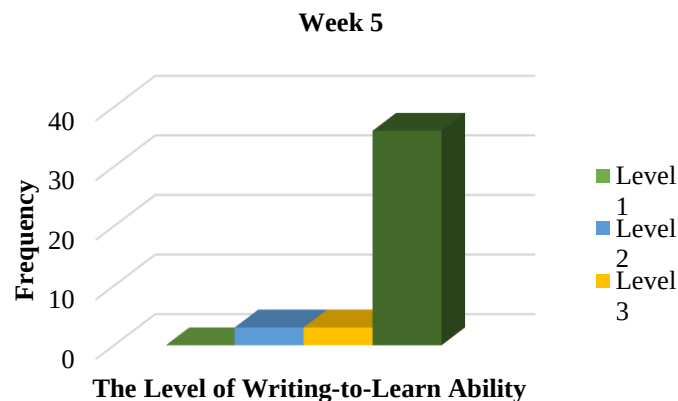


Figure 13. The prospective teachers' writing-to-learn proficiency levels in Week 6

Figure 13 shows that the participants made a considerable improvement. While the majority of prospective teachers ($f=36$) wrote very strong newspaper stories in terms of writing-to-learn model, three ($f=3$) of them wrote at a strong level, and three ($f=3$) of them wrote at an improbable level. No prospective teacher was found at the weak level (Level 1). In other words, the participants were able to create writing-to-learn activities in a unique structure by taking into account the information they learned in line with a certain purpose and considering the possible addressees. In this process, they reached a very strong level in using scientific information correctly and relating to the information they learned with various explanations, examples, and visual aids. The type of writing-to-learn activity prepared by the participants in week 6, and their writing levels are presented in Figure 14 and Figure 15.

1. The theme of Environmental Issues was discussed with the prospective teachers.

2. The prospective teachers were asked to write an Interview on this topic.

3. The prospective teachers prepared Interview texts to refer to environmental issues such as the environmental, sea, air and land pollution, global warming, drought, water scarcity, concretization, and uneven urbanization etc.

Figure 14. The interview articles writing activity as to the writing-to-learn method

As shown in the example given in Figure 14, the participants prepared various interview articles on *international environmental problems* based on the information they learned in the lesson. The evaluation of the interview articles prepared by the participants in terms of the basic principles of writing-to-learn is given in Figure 15

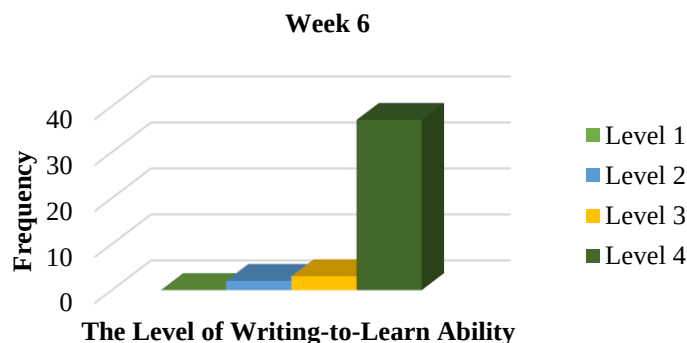


Figure 15. The prospective teachers' level of writing-to-learn ability levels in Week 6

Figure 15 shows that the level of improvement that the participants made in the fifth week continued in the sixth week. In Week 6, thirty-seven ($f=37$) participants seemed to be able to use the information they learned in an interview text at a very strong (Level 4) ability level, while three ($f=3$) of them showed strong (Level 3) ability, and two ($f=2$) of them turned out to have improvable ability (Level 2) in writing. As in the fifth week, there is no prospective teacher with a weak level (Level 1) in terms of writing for learning purposes in the sixth week. As in week 5, no participant remained in the weak ability level (Level 1) range in terms of writing-to-learn in week 6. In other words, it is clearly seen that the participants made a significant improvement in terms of presenting the information in a different form by drawing on what they learned in the fifth week and after, as a result of the direct impact of four-week feedback. The participants reached a level where they can convey the knowledge they gained in a clear, understandable, and a comprehensive way, through different fonts.

THE RESULTS RELATED TO THE PROSPECTIVE SOCIAL STUDIES TEACHERS' WRITING-TO-LEARN ACTIVITIES APPLIED IN DISTANCE EDUCATION

In the distance education process, different writing-to-learn activities were included for six weeks in order to effectively involve the prospective teachers in the learning processes. The multiple writing activities carried out with the participants seemed to improve their writing-to-learn ability. In this sense, the factors that were effective in that improvement or the factors underlying the participants' improvement in the writing-to-learn ability are very important. In other words, the answer to the question, "Why and how did the writing-to-learn activities carried out during the distance education process affect learning?" needs considerable attention, and the present study, therefore, attempted to reveal the possible answers through the opinions of the participants. The results obtained are presented in Figure 16.

As is seen in Figure 16, the participants made evaluations from different perspectives about writing-to-learn activities used in the distance education process. It is remarkable that the effects of writing-to-learn activities such as providing *cognitive learning* and *permanence of knowledge* gained in the lessons, developing *imagination* and *activating higher-order thinking* skills come to the fore among the evaluations.

Regarding the multiple effects of writing-to-learn activities integrated into the distance education process, PT6 said, "*Writing can be a tool for learning because the more our sense organs are active while learning, the better the learning occurs. Just as hearing and seeing enable learning, writing provides as much. Personally, I learn more easily when I take notes while listening to the lesson, and even what I learn becomes permanent. Even though we have been taught via distance education, I think we have been going through an effective process*", emphasizing that writing-to-learn activities facilitate learning in distance education and ensure permanent knowledge. Just like PT6, another participant, PT1 also made a comprehensive assessment of the effects of activities, and said, "*I think that every activity we do adds a lot to us. First of all, I learned while thinking. I both had fun and learned by writing the information we gained in different formats. In the distance education process, we both learned and put the knowledge into practice. Under these extraordinary circumstances, where we are far from face-to-face education, I think we have increased the efficiency we could get from the lesson to a higher level thanks to writing activities*", stating that it is possible to learn by having fun in the distance education process. The participants further made mention of the aspects indicating that writing-to-learn activities activate different skills, which are very important components of learning processes as well as the action of learning itself. In this respect, PT16 said, "*Learning begins where the act of reading, which is a form of learning, is put on paper. When we think about individual differences, it is obvious that some people learn by reading, some by listening, and some by writing. 'Spoken words fly; written words remain'. In this way, writing encourages students to think and helps them put their thoughts into writing.*" PT22 said, "*Before preparing assignments on the type of writing every week, I researched the characteristics of that genre,*

found examples, and read them. This allowed me to do research”, and drew attention to the effectiveness of writing-to-learn activities on research skills. Likewise, PT15 stated that writing-to-learn improves higher-order thinking skills and said, “Writing strengthens the pre-preparation process for students to acquire knowledge. Students can improve themselves in terms of interpreting the information and taking their knowledge to the next level. In this way, critical and creative thinking skills develop.”

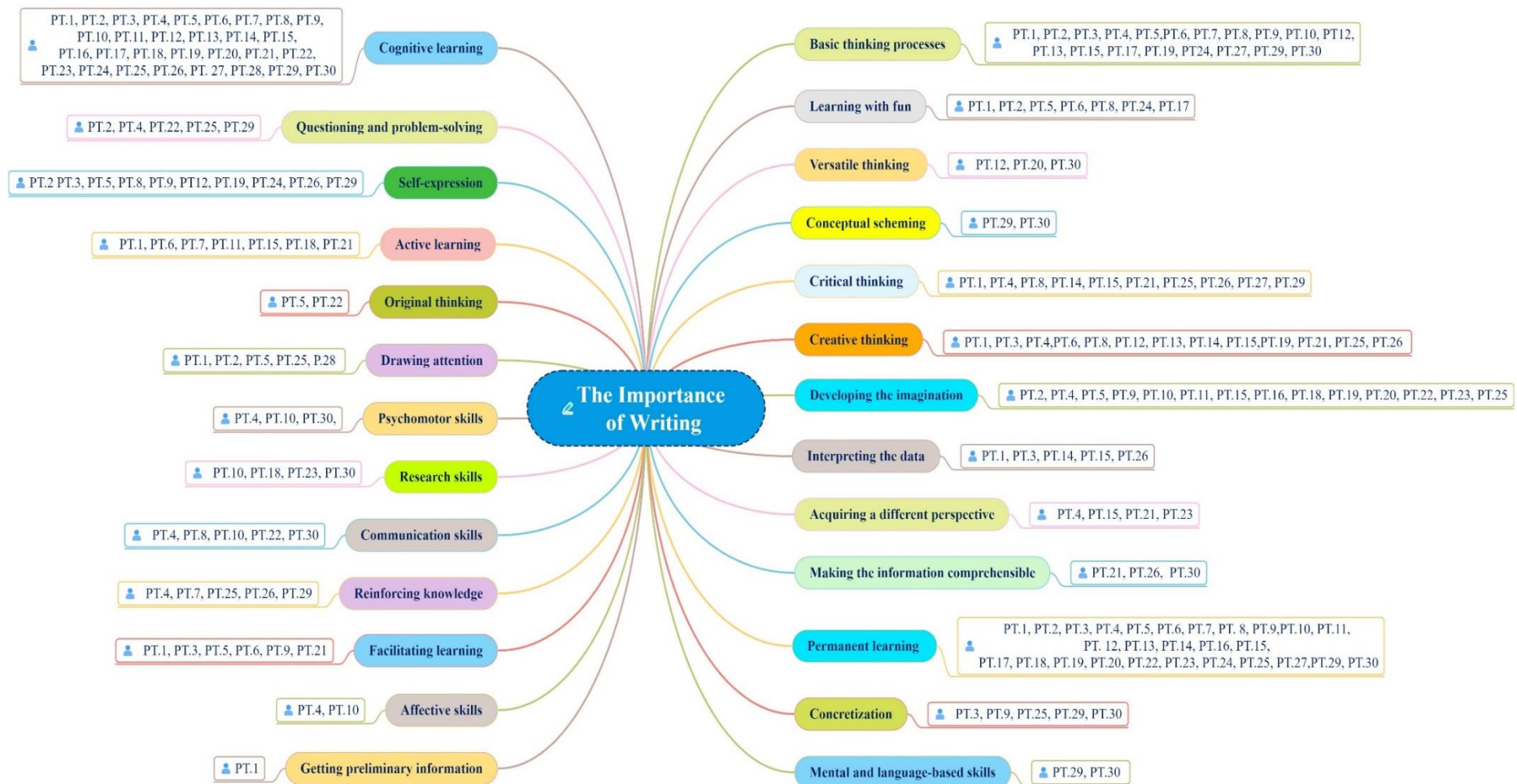


Figure 16. The importance of writing-to-learn model

In addition to these, PT26 stated that writing-to-learn provides an opportunity for prospective teachers to express themselves and said, *“Writing has enabled us to develop in many ways. In particular, it allowed students who could not express themselves verbally to express themselves better by writing.”* Discussing a different aspect of writing-to-learn applied in the distance education process, PT.5 said, *“The writing activities we used in the lesson prevented the lesson from being static. Even in distance education, it made the students more interested in the lesson and give them the opportunity to show what they learned in the lesson in a different way from the exams”*, indicating that it is possible to increase the students’ interest and attention to the learning process in distance education by making use of the writing-to-learn activities.

One of the factors in the effectiveness of the writing-to-learn activities in distance education as regards the prospective teachers’ multidimensional development is that such activities are subject to a process-based evaluation phase and the participants are provided with weekly feedback in return of assignments. Figure 17 presents the results obtained from the participants’ opinions regarding the feedback on writing-to-learn activities during distance education.

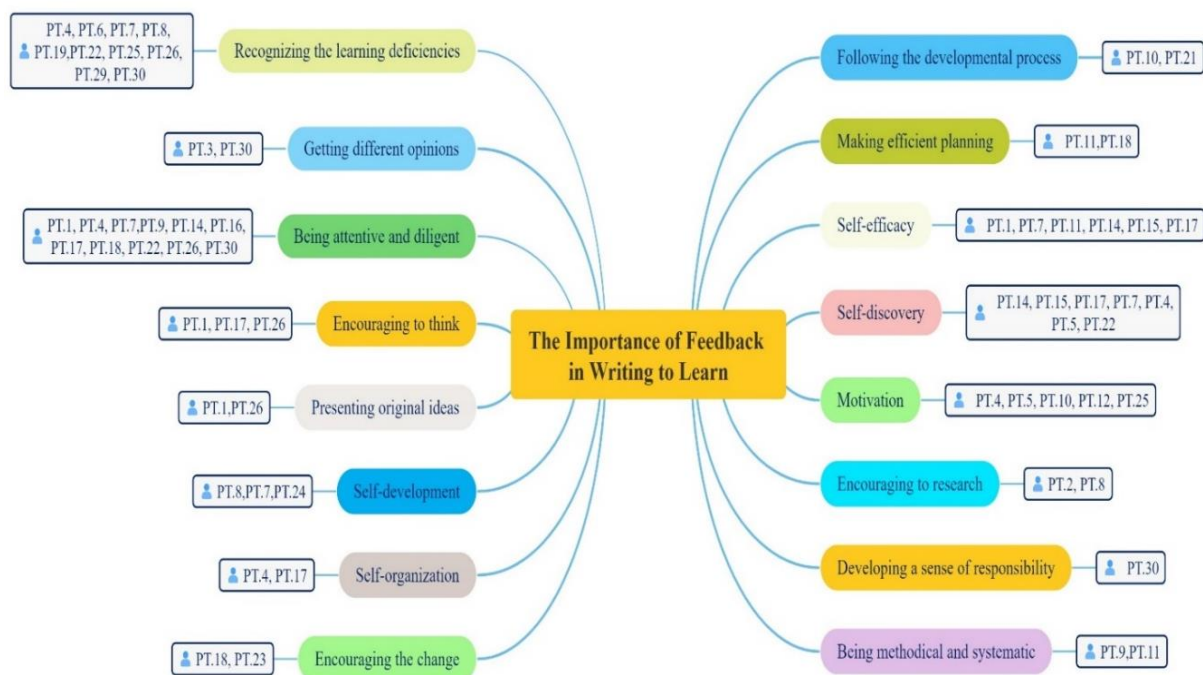


Figure 17. The importance of feedback in the writing-to-learn model

Figure 17 illustrates that the feedback given to the writing-to-learn activities in the distance education process has generated positive changes in the participants’ learning process, especially in noticing the learning deficiencies, being more attentive and diligent, and developing self-discovery through the activities they do. In terms of the feedback given to the writing-to-learn activities integrated into distance education, PT1 said, *“First of all, I think the evaluation was made in an objective way. I saw this very clearly in the feedback given to us after the activities. When it comes to what kind of change occurred in me, I saw that my skills such as thinking and paying more attention to the subject in the following week’s assignment improved thanks to the feedback our professor gave us every week”*, emphasizing that the feedback results in attentiveness and diligence. Regarding the positive contribution, PT30 said, *“The feedback made a positive impact on me in every aspect. It allowed me to see my shortcomings, other ideas about a subject and gain knowledge. By noticing my shortcomings, I have become more attentive while doing my other homework”*, revealing the importance of the feedback. With a similar approach, PT5 said, *“As we receive feedback after each assignment, and we are shown the best assignments in the class and are also explained about which parts*

are better or missing with their reasons, I have started to look objectively and correct my deficiencies.” From a different perspective PT12 said, “It is important for people to receive positive or negative feedback on what they do, especially, to find out where it went wrong. So are the feedbacks we received in this course, even though we sometimes got low grades, we always waited for the result with curiosity. This has been motivating for us in this process.” PT5 further said, “I think the feedback motivated me just like everyone else. It really motivated me that my assignment got the grade I deserved, and that the more I did the better my grade, and that the grading was fair.” Participants drew attention to the fact that the feedback including necessary explanations was quite effective on their motivation. Stating that the feedback provided positive contributions such as eliminating learning deficiencies and boosting motivation in them, as well as offering chances for self-improvement, PT29 said, “Receiving feedback has made it possible for me to see my shortcomings and do better work because each feedback given is just a step in taking you to the better; over time, you can get even the most perfect result.”

DISCUSSION

This study examined the impact of writing-to-learn activities integrated into the distance education process on the learning and evaluation processes of prospective teachers. The initial result revealed that the activities carried out in line with the writing-to-learn model in the distance education process not only improved the writing skills of the prospective teachers for learning purposes but also had positive effects on their learning. The findings of the present study and those of many studies dealing with the effects of the writing-to-learn model, by considering its different aspects, have a lot in common (Aktepe & Yıldız, 2020; Ellis Robinson, 2015; Hohenshell & Hand, 2006; Kayaalp & Şimşek, 2020; Kim et al., 2021; Klein & Rose, 2010; Rouse, Kiuahara & Kara, 2021; Walp, 2013). The effect of writing-to-learn activities on learning can be explained by different reasons. Figure 18 illustrates this intertwined relationship between writing, feedback and learning, which is at the root of these reasons.

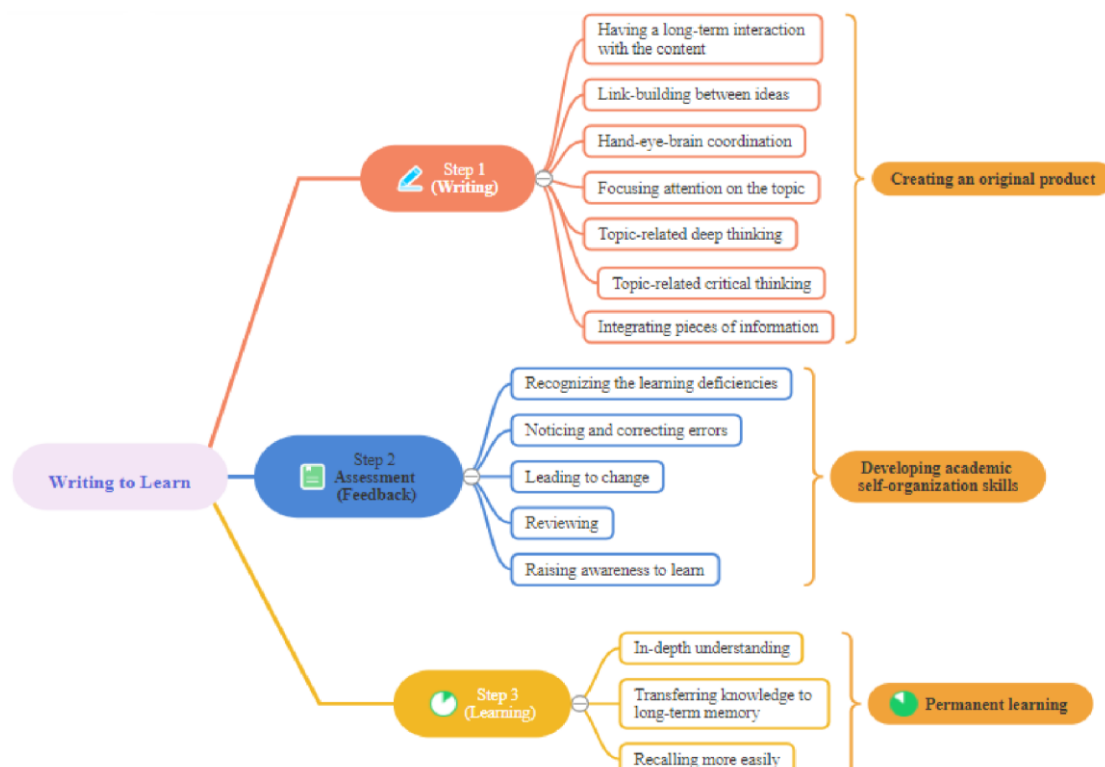


Figure 18. The relationship between writing, feedback and learning

Figure 18 shows the relationship between writing, feedback and learning as discussed in a universal context rather than a particular causality. Instead of a single reason, this study focused on the whole that is revealed by different reasons. Many researchers, who are a part of this whole, primarily discussed the relationship between writing and learning in terms of thinking processes. Caniglia (2016) summarized this situation, asserting that “writing is thinking.” Also, Forsman (1985) stated that if students are allowed to activate their thinking processes in the classroom environment, they can achieve significant mental development regardless of age. One of the most effective ways to achieve this is writing (Forsman, 1985). Writing not only provides students with opportunities to think and rethink about a topic (Abel, Hauwiler & Vandeventer, 1989), but also contributes to students’ critical thinking about what they have learned and to analysing the connection between ideas (Hübner, Nückles & Renkl, 2010). While writing a sentence or paragraph about the content, students select, combine and organize what they know or learn, which further improves the thinking process (Dolgin, 1981). Thus, writing about any subject, above all, allows students to clarify their thoughts about that subject, to understand, and learn the subject better (Goggin, 1985). Writing-to-learn activities build learning environments that allow meaningful writing (Gunel, Hand & Mcdermott, 2009). In this construction process, Chmarkh (2021) emphasizes the reality that learners can potentially store and internalize more information according to how much they interact with relevant content and materials, and process them in the writing-to-learn model as a writing and teaching strategy, while Reilly (2007) stresses that the act of writing itself affects learning because it requires hands, eyes, and brain to work in an integrated manner. Approaching the causality between writing and learning from a different angle, Bangert Drowns et al. (2004) revealed that as students write about the learned subject, the time they get into contact with the subject increases and they build new knowledge, thereby resulting in deeper learning. In this deep learning process, the act of writing functions as a memory aid for students (Boscolo & Mason, 2001). Carefully prepared writing activities help students organize the various pieces of information presented in the classroom, thereby reinforcing the information and associating it with previous information (Holbrook, 1987). Subsequently, students can integrate the knowledge and ideas they have learned with their previous knowledge (Rouse et al., 2021). Thus, a unique learning product comes out (Kayaalp & Şimşek, 2021). Participating in writing-to-learn activities allows students to search, recall, and evaluate the information coming from episodic and semantic memory, and to transform the resulting information into text (Klein, 1999). Thanks to this opportunity, learning takes place as the knowledge and thoughts formed in the brain during the writing process are made evident through writing (Prain & Hand, 1996). This reveals the possible results that students participating in writing-to-learn activities better understand, learn, restore and remember the content for a longer period of time (Myers, 1984). In addition, the feedback received through peer reviews on writing-to-learn activities during the application process allows students to better understand the content and concepts (Finkenstaedt Quinn et al., 2021), as well as detecting and correcting their mistakes (Gupte et al., 2021); and continuous feedback increases students’ awareness of their thoughts (Emig, 1977). Thus, students who are positively affected by the feedback given during the writing process can develop their academic self-regulation and self-efficacy skills, and achieve meaningful learning.

The positive effects of writing-to-learn model has been comprehensively revealed in different meta-analysis studies that deal with the learning outcomes derived from universal causes of writing-to-learn with a holistic approach (Bangert Drowns et al., 2004; Graham & Perin, 2007; Graham, Kiuahara & Mackay, 2020). Likewise, Klein and Boscolo (2016), who examined the trends of writing-to-learn that develops in time, and Chmarkh (2021), who synthesized the results of experimental studies conducted on writing-to-learn between 2004-2019, clearly pointed out the critical effects of writing-to-learn model on learning. Being apparent in the

findings of the present study, the positive effects of the writing-to-learn model on learning overlap with the results of previous meta-analysis studies and those examining the trends in writing-to-learn.

The results of this study are similar to those of different studies approaching the subject within the scope of their own research, as is the case in the studies evaluating the positive effects of writing-to-learn on learning from a holistic perspective. Gupte et al., (2021), for example, revealed that writing-to-learn activities create a bridge between previous and newly learned knowledge, develop students' *"problem solving skills"*, and enable meaningful learning. Tynjala (1998), who approaches this intermediary role of writing from another perspective, also pointed out that thanks to writing, new information is built on old information, which is a step towards *"easier recalling and effective learning"*. This result is in conformity with the findings of both Gupte et al., (2021) and this study, which was carried out in integration with distance education. In the same way, with the intention of improving students' cognitive learning in the social studies course through the use of multiple writing-to-learn activities, Kayaalp and Şimşek (2020) revealed in their study that writing-to-learn activities that have an *"interesting, intriguing and entertaining structure that leads students to different thinking processes"* show important effects on academic achievement, as presented in the current study. Similar findings obtained from different studies make the statement of Kim et al., (2021), saying, *"writing allows us to find out what we know or do not know about what we are trying to learn"* (Kim et al., 2021) even more understandable. Kabataş Memiş (2014), who dealt with the effects of non-traditional writing styles on university students, concluded that the activities are *both beneficial and instructive* for students, suggesting a result similar to that of this study. In a similar fashion, Ray Parsons (2011) focused on concept-teaching and academic achievement through writing-to-learn activities, and came up with results to support the present study and similar studies by emphasizing the positive effects of the writing-to-learn model. Adapting non-traditional writing styles to chemistry class, Kingir (2013) reported the emergence of the capacity to improve both concept learning and course success through letter-writing, one of the types of writing-to-learn activities. Such improvement was observed in this study, which was integrated with distance education, as is the case in other similar studies. Addressing the effects of writing-to-learn on learning processes from a broad perspective, Dummer et al. (2008) asserted that the contribution of writing to critical and innovative thinking skills in the learning process provides students with deep learning, and hence, clarified the concept of deep learning, which was also mentioned in this study. In addition to Karaçağıl (2014)'s emphasis on the contribution of writing-to-learn model to *"remembering what has been learned easily"* in the social studies course, Ay and Başbüyük (2018)'s conclusion about the positive effects of the writing-to-learn model on *"creative thinking and communication skills"*, make the results of the present study even more meaningful. In particular, Doğan and İlhan (2016), who based their conclusion on the opinions of prospective teachers regarding the writing-to-learn model, asserted that the model *"provides increase in knowledge, leads to active participation, motivates for research, and enables permanent learning"*, which is quite consistent with the findings of this study.

CONCLUSION AND SUGGESTIONS

The recent pandemic, which has affected the whole world, has exposed the stakeholders of education (teachers, students, parents and policy makers) to the concerns in relation to how to build a quality learning-teaching process in distance education, how to involve students in this process, and how to objectively evaluate the learning outcomes gained in the process. On the grounds of such meaningful questions about distance education, this research sought practical answers to these basic questions through writing-to-learn activities, with a holistic understanding (providing quality learning, activating the student in the learning process and

objective evaluation) rather than reductionism (only one dimension of the phenomenon). Writing, which keeps strengthening its place as a tool of learning, has always managed to preserve its place among learning tools. Although technological developments have pacified many elements of education, it is possible to integrate writing with developing technology and new education models. The results of this research prove this integration. As a result, the writing-to-learn activities included in the distance education process helped students to learn easily and reduced their learning losses. In addition, writing-to-learn activities made students a part of the process, even from a distance, and drew them to the centre of their own developmental processes. Also, the evaluations made as regards the process increased students' awareness of learning and improved their academic self-regulation skills.

This study was integrated into a course with intensive verbal content. Further studies may be conducted by adapting the model to the content of digital courses. This research employed handwriting as the text production method. Similar studies can be conducted through the use of various digital learning tools in the future.

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PROMOTING THE VOCATIONAL ENGLISH LANGUAGE COMPETENCES OF STUDENTS IN AN ENGLISH FOR SPECIFIC PURPOSES CONTEXT: A NEEDS ASSESSMENT¹

Abstract: The purpose of this study is to examine the vocational English language needs of students in an ESP context in the Accommodation and Travel Service department at a vocational and technical Anatolian high school. The study is a partially mixed sequential equal status design. While convenient sampling method was employed to select students, criterion sampling method was utilized to select teachers and supervisors as participants. As a result, 25 ATS students, two vocational course teachers, two English teachers and three supervisors contributed to this research. A survey, semi-structured interview forms and open ended questions in the open interview were employed respectively to collect data from students, teachers and supervisors. In the analysis of the survey data both qualitative and quantitative methods were put into effect. On the other hand, the interview data were analysed through systematic content analysis, inductive coding and thematizing. The result of the analysis of the data revealed that students in this specific context were in need of improving particularly their speaking and listening skills. Low self-confidence of students, negative attitude toward speaking the language, lack of use of appropriate materials; strategies and methods during instruction emerged as issues of consideration in order to reach a resolution. Finally, lack of an appropriate curriculum, lack of strong school-enterprise relationships and inadequate professional qualifications of teachers emerged as issues to be considered by decision makers.

Keywords: Needs assessment, vocational English, English for Specific Purposes (ESP).

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INTRODUCTION

VOCATIONAL EDUCATION AND TRAINING IN TURKEY

Vocational Education and Training (VET) has a crucial purpose in equipping young people and adults with the skills for work and to respond to the needs of the labor market (OECD, 2010, 9). It has to help individuals develop the skills, abilities and competences obligatory for the occupations in accordance with the demands of the business life and targets of the economy of the country (MoNE, 2012, 11). In Turkish education system, VET programs are provided for students in secondary education and higher education levels (Özer, 2018; Özer 2019a, Özer, 2019b). VET in secondary education level is structured as a four-year education and training program which is divided into two categories as Vocational and Technical Anatolian High Schools (VTAHSs) and Vocational Training Centers (VTCs). VTAHSs provide both academic and vocational courses. Graduates of this type of schools can both select to join the workforce or proceed to higher education (Özer and Suna, 2019, 170).

Contrary to the general education, as is cited by Eichorst et al. (2012), VETs are classified into three categories which are (i) school-based; (ii) a dual apprenticeship system combining school training with a firm-based approach and (iii) informal based. In Turkey the existing vocational education, as is defined by law, is a “dual” system. In the dual system both the educational and the labor sides cooperate to train the labor force through apprenticeship. The school-enterprise relationship is expected to set a sound basis for the development of VET in the context of the business world. However, still vocational education in Turkey suffers from lack of a strong cooperation between school-based vocational education and the sectors (Gelişli, Beisenbayeva, and Sultanbek, 2016). Therefore, it has not reached its desired potential in terms of quality and quantity (Kavi and Koçak, 2018; Erçetin et al., 2019). Despite the efforts to increase the quality and quantity in vocational education, the number of students studying at vocational and technical Anatolian schools does not exceed 35% compared to the total number of students attending high schools which can be said to be a quite low rate (Erçetin et al., 2019). Among the most common issues experienced in vocational and technical education, insufficient cooperation with the service sector, inadequate institutions, schools and buildings, financial problems, rigid and centralized structure of vocational and technical Anatolian schools despite different needs, failure to train individuals with the qualifications required by the sector and insufficiency of curricula are mentioned (Ekşioğlu and Taşpınar, 2019).

In order to eradicate those issues in vocational and technical education, a series of initiatives were planned to be put into practice in 2023 Vision Document released by MoNE (MoNE, 2018, 112-118). Some of the objectives identified in the document were as follow:

- Increasing awareness attributed to vocational and technical education,
- Increasing access to guidance,
- Developing new generation curricula,
- Developing human resources and educational environments,
- Raising qualified human capital needed by the domestic and national defense industry.

Following the release of the 2023 Vision Document, new objectives such as supporting foreign language education, updating curricula and balancing on-the-job training with internship training were identified in order to increase cooperation with the tourism sector. In Accommodation and Travel Service (ATS) which is one of the main branches in tourism and hotel management institutions, the first initiative planned to be put into effect was determined as supporting foreign language education alongside setting priorities for employment to the graduates and providing on-the-job and internship training in real working environments. Foreign language education as a considerably important and emphasized aspect in 21st century education still preserves its significance as an issue in vocational education in Turkey. Therefore in this study it is aimed to examine the students’ needs in vocational English as a

foreign language at a vocational and technical Anatolian high school which provides vocational training in tourism.

ENGLISH LANGUAGE LEARNING AND VOCATIONAL EDUCATION AND TRAINING IN TURKEY

English as the lingua franca on an international level poses great significance on international communication at macroeconomics. As a means of international communication, equipping the learners with essential English language skills undergirds success and quality in vocational and technical education particularly in the tourism sector as the market is extremely competitive. Developing effective English language skills at vocational and technical education institutions raising staff for the tourism sector is a critical issue as speaking the language both enables effective communication at international level and leaves a positive impact on customer service at micro level which may increase the likelihood of return visits to the country (Özen et al., 2013). An important indicator of hospitality is the ability to be able to communicate effectively with tourists. Similarly to the case of many countries, English turns out to be the default language in Turkey, as well. Speaking the English language at a proficient level is a crucial factor in assuring high quality standards of high income visitors (Özen et al., 2013, 35). With respect to this fact, Yeşiltaş, Öztürk and Hemmington (2010) underline the significance of learning and speaking foreign languages effectively for the sake of the sector and indirectly the economy of the country. According to the authors mentioned, remarkable significance should be given to foreign language teaching and all the graduates in the sector should be able to use the English language efficiently. They even imply that, alongside English, a second language such as Russian, German or French should be taught to the students studying in tourism and hotel management vocational and technical Anatolian high schools.

Unfortunately, Turkey National Needs Assessment of State School English Language Teaching report released in 2013 revealed that English language competences of the students were found quite low particularly in secondary education public high schools (Özen et al., 2013). Despite the potential of the teachers, the report proves that the English language competences of most students (90+%) across Turkey were defined as “rudimentary” and “unsatisfactory”. The underlying reasons of this situation were found to be related with the overall teaching strategy which was based on teaching the language as a subject to be learnt instead of a communication tool. Thereby, the results showed that students fail to learn using the language in a functional way. Moreover, it was found that the classroom practices were more teacher-centric heavily relying on grammar and textbooks whereas the students' expectations were to practice the language (Özen et al., 2013). Another important finding related to the low level of English language competences of the students was a reference to the failure of the curricula in that the curricula were not responding to the varying needs of the students (Özen et al., 2013). Likewise, Dinçer, Takkaç and Akalın (2010) examining the readiness levels and experiences of students found out that the profile of the students was low and that the underlying reasons were observed to be the poorly implemented curricula, insufficient course hours, materials and failure in using the language as a communication tool. On the other hand, according to the study conducted by Aysu (2019) to uncover the role of English in students' lives studying at vocational high schools, it was revealed that students indeed wanted to learn English as it was stated to be important for their professions to be able to communicate yet was found difficult to be achieved. In other words, alongside macroeconomics, speaking the language fluently at individual level was perceived as prestigious both as a factor increasing the possibility of being employed and as an opportunity to be promoted to superior positions in the sector.

Besides, as was reported by Taşkın and Aksoy (2018), students are accounted to be homogeneous groups of learners depending on the fact that the placement system of students into high schools largely is bound to a high stakes exam at the end of the middle school. On the contrary, the case is different in classrooms particularly in terms of foreign language skills. While success in the English language courses in reality heavily depends on production skills

like speaking, writing, the high stakes exams are conducted as multiple choice questions which have little to do with the case of producing a language. In line, even in one class students' motivation to learn the language may present differences. Likewise, this case is thought to be represented similarly at school level depending on the type of schools. Also, accounting for the fact that vocational and technical education is classified into different types of schools having different departments responding to the needs of different sectors, each must have different vocational English language needs which is defined as English for Specific Purposes (ESP). That is, as is stated beforehand, at vocational and technical Anatolian high schools students are exposed to both general and vocational English. While, as is clarified by Tabatabaei and Hoseini (2015) students learn English as a Foreign language (EFL) in general English courses, at vocational English it is learnt as ESP. Thereby, as is noted by Hayati (2015), ESP students must meet specific needs that are different from general English. Yet the problem is that the feedback given from the field reveals dissatisfaction regarding the language profile of the students. In sum, the studies in the literature refer to the fact that vocational and technical Anatolian high school students have low competences in EFL and they experience difficulties in learning ESP. In the light of this fact, the purpose of this study is to uncover the needs of ESP of a group of ATS department students at a vocational and technical Anatolian high school and to explore the areas needed to be improved at vocational English courses. In order to achieve the purpose of the study the research questions probed for are as

1. What are the needs of the students in the ATS department in vocational English courses?
2. How can students' vocational English competences be promoted?

The results of this needs assessment would be used to pave the way for setting priority needs, identifying possible solutions, selecting solution strategies and as a further step propose an action plan for a curriculum design.

THE CONTEXT OF THE STUDY

This study was conducted at a vocational and technical Anatolian high school which provides education in tourism and hotel management serving with two major departments namely ATS and Food and Beverage Services (FBS). These two departments of the school are composed of sub-departments. While ATS is divided into Housekeeping and Front Office Services; FBS department is divided into two different classes as Culinary and Service.

Whereas in this specific context the academic year for 9th and 10th grades starts in September similarly to other state schools, 11th and 12th grade students complete their internship up to the end of October and start the new term. Likewise, while the 9th and 10th grade students finish the academic year in June at the same time with other public high schools, 11th and 12th grade students complete the requirements of the curriculum up to the end of April and leave for practicing their internships in hotels, cafes or restaurants which last almost for five months.

The courses are given in standard classes with the seating arrangement in rows. The classes are equipped with smart boards and white boards. As students in 11th grade are divided into sub-branches, the number of students in classrooms ranges between 10 to 20. The school hosts 425 students and 28 teachers. In this context, students are being exposed to two types of language courses as general and vocational English. Unlike the general English course which is a must, the status of vocational English is elective and presents a case for ESP. General English course is taught at all secondary education institutions countrywide. This course is based on teaching all four language skills including the use of basic language structures, lexis and patterns. The course highly aims to equip learners with speaking skills with an emphasis on daily patterns. Vocational English, on the other hand, is based the basic skills adopted in general English courses. In this course it is aimed to equip learners with the required terminology and the language use within the workplace. The main focus in this course is on teaching language of correspondence, the terminology used in customer relations and the terminology required for

hierarchical communication at the workplace. More importantly, an official curriculum specifically related with the needs of tourism students for vocational English courses does not exist in Turkey. Therefore, implementation of the course heavily relies on the teacher groups' decisions. However, it should also be mentioned that the examination of the teacher' group minutes revealed that in this specific vocational and technical Anatolian high school, needs assessment studies did not exist in taking the decisions for the implementation.

There were five English teachers responsible for teaching both general and vocational English courses. The English teachers were graduates of English language teaching and applied linguistics programs at faculties of education from varied universities. They did not have any additional training in ESP and were not familiar with the context when first they were assigned as teachers to work in this specific vocational and technical Anatolian high school.

METHOD

RESEARCH DESIGN

The study is a partially mixed sequential equal status design (Leech and Onwuegbuzie, 2004). The study is partially mixed in that qualitative and quantitative phases were not analysed until after all types of data were gathered; sequential in that the qualitative and quantitative components did not occur at approximately the same time and; equal status in that both qualitative and quantitative phases had equal weight in achieving the purpose of the study. First of all, it was a highly fulfilling design in order to find answers to the research questions. Secondly, considering the time constraints of the academic calendar in this specific context and teachers' concerns for finishing the curriculum, data collection was planned in convenience to teachers' schedules and students' presence at school. That is, firstly the data were collected from students as there were only two hours of vocational English weekly. In the following, teachers and supervisors were interviewed according to their convenience. The data were not analysed until after all the data were collected. Therefore, it can be claimed that considering the research questions, the conditions in the research site, convenience of the participants and the data collection procedures, this design was the best fit as it was highly overlapping with the nature of the study.

SAMPLE

PARTICIPANTS

The target population is composed of 11th grade ATS students studying at front office and housekeeping sub-departments at a Vocational and Technical Anatolian High School (VTAHS). The learners are at the age of 16-17 studying in the 2018-2019 academic year spring semester at the ATS department. The students started the academic year on 21st October and finished their academic semester on 21st April. Depending on the English competences, students with better English skills are located at more prestigious departments during the internship practices of the students. Compared to the Common European Framework of References (CEFR) for language, the students were identified and accepted as A1-A2 (basic users) level at 9th grade by MoNE. This identification was expressed in the updated and revised Secondary Education English Language Curriculum (2018). Depending on the placement system after middle school in Turkey, the students are accounted to be homogeneous groups and are registered to high schools. Therefore the school does not apply any extra institutional standard tests to identify students' language levels. At 9th grade the students took four hours² of general English and two hours of elective English weekly. At 10th grade the students who participated into the study were taught only two hours of general English. Although vocational English

² Recently (2021), general English course hours were revised as five hours a week at 9th grade, two hours at 10th, 11th and 12th grades.

courses started at 10th grade before 2017, as a result of the weekly schedule change (MoNE Journal of Announcements, 2017), vocational English courses were shifted to 11th and 12th grades³³. As a result, the student participants in this study were given two hours of general English and two hours of vocational English weekly at the time of data collection. The general English courses were carried out according to the common curriculum in secondary education institutions. Instruction was based on 10 themes as school life, plans, legendary figure, traditions, travel, helpful tips, food and festivals, digital era, modern heroes and heroines and shopping. The content of the vocational English course, on the other hand was comprised of topics such as brochures, hotel facilities and services, food and beverages. Although compared to the curriculum 11th grade students are defined as B1 (independent users), teacher participants were defining student participants' language levels still as A1-A2 (basic users).

Convenient sampling method was employed for selecting student participants into the study. As a result, 25 students ($n=25$) including 16 male and 9 female students studying at 11th grade in ATS department participated in the study. On the other hand, in the selection of teacher participants, criterion sampling method was utilized. The criteria assigned for the sampling of the English teachers were "teaching vocational English for at least two terms" and "working as a full time teacher in this context". In this respect two English teachers met the criteria and contributed into the study. The criteria for the sampling of the vocational teachers and supervisors were identified as "working as a full time vocational teacher in this context" and "having worked in the ATS department for at least two terms", "being in charge of keeping in touch with the supervisors"; "working as a supervisor for at least two years" and "being responsible for observing the students during internship". In line with the criteria two ATS vocational course teachers ($n=2$) and three supervisors ($n=3$) participated into this needs assessment study. It should also be noted that the abbreviations assigned for the participants in the results were Vt, Et and Sp referring to vocational teachers, English teachers and supervisors respectively.

THE INSTRUMENT

The instruments used to collect data in this needs assessment study are comprised of a survey and semi-structured interview forms. Via the survey, comprehensive information was gathered from students in relation to the *learner characteristics, instructional objectives, clues for content sequencing, designing the message, instructional strategies and the delivery of the instruction*. The survey originated from utilizing the needs assessment studies of Özyel et al. (2012) and Boroujeni and Fard (2013) conducted in ESP contexts. The items belonging to the surveys were reviewed by the researchers and a schedule was prepared comprised of corresponding items to the context of the research site this study was carried out. Apart from the adopted items, there were two additional parts in the survey. The researchers prepared the additional parts in cooperation with the teachers in line with the purpose of the study. Those parts were added to probe for revealing irrelevant content (if existed); and suggestions for alternative units (themes or topics) to be included in the curriculum. Under the guidance of the expert views, before giving the final form, the last version of the survey was reviewed with the teachers working in the research site for clarity and accuracy. Additionally, the instruments employed in collecting data from vocational and English teachers were semi-structured interview forms prepared by the researcher while open interviews were conducted with the supervisors. In giving the final version of the interview forms, expert views were consulted and both forms were piloted.

³³ After the finalization of the study, the weekly schedule changed again. Today (in 2021), vocational English course is taught only at 10th grade.

DATA COLLECTION PROCEDURE

Initially, the documents which were available related to the course such as the teachers' group minutes, the syllabus employed for the course, class notebooks and teachers' materials used for instruction were examined. Secondly, the survey was conducted to the students and the interviews were conducted with the teachers and the supervisors following one after the other. In other words, the data were collected in a sequence. The interviews were arranged according to teachers' convenience and conducted with the teachers in the teachers' room. Supervisor interviews, on the other hand, were arranged according to the availability of convenient time that can be spared by supervisors and conducted in the hotel lounge. The interviews were recorded and transcribed.

DATA ANALYSIS

In the analysis of the survey both quantitative and qualitative procedures were put into action. For the quantitative analysis, the frequencies were taken into account as students had the chance to tick more than one option in each part. The analysis of the quantitative data was conducted via SPSS Statistics 24. Following the transcriptions of the interviews with the English teachers, vocational teachers and supervisors, the analyses were conducted via systematic content analysis, inductive coding and thematizing. As is recommended by Onwuegbuzie and Johnson (2006) validity is termed as "legitimation" in order to reach a bilingual nomenclature in this study. In order to combine the complementary strengths and non-overlapping weaknesses of qualitative and quantitative methods and to increase the inference quality, weakness minimization and sequential legitimation were employed based on the typology of mixed method legitimation types proposed by Onwuegbuzie and Johnson (2006).

FINDINGS/RESULTS

This part consists of results and findings of student surveys, vocational teacher interviews, English teacher interviews and supervisor interviews.

FINDINGS AND RESULTS OF STUDENT SURVEYS

According to the analysis of the survey with regard to the *reasons for learning English*, "success in future profession" ($n=16$) was followed by "speak to foreigners" ($n=15$). As for the *experienced difficulty level in internship*, "some" ($n=14$) and "a lot" ($n=11$) were the most frequent answers. In sum, the evident indicators of the findings revealed that students learnt the language as a means to promote their future career while problems in using the language effectively in the field were encountered relatively to a large extent.

Secondly, it was revealed that in *dominating skills in the current course* the least frequent answers were "speaking" ($n=10$) and "reading" ($n=8$) while the most frequent was "grammar" ($n=16$) which means grammar still was dominating those courses. On the other hand, the analysis of the part with regard to the *areas of language needed to be improved* from the most to the least frequent options indicated that students were in need of improving their *speaking* particularly in the areas of "starting and ending a conversation" ($n=13$), "engage in a dialogue" ($n=12$) and "dealing with communication problems" ($n=11$); *listening* particularly in "understanding different accents" ($n=16$) and "listening to natural speech" ($n=13$); *writing* in "taking notes on talks" ($n=16$) and *reading* in "read and translate" ($n=16$). As a result, it was found out that the students were in need of a more practice based speaking course which would be more in line with the probable cases they would encounter during practicing their jobs in the tourism sector rather than a course heavily focusing on the structure of the language.

Thirdly, about the *functions of the language* part in the survey, the analysis revealed the fact that all functions allocated were found crucial. The most frequent options presumed to be in line with the students' needs were "giving information" ($n=19$) followed by "introducing yourself" ($n=18$) and "asking for information" ($n=17$).

Finally, as for *materials and equipment needed during instruction*, “computer and tablets” ($n=14$) was followed by “smart boards” ($n=13$) and “mobile phones” ($n=12$) which actually might be referring to the need of technologically enriched courses. Additionally, alternative topics such as “room procedures”, “tours and excursions” and “airport” emerged as the most emphasized themes by students suggested that can be included and exploited more functionally in the curriculum of vocational English courses.

FINDINGS AND RESULTS OF VOCATIONAL TEACHER INTERVIEWS

Depending on the fact that the vocational teachers have the chance to observe students on the job and are in constant touch with the supervisors in the field (hotels managers, chefs, supervisors etc.) two vocational teachers were consulted for their opinions. The analysis of teacher responses revealed that the *English language competences* of the students were found extremely significant for their professions. Yet, the analysis of the data indicated that the students had *low competences* particularly in speaking.

Although three different types of English courses (general, vocational and elective) are taught in our school, students still cannot speak English. [Vt1]

The analysis yielded that at school level there were two major underlying reasons behind the low competences of students. The first one was related to *lack of use of appropriate strategies and methods* to teach the language to this student profile in this school.

Of course I trust the expertise of the English teachers working at this school, yet what does it have to do by teaching how verbs, adjectives or adverbs function and writing the structure on the board! [Vt2]

The second reason was found to be the *low self- confidence* of the learners in speaking the language which was thought to be related with the students’ *negative attitudes towards pronunciation*.

Besides, the analysis of the data gave insights that at macro level with regard to the stakeholders involved in planning the curriculum the students were exposed to, there was a *lack of strong school-enterprise cooperation* (among vocational teachers, English teachers and the sector). It was also revealed that indeed the teachers themselves were aware of the need of cooperation for expecting effective results professionally, at school and at macro level.

..We need to come together and communicate throughout the year with English teachers. But that does not happen in any way! Further to say, if the supervisors and the sector expect good students with high language competences, they also must shoulder the responsibility together with us..! [Vt2]

In sum, the vocational English courses were found drawing a low profile in meeting the students’ needs though it was believed to be quite important for students’ jobs and careers. Also, lack of a strong cooperation between the schools and enterprise emerged as another emphasized aspect to be considered. The recommendations of vocational teachers to overcome this situation revolved around more learner-centered teaching strategies and methods and co-teaching (with vocational teachers) with an emphasis on functions and expressions of the language.

FINDINGS AND RESULTS OF ENGLISH TEACHER INTERVIEWS

To access the clues of the phenomenon of ESP through the lens of the vocational English course teachers, two English teachers were interviewed. The analyses of the interviews gave insights that the curriculum they implemented had a *top-down approach*; that is, there were no needs assessment analyses conducted specifically to identify the needs of the student profile in this

context. The yearly syllabus was prepared by the course teachers with depending on their own views of what is to be taught.

Another important insight relevant with macro-level results was the reference to the *highly centralized structure of the vocational and technical Anatolian high schools*. This situation was found to be among the major reasons for failure of ESP due to *different needs* of each type of vocational high school. For instance, this specific VTAHS has a considerably shorter academic calendar and yet has to cover the same common curricula with the other Anatolian high schools. According to the analysis, it was revealed that teaching vocational English in an ESP context was found to be a much more difficult job compared to teaching general English. ESP was found to be seen as a *professional expertise area* and teachers also felt *limited and inadequate* in responding to the students' needs.

Teaching at a tourism school or in a health school is totally different. It is not regular English we teach. A world you are truly unfamiliar with! If it were for vocational teachers it is easy, they have the professional knowledge but for us we feel helpless.
[Et2]

Similarly with the results of the vocational teachers, at school level according to the vocational English course teachers also, the students had a *low profile in speaking*. The analysis revealed that the inability to speak was related with students' *negative attitudes toward pronunciation* emerging due to fear, peer pressure and lack of enhanced teaching methods.

This week at the course I experienced it, the student asked 'Teacher what if I mispronounce! What if everyone laughs at me! I said that's why I'm here to help you!'
[Et2]

The analysis of the data yielded overlapping insights with the vocational teachers in terms of teaching methods, as well: the artificial learning environment called for more *applied teaching strategies*, learner-centered teaching methods and *co-teaching* practices at school.

If we teach how to take an order at a restaurant, we use the desk as tables in the class and try to simulate the case. Can the vocational teachers not open the ateliers for us and thereby we would teach in a real workplace. [Et1]

In conclusion, the analysis of the data gathered from English teachers indicated that the students were exposed to the course in a top-down manner. The results also showed that the centralized approach to vocational and technical Anatolian high schools caused difficulties in the implementation as neither the needs of all vocational and technical Anatolian high schools are the same nor are the teachers equipped with the qualifications required to teach this course. Additionally, in order to ease students' negative attitudes towards learning the language and support students for speaking the language, strong cooperation with the vocational teachers and enhancing the variety of strategies and methods during instruction were emphasized.

FINDINGS AND RESULTS OF SUPERVISOR INTERVIEWS

Depending on their experiences to monitor students' performances during internship, three supervisors were interviewed. The emerging codes and themes to a great extent overlapped with that of vocational and vocational English teachers. The analysis of the data showed that speaking the language was found quite important for students in the sector both for *fulfilling the requirements of the job* and *getting promoted*.

In fact, we select students who are good at English for front-office desks. More importantly, students competent in English get promoted more easily to superior positions. [Sp3]

Besides, the analysis yielded that the supervisors also thought that the *low profile of the students in speaking* was related to *grammar-based teaching methods at schools* and students' *negative attitudes toward speaking the language* due to their *fears of mispronunciation*.

I think, still, grammar is taught at school. When they come to the hotel they practice the language, improve within time despite their fears because they have to. Please teachers, never speak to them in Turkish in the class! [Sp2]

Comparing the three interview groups (vocational, vocational English teachers and supervisors) there was consensus that the program at school did so little to encourage the students “to speak” the language. Therefore, more applied strategies and methods were to be put central in teaching how to speak rather than teaching the structure of the language.

As a result of the triangulated findings emerging from all three groups, it appeared that students had a negative attitude towards speaking the language yet this fear could be conquered with appropriate strategies and methods. One supervisor’s saying as “there are also students coming from your school who have good English skills, so why not to use their potential in the class” also stood as an indicator related to the teaching and learning methods that can be adopted in the classroom. Also, the top-down approach in the curriculum instead of designing the curriculum according to students’ needs emerged as a serious hindrance. Similarly to this problem, the triangulated results showed that the centralized structure of the vocational and technical Anatolian high schools presented difficulties as each type of vocational school has different departments and responds to different sectors. Additionally, teacher qualifications in ESP emerged as another concern. As teaching English as EFL and as ESP may quite require different expertise areas, the insights of the study revealed dissatisfaction in terms of professional efficiency in teaching the language in an ESP context.

As a result, it can be said that the students at this specific school actively need to produce the language for the sake of their current condition in language use and their future career in their departments in the tourism sector. Therefore, in sum as an answer to the first research question, the triangulated findings in this needs assessment indicated that the current curriculum needed to be revised with an emphasis on more speaking and listening skills. Also, as an answer to the second research question, it is revealed that there need to be improvements with regard to the strategies and methods during instruction as well as the materials and equipment in the curriculum.

DISCUSSION AND CONCLUSION

In order to develop a comprehensive understanding and find answers to the research questions, the data of student surveys, interviews with English teachers, vocational teachers and supervisors were triangulated. In response to the first research question probing for “What are the needs of students in the ATS department in vocational English courses?” salient results were obtained. The triangulated results revealed that the students wanted to learn the language for being successful in their future professions and speak to foreigners, which can directly be related to the qualifications expected from ATS students. As a result, it can be claimed that the students were aware of the significance of the competence in English language for their job-career promotions. As was reported by Özen et al. (2013) students perceived language competence as an important factor for being employed. This fact also was underlined in the study conducted by Aysu (2019) in which it was inferred that students desired to learn English for they thought it was important for their professions. As was emphasized, being able to communicate effectively with the tourists is an important indicator of hospitality and is related with the quality of being hosted (Özen et al. 2013). Even, like it was suggested by Yeşiltaş, Öztürk and Hemmington (2010), a second language like German, Russian and French can be

taught to students studying at tourism and vocational schools to ensure the quality expected in the tourism sector.

The triangulated results also yielded that the students were experiencing difficulty in practicing the language in their internship experiences. Dinçer, Takkaç and Akalın (2010) also defined the English language competences of students as “low profile” particularly in producing the language. In relation to the difficulty experienced in speaking, when the dominating skills in the vocational English course were examined, it was found out that basically grammar was put central in the classroom practices. That is, while the skills the students needed to improve were revealed as speaking and listening, the teaching practices in the classroom were more grammar-based. Yet, being well-equipped in particularly speaking and listening skills is highly required in the sector of tourism. As a result, it can be claimed that ATS students at this specific school needed a highly speaking and listening-centric instruction in vocational English courses. In relation to this result, it can be suggested that the vocational English course curriculum in this tourism and vocational Anatolian high school needed a sound perspective with an emphasis on speaking and listening skills rather than exposing the learners heavily to the structure of the language.

According to the results with respect to areas of language needed to be improved in *speaking skills* at vocational English courses, “starting and ending a conversation”, “setting dialogue effectively” and “dealing with communication problems” were found to be among the most important aspects. With respect to *listening skills*, the focus was on “understanding different accents”, “listening to natural speech and TV, radio and internet broadcasts”. The role attributed to writing and reading skills appeared to be more limited compared to speaking and listening skills. While for *writing skills*, “taking notes on talks” and “communicating written information” was seen of utmost importance; for *reading skills*, “translation” and “writing and answering emails” were more emphasized. As was noted in the report by Özen et al. (2013), the students fail to learn using the language functionally. In this respect, the results gained regarding the skills, indeed can be referred to the students’ need of practicing the language more functionally in their professions. Therefore, in the design of the curriculum for vocational English courses the emphasis should be more on speaking and listening skills. Additionally, the endeavour to uncover the needs with respect to the alternative topics to be included in the curriculum revealed that room procedures and airport themes could be added with a more functional emphasis.

After revealing the needs of ATS students in vocational English courses, answers were found for the second research question: “How can students’ vocational English competences be promoted?” The results related to the materials and equipments to be utilized at vocational English courses revealed that first of all, the students expected incorporation of computer and tablets, smart boards and mobile phones into classroom practices rather than using only textbooks, and conducting pen and paper examinations. As was stated by Dinçer, Takkaç and Akalın (2010) among the underlying reasons of the low language competences of the students were poorly implemented curricula, materials and failure to use language as a communication tool. As was suggested by Lee (2017) Technology Enhanced Language Learning (TELL) via e-learning systems and the Internet encourages students to develop language ability in a more effective way. Therefore, it can be noted that there is a need for more updated utilization of materials alongside the need of updating the content covered to improve students’ vocational English competences. Hence, for TELL to incorporate more updated technological equipment and materials, the use of the mobile phones and smart boards could be matched with the purposes of the course both to motivate the learners and enhance learning both in and out of classroom practices. Further, TELL can be matched with the instructional methods of multimedia (Mayer, 2009) and computer simulations (Jong, 2011). As was suggested by Mayer (2009) the instruction based on only words does not prove to be as much developed as

multimedia instruction. On the other hand, evidence out of 13 experimental studies proved that low-knowledge learners performed better ($d=1.35$, a large effect) via multimedia instruction. According to the results, the students under interest have a low profile in English language competences in ESP. Therefore, multimedia instruction together with TELL could be offered as a remedy in this case (Mayer, 2009).

According to the triangulated results of the interviews conducted with teachers, the supervisors and the surveys applied to students, mainly at school level, the reasons underlying in the low language competences of the learners were found to be rooted in learners' low self-confidence in speaking the language due to the fears of mispronunciation and peer-pressure; lack of use of appropriate strategies and methods during instruction and lack of cooperation among vocational teachers and the teachers in charge of teaching vocational English courses. At macro level, the reasons emerged to be related to the highly centralized structure of vocational and technical Anatolian high schools despite different needs, lack of professional qualifications of teachers and lack of strong school-enterprise relationships.

Therefore, based on the results gained out of the needs assessment study, at school level, first of all, it can be suggested to consider the negative attitude of the students to speak the language. Therefore, Cooperative Learning (CL) instructional methods could be utilized as both the social cohesion perspective and developmental perspective support learning of individuals through the power of learning in groups (Slavin, 2008; Slavin 2021). As was indicated by Slavin (2011) in social cohesion, the individuals identify themselves with the group and support the learning processes of each other. Also, Slavin (2021) concludes that CL methods when used with group goals/rewards and individual accountability consistently increase achievement of secondary education students. As is cited by Slavin (2011), according to Vygotsky's (1978) Zone of Proximal Development theory, collaborative activities among students can foster one another's proximal zones of development. Besides, Piaget's (1926) Social Arbitrary Knowledge theory suggests that the only way to learn language, values, morality and symbol systems is to learn via interaction with others (Slavin, 2011). Hence, both formal and informal cooperative learning methods can be utilized for diminishing students' fears, increasing their confidence in speaking the language. In this respect, from formal methods, Peer Assisted Learning Strategies (PALS), Team Assisted Individualization (TAI) can be utilized while from informal methods Learning Together can be helpful accounting for the needs and the applicability to the topic covered. Moreover, peer tutoring in classroom practices can be recommended as another method to overcome the fears, prejudices against mispronunciation and low self-confidence problems of students. As Graesser, Mello and Cade is cited in Mayer (2011) peer tutoring is a low-cost solution and this method proved to improve communication skills and be effective even when the tutors are unskilled like same-age or cross-age peers.

At macro level, on the other hand, different needs of each type of vocational school should be taken into account by MoNE and it should be acknowledged that language needs of each type of vocational and technical Anatolian high school student profile most probably would present differences in terms of ESP vocational courses. Finally, it can be suggested that steps should be taken for solutions to increase the professional qualifications of English teachers who may teach vocational courses. Moreover, the solutions formulated in doing so should also take into account the type of the vocational schools as each has its own specific content and corresponding sectors. Last but not the least, school-enterprise relationships should be strengthened and their support should be incorporated both in the development of relevant curricula, design of the courses and implementation of the programs.

In conclusion, initially, as a result of this needs assessment study, providing that the vocational English course in this ESP context would be redesigned, speaking and listening skills should be given a broader emphasis and can be enhanced with writing and to some degree with reading skills. Besides, the functions of the language should base the skills with respect to mainly

“giving information”, “introducing oneself”, “asking for information”, “explaining where something is” and “explain the process or procedure while staying at a hotel”. More specifically, providing that the course would be designed based on the findings of this needs assessment, *speaking skills* which was seen as paramount by students, teachers as well as supervisors should provide a broader perspective in the areas of “starting and ending a conversation”, “setting dialogue”, “dealing with communication problems” as these areas were reported to be more probable to be experienced in on-the-job practices. In planning the practices for *listening skills*, “understanding different accents”, “listening to natural speech and listening to TV, radio and internet broadcast” should be ensured to be included as those abilities were the most emphasized ones required during on-the-job practices in the field. Also, based on the results it can be inferred that as students working on the desk need to communicate written information, in terms of *writing skills*, “taking notes on talks” can be highly suggested to be included into the design. Secondly, depending on the results of the study, it can be concluded that materials used to teach should be enhanced and outdated materials replaced with new technological equipment and materials like mobile phones and tablets. In this respect TELL can be matched with multimedia and computer simulations (if possible) instructional methods to motivate the learners and promote their speaking skills. Also the results yielded that alternative topics of “room procedures”, “tours and excursions” and “airports” should be included and exploited more functionally in the curriculum rather than inserting the topics on a superficial level.

Thirdly, it is concluded that students have a low-self-confidence and have a negative attitude towards speaking the language. In this respect, instructional strategies which proved to be successful in overcoming similar problems such as social cohesion and developmental perspectives in CL can be selected. Therefore it is highly suggested to design the course around strategies and methods overlapping with the needs of the learners.

The study can be mentioned to have implications for the design of vocational English courses in ESP contexts at MoNE in Turkey at macro-level as there was not a formal curriculum accessed despite the existence of this course. Besides, the study presents insights for decision makers at macro level in terms of incorporating the power of the sector into planning of education at vocational and technical Anatolian high schools and taking initiatives to strengthen school-enterprise relationships. Also, the study can be claimed to have implications at school level for teachers to design their courses even if an accessible central formal curriculum does not exist yet in ESP.

The study is limited in that it was conducted at a specific context with stakeholders having different needs. Though all named under the umbrella term of vocational and technical, those schools have different areas responding to different sectors. Hence, as this school is responding to the needs of the tourism sector, the results cannot be generalized across other vocational and technical Anatolian schools. Yet, as the design, sampling and data collection procedures are clearly reported, the way the study was conducted can be replicated by other studies.

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A QUALITATIVE RESEARCH ON THE USE OF HUMOR IN TURKISH TEACHING IN SECONDARY SCHOOL

Abstract: This research aims to determine the use of humor in Turkish classes in secondary schools. To this end, firstly, the humorous elements in the Turkish textbooks were examined, and then Turkish teachers' views on these elements and their views and classroom practices regarding the use of humor in their classes were determined. The study was designed according to the case study method, one of the qualitative research methods. The humorous elements in the Turkish textbooks were collected through the document review method, and the views and classroom practices of the Turkish teachers regarding the use of humor were collected through a semi-structured interview form. In this context, interviews were made with 15 Turkish teachers working in public schools. The content analysis method was used to analyze the obtained data. According to the findings, most of the interviewed teachers included humorous elements in their classes through various classroom practices. In addition, it was determined that teachers consider humorous elements important because such elements increase students' motivation and make classes more interesting. Finally, it was concluded that Turkish textbooks do not contain enough humorous elements.

Keywords: Turkish course; textbook; humor, teacher opinion, classroom practice

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INTRODUCTION

One of the most important features of the modern education approach is that knowledge and skills are taught by learning-by-doing, not by rote learning. For students, being able to adapt the information learned in school to real life is more valuable than being able to memorize pieces of information (Özden, 2010). In order to make the knowledge and skills acquired in the educational environment more permanent and to make the education process more effective, it is very important to adapt the education process to everyday life. Individuals tend to forget information and practices based on abstract concepts that they cannot relate to real life, that do not attract their interest, or that do not affect them emotionally. On the other hand, experiences that bear traces from real life, affect students emotionally, and leave a nice impression on them tend to be permanent (Altın, 2021; Altmışdört, 2013; Gündoğdu et al, 2019). Every individual has an inner world of emotions where the information learned becomes meaningful. In this sense, humor is one of the factors that establish a connection between information and the inner world of emotions, increase the permanence, effectiveness, and efficiency of the information learned, and ensure that students can relate the information they learned in school to real life (Wagner, & Urios-Aparisi, 2011).

The sense of humor is defined as revealing the fun aspects of events and situations in everyday life (Susa, 2002), as appreciating a joke, or as dealing with the fun aspects of a situation or phenomenon (Solomon, 1996). Humor reflects the laughable and ridiculous aspects of life, so it not only aims to make somebody laugh but also shows the true face of life (Oruç, 2010). In this regard, it should be seen as life itself, not as a reflection of life. It is a way of coping with a situation, event, or person by laughing or having fun. One of the important features of humorous elements is that they make people think while making them laugh. In this context, humor is, in a sense, a critique of situations that run counter to the usual flow of life. It is a tool to increase the joy of life, improve awareness, and develop the ability to empathize (Savaş, 2014). Therefore, humor is not only a means of production in social life but also an ideal teaching tool in education life (Bell & Pomerantz, 2015; Özkara, 2013). In this sense, it has an important place in the learning process. In the literature, it is mentioned that humor can have positive or negative effects on the educational process. For example, while humor offers positive effects in situations such as increasing group cohesion and coping with stress, it can also serve negative social functions such as derision and social isolation (Banas at all, 2011; Lefcourt, 2001).

Humor is considered as an element that adds a positive atmosphere to learning environments. It contributes to the effectiveness of the way topics are dealt with in classes (Azizifard & Jalali, 2012; Olajoke, 2013; Oruç, 2010). The inclusion of humor in classes should not be regarded as an absurd act because laughter in the classroom is actually a sign indicating that students are enjoying the learning process (Hill, 1988). The use of humor in classes is very useful in terms of supporting students' social development (Popescu, 2010). This is because humor is, above all, a process of sharing. All students in the classroom participate in this process and thus, an atmosphere of tolerance is created in the classroom. In order for humor to achieve its purpose in the educational environment, individuals need to have a sense of humor. Therefore, it is necessary to support the development of a sense of humor in children starting from early childhood, which will also benefit public health, peace, and happiness.

A thorough review of the relevant literature showed that numerous studies have investigated humor from different perspectives. For example, Avşar (2008) and Traş et al (2011) tried to determine the humor styles of prospective teachers, Tümkaya (2006) examined the humor styles of faculty members, and Aslan and Çeçen (2007) investigated the humor styles of teachers working in secondary education institutions. Furthermore, Kılıç (2016) studied the Turkish teachers' views on the use of humor, Dinç and Cemaloğlu (2018) investigated the

relationship between elementary school administrators' humor styles and teachers' stress levels, Savaş (2014) studied the effect of using humor in 7th-grade Turkish classes on students' attitudes towards the class, Çetin and Altun (2018) investigated the opinions of school administrators regarding the use of humor in school management, and Yolcu et al., (2018) examined students' perceptions on the use of humor in science classes. Again Popescu (2011) examined the contribution of humor to language education and classroom culture. Heidari-Shahreza and Heydari (2018) applied to the opinions of teachers and students in language teaching integrated with humor. Bell and Pomerantz (2014) reconsidered language teaching through a focus on humor. All these studies are considered important in that they draw attention to the use of humor and highlight the use of humor as a concept that needs to be examined from a socio-cultural perspective.

Turkish classes are very suitable for the use of humor in the learning and teaching process. In Turkish classes, which aim to improve students' language and thinking skills, humor is seen as a product of fine intelligence and thought, as well as a multi-component discourse with features such as wit, allusion, and joke. Humor increases the effect of what is said and reduces the tension in the environment (Kahya, 2019). Thus, humor creates a sense of unity in the environment. By using humor, teachers contribute to increasing student engagement. According to Sürücü and Ünal (2018), if teachers do not include humor in their classes, students may lose their interest in the lesson. Humor helps to strengthen social relationships, and the use of common cultural elements through humor develops a feeling of unity among individuals (Askildson, 2005). Humorous elements can be included in the reading, writing, speaking, and listening parts of Turkish classes (Kılıç, 2016). In this respect, both examining Turkish textbooks in terms of humorous elements and determining Turkish teachers' views and classroom practices regarding the use of humor in their classes is seen as a necessity to draw attention to the use of humor in educational settings.

In this study, the use of humor in the process of teaching Turkish as a mother tongue is examined. The humor elements in the textbooks are determined. In addition, the opinions of Turkish teachers on the use of humor in lessons are investigated. So that, the present study both examined the humorous elements in the secondary school Turkish textbooks designed according to the 2019 Turkish Course Curriculum and tried to reveal Turkish teachers' views on these elements and the way they use humor in their classes. In this context, the following research questions were addressed:

- To what extent is humor included in secondary school 5,6,7 and 8th grade Turkish textbooks?
- What are the opinions of Turkish teachers about humor elements in textbooks?
- What are the opinions of Turkish teachers regarding the use of humor in classes?

METHOD

RESEARCH DESIGN

The present study was designed according to the case study method, one of the qualitative research methods. The case study method is a research method that seeks answers to "how" and "why" questions and aims to create a conceptual framework based on these answers (Yin, 2012). Case studies offer an in-depth examination of a current topic that the researcher cannot control (Yıldırım & Şimşek, 2016). Although the case study is a research and teaching method, in a broader sense, it is a research model regarded as a learning method (Flyvbjerg, 2006). In this study, the use of humor in Turkish classes is considered as a case. The desire to collect in-depth data on this subject is the main reason for the use of a qualitative research method in the present study. Case studies may be explanatory, exploratory, and descriptive (Yin, 2012). The present study is an explanatory case study. Explanatory case studies aim to

provide in-depth information about the case or phenomenon under consideration (Aytaçlı, 2012). In this study, it is aimed to provide in-depth information about the subject that discussed. In the study, it was aimed to explore the use of humor in Turkish classes with a specific focus on the humorous elements in Turkish textbooks and Turkish teachers' views and classroom practices regarding the use of humor in their classes. Case studies must follow certain stages. The stages defined by Yıldırım and Şimşek (2016) and followed in this study are as follows: developing research questions, determining the case to be studied, determining the unit of analysis, forming the study group, collecting data, and analyzing and interpreting the data.

DATA SOURCE AND PARTICIPANTS

In this study, two different data collection methods were used. In order to determine the humorous elements in Turkish textbooks, 5th, 6th, 7th, and 8th-grade Turkish textbooks were examined by the document review method. For this, secondary school 5th, 6th, 7th, and 8th-grade Turkish textbooks used in public schools were determined as the sample. The reason for choosing these books is that they are the books used by the interviewed teachers. The edition notice containing information about these textbooks is included under the References section. Secondly, to reveal the views and classroom practices of the Turkish teachers regarding the use of humor in their classes, a study group was created. The purposive sampling method was used when creating the study group. "The purposive sampling is a sampling method that has emerged within the qualitative research tradition and allows for in-depth study of cases that are considered to have rich information" (Yıldırım & Şimşek, 2016, p. 118). Since the use of humor in the Turkish teaching process in a typical public school was investigated, the typical case sampling method was used in the research. The study group consists of 15 Turkish teachers working in the public school in the 2019-2020 academic year. Of these teachers, 7 are female and 8 are male with various levels of professional experience. The teachers in the study group participated in the research voluntarily and signed the "Voluntary Participation Form."

DATA COLLECTION

In this study, two data collection methods were employed; hence, data diversification was used. In qualitative research, data diversification is considered important because it minimizes the risk of systematic errors (Maxwell, 1996). Accordingly, the document review method was employed to determine the humorous elements in Turkish textbooks. Document review is the analysis of documents related to the research subject (Hodder, 2002). Furthermore, to reveal the views and classroom practices of the Turkish teachers regarding the use of humor in their classes, the interview method, which is an important data collection technique for qualitative research, was used. "In the field of social sciences, interviewing is an effective method of obtaining information about individuals' experiences, attitudes, opinions, complaints, feelings, and beliefs" (Yıldırım & Şimşek, 2016, p. 129). "In qualitative research, the interview technique is used to reveal the perspectives of the people examined and to see the world through their eyes" (Cemaloğlu, 2011, p. 152). For the research, a 5-item semi-structured interview form was developed by the researchers. During the development of the form, a literature review was carried out to examine the studies on humor. A seven-question draft interview form was developed. A pilot application was carried out with this form on four teachers. In addition, the opinions of three expert were taken in this process. As a result of the pilot application and expert opinion, two questions were removed from the form. The purpose of the interviews was to collect as much data as possible, and the interviewers sincerely answered all the questions. The interviews were held face to face and notes were taken for the interviews.

DATA ANALYSIS

For data analysis, all the data was first transferred to the computer environment. The obtained data was analyzed by the content analysis method. Content analysis is a data analysis technique used to obtain repeatable and valid results from the data (Krippendorff, 1980; Koçak & Arun, 2006). “The main purpose of content analysis is to reveal the concepts and relationships that can explain the collected data” (Yıldırım & Şimşek, 2016, p. 242). The data collected through the document review was analysed based on grade levels and the themes in the textbooks. The humor elements in the textbooks were determined one by one and presented in the context of themes. The data obtained from the interviews were analysed by coding and developing themes. Research questions were taken into account when creating themes and sub-categories. In qualitative research, the raw data are subjected to content analysis, which reveals certain categories and sub-categories; later, the interpretation of these data reveals various patterns, understanding, and insights (Patton, 2014). In this study, these stages were followed, and in this sense, it was aimed to reveal the general pattern of the study.

RELIABILITY OF THE RESEARCH

Expert opinion was sought to ensure reliability in the study. In this sense, the themes and sub-themes obtained as a result of the research were presented to three Turkish educators. Consensus was sought in sub-theme and theme matching. The coefficient of agreement among experts was determined as 100% in the creation of themes and sub-themes. Besides, the data source was examined by two researchers over a period of 4 months, and the findings of the research were obtained. In this sense, it is aimed to increase the reliability of the study with expert opinion and long-term interaction.

FINDINGS/RESULTS

This section includes the findings related to the research questions. First, the findings obtained through document review and then the findings obtained from the interviews are discussed.

FINDINGS RELATED TO THE ANALYSIS OF TEXTBOOKS

In this section, findings regarding the use of humorous elements in the secondary school Turkish textbooks are presented in tables according to the grade levels. Table 1 presents the findings obtained as a result of the analysis of the 5th-grade Turkish textbook.

Table 1. Humorous Elements in the 5th-Grade Turkish Textbook

No	Theme	Frequency (f)	Humorous Element
1.	Individual and Society	1	Funny cartoon
2.	National Struggle and Atatürk	-	-
3.	Nature and Universe	-	-
4.	Our National Culture	1	Humorous story
5.	Citizenship	1	Funny cartoon
6.	Health and Sports	1	Humorous drama
7.	Virtues	-	-
8.	Science and Technology	-	-

As can be inferred from Table 1, the 5th-grade Turkish textbook contains humorous elements under four themes. The first and fifth themes contain funny cartoons, and the fourth theme contains a humorous listening story. Also, the sixth theme contains a humorous Karagoz and Hacivat play, a traditional Turkish shadow play. On the other hand, the second, third, seventh, and eighth themes do not contain any humorous elements. Table 2 presents the findings obtained as a result of the analysis of the 6th-grade Turkish textbook.

Table 2. Humorous Elements in the 6th-Grade Turkish Textbook

No	Theme	Frequency (f)	Humorous Element
1.	Nature and Universe	-	-
2.	National Struggle and Atatürk	-	-
3.	Child's World	1	Humorous anecdote
4.	Virtues	1	Funny cartoon
5.	Our National Culture	1	Humorous story
6.	Science and Technology	-	-
7.	Art	1	Humorous drama
8.	Citizenship	1	Humorous anecdote

As can be inferred from Table 2, the 6th-grade Turkish textbook contains humorous elements under five themes. The third and eighth themes contain humorous anecdote. The third theme contains a humorous Keloglan anecdote while the eighth theme contains a humorous Nasreddin Hodja anecdote, both of whom are traditional figures of Turkish humour. Also, the fourth theme contains a funny cartoon, the fifth theme contains a humorous story, and the seventh theme contains a Karagoz and Hacivat play, a traditional Turkish shadow play. On the other hand, the first, second, and sixth themes do not contain any humorous elements. Table 3 presents the findings obtained as a result of the analysis of the 7th-grade Turkish textbook.

Table 3. Humorous Elements in the 7th-Grade Turkish Textbook

No	Theme	Frequency (f)	Humorous Element
1.	Virtues	-	-
2.	National Struggle and Atatürk	-	-
3.	Emotions	1	Funny cartoon
4.	Our National Culture	-	-
5.	Nature and Universe	-	-
6.	Art	1	Humorous drama
7.	Personal Development	-	-
8.	Science and Technology	1	Humorous story

As can be inferred from Table 3, the 7th-grade Turkish textbook contains humorous elements under three themes. The third theme contains a funny cartoon. The sixth theme contains a humorous Karagoz and Hacivat play, a traditional Turkish shadow play. Also, the eighth theme includes a humorous caricatured story. On the other hand, the first, second, fourth, fifth, and seventh themes do not contain any humorous elements. Table 4 presents the findings obtained as a result of the analysis of the 8th-grade Turkish textbook.

Table 4. Humorous Elements in the 8th-Grade Turkish Textbook

No	Theme	Frequency (f)	Humorous Element
1.	Virtues	1	Funny cartoon
2.	National Struggle and Atatürk	-	-
3.	Science and Technology	1	Humorous story
4.	Individual and Society	-	-
5.	Time and Space	-	-
6.	Our National Culture	1	Humorous drama
7.	Nature and Universe	1	Funny cartoon
8.	Citizenship	-	-

As can be inferred from Table 4, the 8th-grade Turkish textbook contains humorous elements under four themes. The first and sixth themes contain funny cartoons, and the third theme contains a humorous story. Also, the sixth theme contains a humorous Karagoz and Hacivat play, a traditional Turkish shadow play. On the other hand, the second, fourth, fifth, and eighth themes do not contain any humorous elements.

FINDINGS RELATED TO THE ANALYSIS OF INTERVIEW FORMS

This section contains the findings obtained from the content analysis of the participants' responses to the interview questions. Accordingly, Table 5, 6, 7 and 8 present the findings obtained from the responses given to the question, "What are the views of Turkish teachers regarding the use of humor in classes?" According to teachers' views, findings regarding the contribution of the use of humor in the classes are presented in Table 5.

Table 5. Theme/Sub-Theme Related to the Contributions of Using Humor in Classes

Theme	Sub-theme	Participants	Frequency (f)
Contributions	Attracting Students' Attention	[T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15]	15
	Development of Thinking Skills	[T5, T7, T9, T10, T14]	5
	Motivation	[T4, T10, T12]	3
	Creating a Fun Learning Environment	[T1, T8]	2
	Helping Students Develop Different Points of View	[T5]	1

As can be inferred from Table 5, most of the interviewed teachers think that humor has an important place in attracting students' interest and attention (f=15). Another view put forward by teachers in this sub-theme is that humor improves students' thinking skills (f=5). Also, the interviews have revealed that teachers think that humor increases student engagement and motivation (f=4). Two teachers noted that the use of humor creates a fun learning environment and that they can have more enjoyable lessons in this way (f=2). Finally, one teacher stated that humor helps students develop the ability to look at things from different perspectives (f=1). Some opinions obtained within the framework of the theme are given below.

"Students are more interested in texts with humorous elements in the textbook" [T1]. "One of the biggest problems during the lesson is the lack of attention. Humor can help to attract students' attention again" [T6]. "I think that humor improves students' intelligence and develops in them the ability to interpret" [T5]. "Humor requires cultural accumulation and fine intelligence; in this sense, humor improves children's thinking skills" [T7].

"The use of humorous elements in the introduction of the lesson increases student motivation" [T10]. "Humor allows us to touch the inner world of children rather than raise problem-solving robots; humor helps create a fun classroom atmosphere" [T1]. "The use of humor reveals the funny side of life and makes students laugh, so we have more enjoyable lessons" [T8]. "I believe that humor is the skill of intelligence and interpretation. In this way, students develop the ability to look at things from different perspectives" (T5).

In the interviews, findings about the negative effects of the use of humor in classes were also reached. Relevant findings are presented in Table 6.

Table 6. Theme/Sub-Theme Related to the Negative Effect of Using Humor in Classes

Theme	Sub-theme	Participants	Frequency (f)
Negative Effect	Problems Related to Time Management	[T3, T6, T8, T10]	4
	Problems Related to Classroom Management	[T1, T7, T11, T15]	4

As can be inferred from Table 6, the interviewed teachers stated some negative effects of using humor in classes, though these negative effects were not as many as contributions. The negative effects of humor-based activities that was most frequently stated was related to time management (f=4). In addition, classroom disruptions (f=4) were another negative effect of

using humor in classes, as can be inferred from the interviews. Some opinions obtained within the framework of the theme are given below.

"I think the most important negative aspect of using humor in lessons is related to time management. Therefore, the teacher must manage time very well in the classroom" [T3]. "Teachers use humor (in their classes) not in a planned way but in a spontaneous way. For this reason, we may experience problems regarding time management" [T6].

"Humor (usually) creates a fun learning environment, but it can also cause classroom disruptions" [T7]. "The use of humorous elements may (sometimes) cause classroom disruptions" [T11]. "As for the negative aspect of using humor in classes, I can think of problems regarding classroom management" [T15].

Another focus of the present study was the quality of textbooks in terms of the inclusion of humorous elements. In this sense, the findings obtained within the framework of teachers' opinions are presented in Table 7.

Table 7. Theme Sub-Theme on the Quality of Textbooks in Terms of Inclusion of Humorous Elements

Theme	Sub-theme	Participants	Frequency (f)
Quality of Textbooks	Insufficient Number of Humorous Texts and Activities	[T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15]	15
	Inadequate in Terms of Diversity	[T1, T5, T7, T10, T13]	5
	Inadequate in Terms of Humorous Visuals	[T7, T10]	2

As can be inferred from Table 7, all the interviewed teachers (f=15) are of the idea that Turkish textbooks are inadequate in terms of humorous elements. They all (f=15) think that textbooks do not contain enough humorous texts and activities. Also, some of the teachers (f=5) stated that the humorous elements in the textbooks lack diversity and that both traditional and contemporary humorous elements should be included in the textbooks. In addition, it was noted that the textbooks are inadequate in terms of humorous visuals (f=2). Some opinions obtained within the framework of the theme are given below.

"I think our textbooks do not contain enough humor-based activities" [T1]. "Number of humorous texts and activities in textbooks is like a drop in the ocean" [T7]. "(There are) absolutely not enough (humorous) activities" [T10]. "Humorous elements should be included more in (textbook) activities" [T12].

"The use of similar humorous activities in textbooks does not create the desired effect (on students)" [T1]. Textbooks are inadequate in terms of diversity of humorous activities. Both traditional and contemporary humorous elements should be included in textbooks [T13]. "The humorous pictures and cartoons in Turkish textbooks are not effective enough" [T7].

The present study also aimed to explore the ways teachers use humor in their classes. In this sense, the findings obtained within the framework of teachers' opinions are presented in Table 8.

Table 8. Theme/Sub-Theme Related to the Ways Teachers Use Humor in Their Classes

Theme	Sub-theme	Participants	Frequency (f)
The Ways of Using Humor	Cartoon	[T2, T4, T5, T6, T8, T9, T10]	7
	Jokes/Funny Stories	[T1, T3, T5, T11]	4
	Drama	[T7, T11, T12]	3
	Imitation	[T1, T13]	2
	Animation	[T7]	1
	Memes	[T11]	1

As can be inferred from Table 8, most of the interviewed teachers use cartoons (f=7) to make their classes fun. In addition, telling jokes and funny stories (f=4) as well as getting students

to act out funny stories and write funny skits or dramas ($f=3$) were other main ways of using humor in classes stated by the interviewed teachers. Some other methods of using humor in classes, though not as much emphasized as the above-mentioned methods, include doing funny imitations ($f=2$) and using funny animations ($f=1$) and memes ($f=1$). Some opinions obtained within the framework of the theme are given below.

"I bring humor to my classes through activities and cartoons especially related to the topic being covered" [T8]. I use cartoons. Students love funny cartoons; so, I want them to interpret these cartoons [T10]. "I tell jokes and funny stories especially when my students get bored" [T1]. "I read jokes and funny stories from joke books during the reading time" [T5].

"I get my students to write humorous skits or dramas" [T12]. "I ask my students to do funny imitations in the classroom. The students can imitate funny movie characters and funny events they observe around them" [T13]. "I also use funny animations in my classes" [T7]. "I use funny memes that are related to the topic being covered" [T11]

DISCUSSION AND CONCLUSION

Educational research focuses primarily on increasing the effectiveness of teaching. Teaching carried out through experiences that relate to everyday life, affect students emotionally, and leave a pleasant effect on them is permanent (Adıgüzel, 2009; Caruana, 1997; Özden, 2010; Şaşan, 2002). The present study investigated the use of humor in Turkish textbooks, which serves to relate the learned information to real life and creates a positive learning atmosphere, as well as Turkish teachers' views on these humorous elements and on the use of humor in their classes.

The findings reveal that the 5th-grade Turkish textbook contains humorous elements under four of the eight themes. These humorous elements are two cartoons, one funny story, and one humorous play (Karagoz and Hacivat). Also, the 6th-grade Turkish textbook contains humorous elements under five of the eight themes. These humorous elements are two funny stories (Keloglan and Nasreddin Hodja), one funny cartoon, one funny joke, and one humorous play (Karagoz and Hacivat). In addition, the 7th-grade Turkish textbook contains humorous elements under three of the eight themes. These humorous elements are one funny cartoon, one funny story, and one humorous play (Karagoz and Hacivat). Finally, the 8th-grade Turkish textbook contains humorous elements under four of the eight themes. These humorous elements are two funny cartoons, one funny story, and one humorous play (Karagoz and Hacivat). Based on these results, we can say that secondary school Turkish textbooks are inadequate in terms of diversity of humorous activities. These findings are in line with the findings of Kılıç (2016) and Ünveren (2020). In the related studies, it is stated that the humor elements are insufficient in Turkish textbooks. In this sense, it is thought that giving enough space to humor elements in the preparation process of the Turkish textbooks will contribute to the quality of the education process.

Findings from the interviews with teachers also support the above results. It was determined that all the interviewed teachers thought that the textbooks do not contain enough humorous elements. That there are not enough humorous texts and activities in the textbooks and that textbooks are inadequate in terms of diversity of humorous activities were two most frequently stated points with regards to the quality of the textbooks in terms of humorous elements. In this respect, our findings are consistent with the findings of Aydoğmuş and Yıldız (2017) and Aykaç (2018), who concluded that both primary and secondary school Turkish textbooks and workbooks are inadequate in terms of humorous activities. In this regard, it is important that humorous elements that increase student engagement and motivation in classes should be considered when designing secondary school Turkish textbooks.

According to the findings, teachers think that the use of humor in classes increases students' interest in the lesson, motivates them, creates fun learning environments, and gives students different perspectives. Also, one of the positive contributions of using humor in classes, as stated by the interviewed teachers, is that students can express themselves more easily in classes made fun through using humor. It can be stated that these findings are in parallel with the findings of the researchers, such as Aydın (2006), Berk (1996), Bolkan et al. (2018), Oruç (2010), Steele (1998), Summerfelt et al., (2010) who investigated the contributions of using humor to learning processes. These researchers have concluded that using humor in learning environments both positively affects students' affective processes and contributes to their academic achievement. Humor is an important factor for social cohesion, healthy psychology, and for coping with problems (Akın & Bilgin, 2015; Aylor & Opplinger, 2003; Banas et al., 2011). According to Loomans and Kolberg (2002), on the other hand, different types of humor increase students' communication, creative and critical thinking, coping, and cultural awareness skills. Therefore, both traditional and contemporary humorous elements should be used in order for students to acquire a humorous intellect. These results, which show the contributions of using humor to the learning process, seem to be very important for the more frequent use of humor in learning environments.

The interviewed teachers also stated some negative aspects of using humor in classes, though these negative aspects were not as many as positive contributions. The main negative aspects of using humor in classes, as stated by the teachers, are related to time management and classroom disruptions. It is thought that the use of humor, which is not carried out in accordance with a certain plan, may lead to these negative aspects. Therefore, while determining the humorous elements to be included in the learning process, the objectives of the course and the developmental characteristics of the students should be taken into consideration as well as humorous classroom practices should be carried out within the framework of a certain plan.

According to our findings, Turkish teachers mostly use cartoons to make their classes fun. In addition, funny stories/jokes, funny dramas, imitations, and funny animations emerged as the main humorous classroom practices that teachers use in their classes. It was stated by the interviewed teachers that such classroom practices reduce students' stress levels and affect the classroom atmosphere positively. These findings are consistent with the findings reported by Balta (2016), Demirci (2013) and Oruç (2010). Different humorous classroom practices have positive effects on students' thinking processes and developing new points of view. According to Çarkıt (2020), every classroom practice that improves students' thinking skills affects their self-confidence positively. In this regard, humorous classroom practices in Turkish classes both entertain and make students happy and make an important contribution to their personality development.

In the study firstly it was concluded that secondary school Turkish textbooks were insufficient in terms of humorous elements. This situation should be taken into consideration by both the writers of the textbooks and the teachers. Because humor is seen as an important element in language teaching. Secondly, according to the opinions of the teachers, it was concluded that using humor on time supports the effective learning process. In this respect, it is necessary to benefit from humor in the Turkish teaching process. In this framework, the following suggestions can be presented for the application area.

- The quality of humor-based activities in Turkish textbooks should be improved and their number should be increased.
- During the teacher training process, prospective teachers should receive training on the use of humor in classes.
- An awareness of the importance of using humor in classes should be developed in teachers, and seminars on improving skills of using humor should be held.

- Students should be made aware of "what is humor" and "how it is done" and be taught to distinguish between constructive and destructive humor.

LIMITATIONS

There are some limitations to the research. Firstly, the research was carried out on the textbooks selected as a sample. In this sense, it will be useful to examine the books published by different publishing houses. Secondly, the opinions of the teachers in the research were obtained from the teachers working in the schools of Gaziantep. Research can be done on teachers working in different provinces in Turkey. Finally, studies on the effects of humor-based practices on students' affective processes in Turkish courses and on the effect of humor-based practices on students' academic achievement in Turkish courses are considered useful.

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DEVELOPING A THINKING CULTURE IN THE CLASSROOM: A PARTICIPATORY ACTION RESEARCH¹

Abstract: In this study, cooperating with the classroom teacher, the researcher aimed to improve the thinking skills of students through teaching activities prepared based on the dimensions of thinking cultures. The research is designed using the qualitative paradigm in the participatory action research model. A total of six cycles were carried out during the thirty-three-week application process in line with the ‘cultures of thinking dimensions’ along the research process. The implementation process focusing on the cooperation of the teacher and researcher as a weekly cycle in the form of problem detection, literature review and seminar, preparation, implementation, monitoring and evaluation of the action plan. The action research reveals that developing a culture of thinking increases the diversity and frequency of utilization of the thinking skills by students. The results indicate, that although practices related to the culture of thinking approach contribute to the development of students' thinking skills, this development is slow and the teacher's motivation in this regard is an important variable.

Keywords: culture of thinking, teaching thinking skills, participatory action research, primary education

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INTRODUCTION

Due to the emergence of ‘21st century skills’, the transformation of education by the digital technology, the change of the nature of knowledge, and finally with the impact of the pandemic around the world resulting in educational activities to be executed via distance education has resulted in an increase in the need for teaching thinking processes and skills. Teaching thinking is an educational area emerging as a reaction against the assumption that intelligence is fixed in order to help students reach their full potential as a result of the interaction of many disciplines such as neurology, psychology, philosophy and sociology (Higgins, 2015). Many approaches and programs have been developed for this education from past to present. (Feuerstein, 1980; Lipman, 1981; De Bono, 1984; Shayer, 1999; Tishman, Perkins ve Jay, 1995; McGuinness, 2000; Dawes, Mercer ve Wegerif, 2000; Ritchhart, 2002; Topping, 2003). Current research about these approaches and programmes assure that a way to ensure the development of thinking processes and skills is based on the consideration of more social and affective domains (Perkins, Thishman, Ritchhart, Donis, and Andrade, 2000; Ritchart, 2002; Hurley and Nisbet, 2004; Ritchhart, 2007; Salmon, 2008). The social dimension in the way of developing thinking processes and skills is related to the fact that the development of these skills should not be considered independent of school and class culture, as well as based on the current culture and cultural characteristics. It emphasizes the need to include parents and peers in the process, although the teacher has the lead role in the teaching process (Topping and Bryce, 2004; Kim, 2002; Lebuda, Jankowska and Karwowski, 2020). The affective dimension, in the way of developing thinking processes and skills emphasizes motivation, dispositions attitudes, values and habits related to teaching thinking. In this context, a culture of thinking is one of the approaches that attracts attention because it includes both social and affective dimensions in teaching thinking (Tishman, Perkins and Jay, 1995; Fisher, 1999; Perkins, 2001; Ritchart, 2002; Costa, 2008).

A culture of thinking focuses on addressing teaching of thinking processes and skills in a socio-cognitive context. In learning, there is an approach based on the foundations of the theory of social constructivism (Ritchart, 2002; 2005). A culture of thinking is a metaphor associated with classroom/school culture in which thinking is ‘valuable, visible, and active’, revealing the mutual symbiotic relationship between the teacher, learner, and the act of learning (Ritchart, 2015). The dimensions including the types of thinking to be taught in the process of developing a culture of thinking are (Thishman et al., 1995):

- (1) Language of thinking: It includes words in a language that points to mental processes and products, questions that describe and evoke thinking, class discussions, providing students with data instead of solutions, giving instructions and feedback.
- (2) Thinking dispositions: It refers to affective characteristics such as motivation, tendency, attitude, and values related to the development of thinking processes and skills.
- (3) Mental management: This concept is treated in the literature as metacognition and is about supporting an individual in managing his/her mind. Mental management is the activity of reflecting on and evaluating one’s own thinking processes.
- (4) Strategic spirit: This dimension is associated with producing and using thinking strategies that enable the learners progressing step-by-step and in a planned way in order to solve problems or make decisions.
- (5) Higher order knowledge: it is associated with addressing information-generation processes such as problem solving level, inquiry level, and evidence level, beyond the facts in a discipline.
- (6) Teaching for transfer: This is a dimension applying any knowledge, skills, strategies and others to another context.

These dimensions are of great importance in terms of understanding, making visible, and facilitating systematic progress in teaching a culture of thinking that is more implicitly present

in the classroom environment. Considering the explanations on the sub-dimensions of a culture of thinking aforementioned, the sub-dimensions are frequently researched individually in the context of teaching thinking and that there is a strong evidence for their impact. In other words, it has been determined that survey model or quasi-experimental design is mostly used in the studies on teaching thinking across Turkey. In these researches, it's clear that thinking processes such as critical thinking, creative thinking, metacognition, problem solving, decision making are examined in terms of the impacts of different variables (Akınoğlu, 2001; Emir, 2001; Çetingöz, 2002; Kürüm, 2002; Aksoy, 2005; Aybek, 2006; Karataş Öztürk, 2007; Özcan, 2007; Tok, 2008; İbrahimoglu, 2010; Çoraklı, 2011; Ülger, 2011; Kurtuluş, 2012). Moreover, there have also been studies using thinking programs such as De Bono's CORT (Aybek, 2006), Feuerstein's instrumental enrichment (Özüberk, 2002) and Lipman's philosophy for children (Okur, 2008). There are also studies examining teacher competence, especially in teaching thinking skills (Dilekli, 2015). However, there aren't enough studies conducted about affective (studies conducted in affective field are mostly limited to critical thinking tendencies) and social aspects of teaching thinking while considering these local studies. At the same time, when we examine overseas literature, we also see that there are few studies carried out about the six dimensions of a culture of thinking separately investigated (Perkins, Tishman, Ritchhart, Donis, and Andrade, 2000; Perkins and Salamon, 2001) as well as studies regarded as holistic (Ritchart, 2007; Salmon, 2010; Yusoff, Bunkers and Embong, 2017; Andersen, 2018), and these studies are in the form of case study or survey model.

In summary, this study is based on the affective and social domains of teaching thinking processes and skills in the context of a culture of thinking. Especially in teaching thinking, there is a need for further research based on affective and social domains (Baumfield, 2006), thus it is believed that this study will contribute to the literature. The most important component of this problem situation is the collaboration between teacher and researcher. The collaboration between researcher and teacher is extremely important for combining theoretical knowledge with the experience of teachers in practice. Depending on this rationale, this research has been based on the question of 'how can a culture of thinking affect the development of the students' thinking skills with the cooperation of a researcher and teacher in an elementary class (5th Grade)?'. In the research process, in the context of this question, answers will be sought for the following sub-questions:

- (1) What thinking skills did students use before the action research process?
- (2) How did students' thinking skills develop during action research aimed at developing sub-dimensions of the culture of thinking?
 - a. What improvement was observed in the thinking skills of the students in the first cycle in which the thinking language was developed?
 - b. What improvement was observed in the thinking skills of students in the second cycle in which their thinking disposition was developed?
 - c. What improvement was observed in the thinking skills of students in the third cycle in which mental management was developed?
 - d. What improvement was observed in the thinking skills of students in the fourth cycle in which the strategic attitude was developed?
 - e. What improvement was observed in the thinking skills of students in the fifth cycle in which high-level knowledge was developed?
 - f. What improvement was observed in the thinking skills of students in the sixth cycle when transfer for learning was developed?

METHOD

RESEARCH DESIGN

In this study, an action research with qualitative research design has been used. The action research has been applied in accordance with the participatory action research. Action research can be evaluated in the context of critical theory and used as both quantitative and qualitative research methodologies. Moreover, it provides recovery about the current problem status and also aims to connect theory to practice (Freankel and Wallen, 2006).

PARTICIPANTS

The research environment was a public school located in Hatay province of Turkey. The school had 19 staff and 360 students. The participants of the study consisted of a total of 37 students, of whom were 18 girls and 19 boys and the classroom teacher at the 5th grade. The mothers of the vast majority of students were housewives, while their fathers were workers or tradesmen, and most of them were bilingual. The classroom teacher who voluntarily agreed to become a practitioner of the research, was 37 years old. This teacher, who had worked for sixteen years professionally, was a graduate of the department of primary education of the faculty of education.

The researcher was also among the participants and kept notes on the problems in order to shape the action plans, making sure not to affect the natural flow in the class. She also took on roles such as informing the teacher at the points needed to develop a culture of thinking, identifying problems related to a culture of thinking with the teacher, and providing the teacher with guided learning assistance in preparing action plans for solving these problems. Before the actual study the researcher conducted a three-month pilot study on the theme of ‘aiming to develop a culture of thinking’ with both of the 5th grade classroom teachers working at the same school. Thus, the researcher increased his experiences on this subject by developing and experimenting with lesson activities and materials.

Among the participants of the study there was also the Validity Committee, which followed the study from the presentation of the research proposal to the reporting process of the research in order to monitor every step of the research process. The validity committee, consisting of three academic members offered guided learning assistance to the researcher at each stage from the beginning to the end of the research, and the meetings were recorded.

DATA COLLECTION

Action research is a mean of achieving recovery that includes identifying the need for change, planning, implementing, and evaluating change. In this context, the research process followed in the study is shown in Figure 1 (Stringer, 2008; Mills, 2003, Kemmis and McTaggart, 2007; McCarty, 2010; Coughlan and Coughlan, 2002).

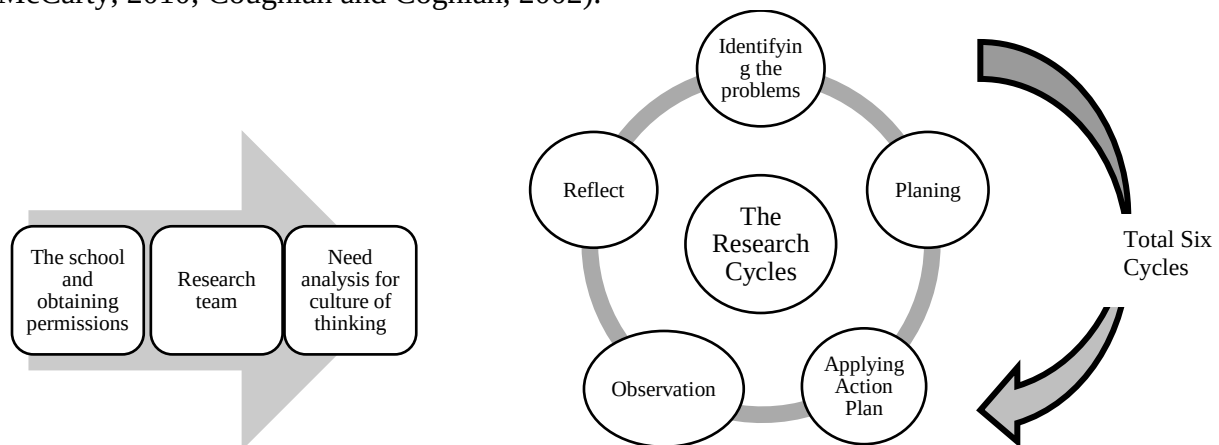


Figure 1. The Action Research Process

As seen in Figure 1, the action research process started with the school to be studied and the necessary permissions (permissions from the Ministry of National Education, school administration, teachers and parents). The study consists of a needs analysis and a total of 6 research cycles. The steps followed in these six cycles are summarized below:

- (1) Identifying the problems: At this stage, in each cycle, there is a discussion of the problems identified in the class aimed at the development of the culture of thinking and the determination of the sub-dimensions of the culture of thinking to which these problems are related. In the first cycle, we focused on solving problems facing the dimension of the language of thinking, and in subsequent cycles, problems facing the culture of thinking were solved by adding other dimensions of the culture of thinking.
- (2) Planning and seminar: At this stage, information about the issues needed by the teacher was exchanged before the preparation of the action plans and in accordance with the problems identified in the preparation process. In other words, information sharing between teacher and researcher continued throughout the cycle. At this stage, in addition to sharing information, action plans aimed at solving problems were prepared by the teacher and researcher. In preparing action plans, it has been cared not to disrupt the annual flow of plans. A general plan has been prepared in line with the problems encountered during the development of action plans in each cycle. In accordance with this general plan, activities aimed at the dimensions of the relevant culture of thinking have been prepared in accordance with the content of Turkish, Mathematics, Science, Social Sciences and traffic courses given by classroom teachers. Examples of the activities included in the plan prepared in each cycle in cooperation with the researcher-teacher are presented in Appendix B.
- (3) Implementation, observation and reflection of the action plan: The action plans prepared at this stage have been implemented. The action plans implemented were revised and reorganized at the end of each week in line with the exchange of ideas with the teacher. During the implementation of the action plans, the researcher took notes in the field on the development of the culture of thinking and the obstacles to this development, and shared these notes with the teacher, supported by video recordings taken in the classroom in reflection interviews. These shares were used to shape the overall Action Plan prepared. The teacher is responsible for implementing action plans. There was no interference with the teacher during the practice. However, during recess and reflection interviews, ideas were exchanged by interacting with the teacher about the implementation of the plan.

DATA ANALYSIS

Analysis in action research shows continuity (Stinger, 2008; Mills, 2003). Each course observation was analyzed at the macro level to determine whether the problem was solved during the research process and whether new problems would be encountered. Hence, a total of 252 courses were macro-analyzed with the help of two field experts at the end of the six cycles before they were reported, 102 recordings were micro-analyzed. During micro-analyzing, the content analysis technique was used.

In the analysis of the observations, all of the video recordings selected as a sample of the observations were first transcribed into a word file. Raw information from classroom observations in this process consists of a total of 7 booklets and 1481 pages, including the pre-study process. At a later stage, the observation records were first encoded by a line-by-line reading technique. The developed taxonomy of cognitive processes developed by Marzano and Kendall (2007) was used as the theoretical framework for coding. The categories and definitions used are as follows (Marzano and Kendall, 2007, 62-63):

- (1) Retrieval: It requires students to recognize information.
- (2) Comprehension: It requires translating knowledge into a form.

- (3) Analyzing: It requires five mental processes such as matching, classifying, analyzing errors, generalizing, and specifying.
- (4) Knowledge utilization: It involves the application of knowledge in specific situations.
- (5) Metacognition: It involves monitoring, evaluating, and regulating the functioning of all other types of thought.
- (6) The self-system: It is related to arrangement of attitudes, beliefs, and emotions.

For the validity and reliability of the observations, the researcher coded a total of 123 pages of data twice, 30 days apart. Accordingly, it was found that there was 87.5% compatibility among the codes that the researcher made at different times (Miles and Huberman, 1994, 64). The reliability among inter-coders was calculated and the consistency between the expert and the researcher about class observations was 85.39% (Miles and Huberman, 1994, 64). Codes that weren't agreed on have been reviewed in the context of the theoretical framework with the expert. During the research process, 102 semi-structured interviews were conducted with the teacher, the first of which was on August 15, in the context of current problem identification, informing, the development, implementation, monitoring and evaluation of action plans. The interviews were audio-recorded. The shortest interview lasted for 40 minutes and the longest interview lasted for 116 minutes. Since the school environment was not suitable, the interview environment has been determined before each interview by the joint decision of the teacher and researcher. Analysis of the reflection interviews was used in the context of supporting the observation findings, and the transcription of the interviews took a total of 1243 pages.

VALIDITY AND RELIABILITY

For the validity and reliability of this research, the following measures have been taken:

- (1) In order to reduce data loss, observations and interviews conducted has been recorded directly.
- (2) The obtained results were shared with the teacher and were confirmed by the participant
- (3) Data collection, data analysis process and findings have been reported in detail.
- (4) The validity committee has shared its opinions about the research process, analyzing the data and presentation of the findings.
- (5) The codes that the researcher created at different times and the consistency of the second inter-coder have been considered.

RESULTS

In this study, it has been aimed to develop thinking skills in the context of a culture of thinking with the cooperation of the researcher and teacher. Decisions made during the research process were realized by the teacher and the researcher and they have been applied by getting the opinion of the validity committee. All findings on thinking skills in the action research process are presented in Chart 1, created in accordance with Table 1 presented in the annexes. The findings presented in Table 1 and Chart 1 will be discussed under separate headings according to cycles.

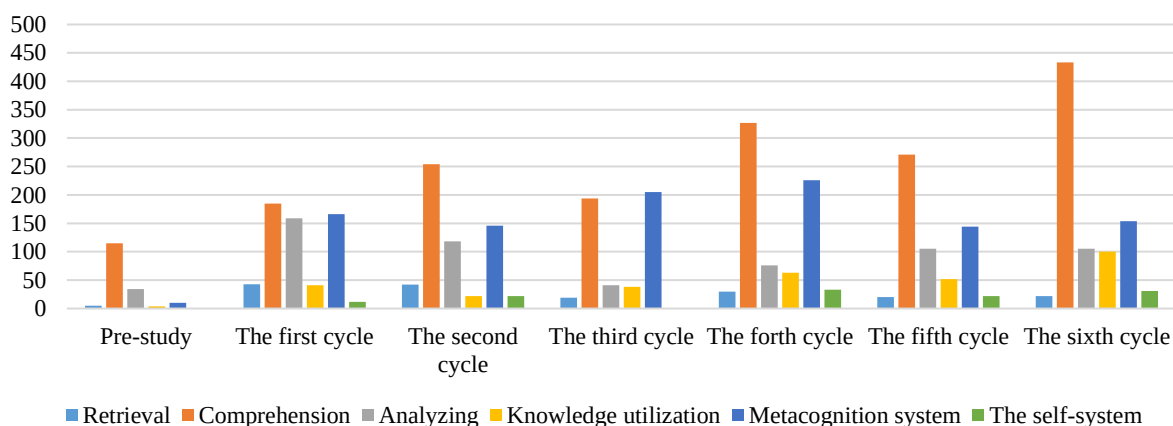


Figure 1. Findings regarding observations of the development of thinking skills

In the first step of the study, the current situation has been described in order to define the research context and establish the baseline for the first cycle.

NEEDS ANALYSIS

In order to describe the current culture of thinking and the thinking skills used, a total of 38 lesson hours were observed for four weeks. Detailed (micro-level) analyses of this current condition were carried out via video-recordings containing 9 course hours. As a result of the analysis of student discourses, it was revealed that the thinking skills used in understanding information and the cognitive awareness categories were more frequent. It was observed that the students used thinking skills in the categories of retrieval, analyzing, using and incorporating information into the self-system much less frequently for four weeks. The most remarkable finding, which has the power to influence the current culture of thinking prior to the study, is that students tend to ask questions very rarely (see Table 1). Another situation that is noteworthy in this cycle is that deficiencies were identified in the thinking skills that students used. For example, in a Turkish lesson, it was observed that students' estimates were similar and they had difficulty in making predictions after the teacher asked students to guess the end of the text.

Teacher: What could the child have said to the balloon seller when he came down, children?

Student1: I Won. I thought you were gonna give me a balloon.

Teacher: Maybe he said y ou were going to give it to me. Yes

Student2: I have removed the balloons, can you give me my balloons?

Teacher: Can you give me my balloon?Yes

Student3: I pulled out your balloons, so give me a balloon

Teacher: Come on, give me a balloon.Yes

Student2: I pulled out your balloons,now give me a balloon

Teacher: Give me a balloon. Yes?

Student4: I saved your balloons. Give me a balloon.

Teacher: Give me a balloon. Yes?

Student5: I got all the balloons, only one left.

Teacher: He may have said that there is only one left. Yes?

Student6: I climbed a tree and took your balloons now give me the balloon (October 13, pages: 110-111)

When considering the teacher's verbal statements about this situation, it was seen that he only repeated what the students said instead of giving feedback and encouraging them to think more.

THE FIRST CYCLE: A LANGUAGE OF THINKING

As a result of interviews with the teacher and observations made in the classroom environment, the need for the development of the ability to ask questions and the low effectiveness and frequency of the use of basic thinking skills by students reinforced the need to develop a language of thinking as the first dimension. The first cycle continued for 12 weeks and a total of 20 interviews were conducted with the teacher during the cycle. The classroom teacher and researcher, who agree on the need to develop the language of thinking in the classroom, have focused on solving the problems mentioned below in this cycle:

- Prevalence of closed-end questions in the classroom
- Students use superficial and closed-ended expressions when expressing opinions
- Giving students enough time to think
- Lack of usage of thinking language words and expressions in verbal expressions used in the classroom

At the stage of developing action plans, a general plan was prepared for the problems encountered, primarily for the development of the language of thinking. In accordance with this general plan, action plans were prepared and 10 activities were conducted in the first cycle. During the first cycle, 65 lessons were recorded and problems were solved by analyzing these records at the macro level. Detailed (micro-level) analyses of the observations were carried out over 20 course hours. According to the findings obtained from student observations, there was a significant increase in thinking skills used in retrieval, the process of comprehension, using, analyzing data, metacognition and self-system categories compared to baseline stage. It has been observed that students often review their own learning, make statements, monitor their friends' learning, and exchange ideas. Another remarkable point in this cycle is that students start asking for time to think and are willing to ask questions. According to the current situation in the first cycle, students used 16 new thinking skills, and 'exchange of ideas, inference, and error analysis' skills were the most commonly used skills among these newly used skills. A significant increase in the frequency of asking questions was also observed. For example, in the science and technology lesson, a student expressed his or her desire to ask a question and asked the question to the class:

Student1: I have a question. Is there more water evaporation when there is a flow or when the water is dead?

Teacher: Now there may be more evaporation while at rest. But I don't know, let's just think about it anyway. Yes, let's strain your mind. Let's not answer that right away, let's think about which one will be more. Is it in current or still?

Student2: While still

Student3: Teacher, I think when there is current

Teacher: So on what basis are you saying that? What evidence can you show about this?

Student3: Teacher, I always see it in such waterfalls, the waters always flow down like this (December 22, pages:157)

In reflection interviews conducted during the first cycle, the classroom teacher noted that the language of thinking enabled the students to distinguish words of a language of thinking, listen to lessons more carefully, increase participation in some lessons, start to say their thoughts without hesitation and generate ideas. The classroom teacher's perception of this change is supported by the observation findings obtained as a result of micro-analysis and presented in Table 1. However, the development of thinking skills such as willingness to show evidence, demanding thinking time, wondering were not observed at the desired frequency. These skills are more associated with thinking dispositions, defined as the source of motivation of thinking skills.

SECOND CYCLE: THINKING DISPOSITIONS

At the end of the first cycle in which the language of thinking was aimed to be developed, the findings obtained through both interviews and observations revealed the need to continue to solve problems related to the language of thinking as well as the need to develop thinking dispositions. The second cycle continued up to four weeks. In this process, a total of 10 interviews were conducted with the teacher. In the first of these interviews, the researcher and the classroom teacher exchanged information about the first cycle and decided to prepare the second general action plan for solving the following problems:

- Inability to fully understand the language of thinking and inappropriate use of some words of the language of thinking
- Teacher has trouble producing questions
- Need to be given time to think
- Students have negative affective characteristics such as hasty, disorganized thinking and giving up
- Need to develop a questioning learning environment in the classroom

In line with the mentioned problems, the second cycle aims to develop the tendency of students to wonder and question, to develop alternative perspectives, to ask for time to think and to make efforts to think. Action plans were carried out each week in the form of adapting the determined activities to the dimensions of the language of thinking and thinking dispositions. These action plans included 10 activities. In the course of monitoring the second cycle, a total of 10 interviews were conducted with the teacher. There were many changes during the implementation period in accordance with the collected data. As a result of the observations made by the researcher in the classroom, a total of 40 hours of video were recorded and 13 of these records were analyzed in detail. As a result of this analysis, although an increase in the frequency of skills that students use to understand data was observed, it was found that there was a decrease in the frequency of skills included in the categories of analyzing information, using information, and metacognition. In the category of self-systems, no changes were observed. In this cycle, it was determined that there was a significant increase in question-asking skills, more open-ended questions were asked, and that cognitive levels of questions increased.

According to the first cycle, the frequency of students expressing alternative views increased in the category of analyzing knowledge. It has been observed that they have begun to use a new skill about conducting research that is aimed at using it. However, no significant changes were observed in the use of skills included in the categories of metacognition. In the self-system Category, new skills were observed to ask for time to wonder and think. For example, the following excerpt shows how one of the students asks for time to think in a math class:

Teacher: I want you to write a problem in your notebook using the data. For this, I give you five minutes to write a problem and three minutes to solve the problem.

Student7: two minutes for us to think...it was 10 minutes. (February 17, pages:126)

In this cycle, there was a significant increase in question-asking skills in different categories, more open-ended questions were asked, and cognitive levels of questions increased. For example, in the science lesson, two students asked questions required analysis:

Student2: What difficulties would we face in our lives without electricity?

Teacher: yes, that's a good question....

Student6: What are the benefits and harms of electricity? (February 22, pages: 186)

It has been indicated that the students used expressions about 'monitoring their own learning', 'monitoring the learning of their friends' and 'error analysis' related to this dimension without exchanging data with the teacher about the mental management. It has also been noticed that this development in student observations is an improvement in the 'monitoring' dimension of mental management, and the need to provide development towards the 'evaluation' levels. For this reason, the researcher and the classroom teacher decided to switch to the third cycle to

solve problems related to mental management in accordance with the results obtained in the first and second cycle.

THIRD CYCLE: MENTAL MANAGEMENT

Concerning the findings obtained in the first and second cycles, the third cycle took two weeks to solve the problems related to mental management. A total of 11 interviews were conducted with the teacher during the cycle. The overall action plan developed by the researcher and classroom teacher was formed within the framework of the following problems:

- Increasing the quantity and quality of the words used in the thinking language
- Attention to thinking time
- Students continue to ask low-level and closed-ended questions
- The need to develop students' research, inquiry and curiosity tendencies
- Giving quick and irrelevant answers to questions without thinking
- Improving the quality of students' thinking and monitoring their learning (checking whether they understand more in the teaching process)

In the third cycle, it is aimed to evaluate the thinking process before, during and after the thinking task in accordance with the identified problems and to reflect on the thinking process that it has. Action plans also were realized in the form of adapting the determined 18 activities to the dimensions of the language of thinking, thinking dispositions and mental management. During the third cycle, a total of 18 course hours of observations were made and a detailed (micro) analysis of 13 courses was made from these observations. According to the findings obtained as a result of this analysis, an increase has been seen in the frequency of thinking skills included only in metacognition category. In particular, there has been a significant increase in students' ability to monitor their own learning, monitor course processing, present strategies and ask questions. For example, the following excerpt shows that in Traffic Class, A student watches his/her learning by asking questions about the activity and providing information about his/her cognitive status:

Student3: My Teacher how can you understand that Ahmet Bey acted like this?

Teacher: didn't you read the texts?

Student3: I read my teacher

Teacher: Yes

Student3: I couldn't relate. (March 3, pages:77)

In this cycle, where it is primarily aimed to improve mental management, it is a positive development for students in terms of processing information to start to 'present strategy' and 'observe'. In this cycle, students gave information more frequently about their cognitive performance. Besides, it is noteworthy that students begin to use verbal expressions aimed at 'strategy generation' without exchanging detailed information with the teacher about the strategic attitude dimension. This finding, obtained as a result of student observations, and the similarities between mental management and the strategic dimension have provided a basis for the development of strategic spirit, the fourth dimension of a culture of thinking.

THE FOURTH CYCLE: STRATEGIC SPIRIT

In line with the findings obtained in the third cycle, the researcher and the classroom teacher decided to prepare the fourth Action Plan with the approval of the validity committee to solve the problems related to strategic spirit. The fourth cycle lasted two weeks, with a total of 11 interviews with the teacher in the process. The overall action plan developed by the researcher and classroom teacher was formed within the framework of the following problems:

- need to increase interaction in the classroom
- Need to be given time to think

- need for students to improve their tendencies towards asking questions, researching and curiosity
- Students offer solutions directly instead of helping their friends
- Students cannot explain how the problem is solved correctly
- Students don't follow a strategy while researching
- Students have problems with ways they should follow while studying for the exams
- Students do not follow strategy while writing an essay in the course

In this cycle, where strategic spirit is developed, it is aimed to focus on teaching strategies. Action plans have also been applied each week in the form of adapting 15 activities determined by focusing on solving the problems into the dimensions of strategic spirit primarily, thinking dispositions and mental management. A total of 30 course hours of observation were made during the fourth cycle, and a detailed (micro) analysis of 18 courses was made from these observations. As a result of this analysis, it has been determined that students often used the thinking skills included in the categories of understanding the data and metacognition. In this cycle, where strategic spirit is primarily intended to be developed, students' starting to present strategy and expressing what is said differently can be considered a different development than other cycles. For example, the following excerpt shows that in science class one of the students expresses the question his friend asked differently:

Student4: The world is round, or I think it's water where it looks blue, Why doesn't it spill?

Teacher: Where will it spill?

Student9: what Student4 means is that when we really look at the world from space, why doesn't the water on Earth spill out?(March 23, pages:54)

Consistent with these findings, in reflection interviews, the teacher noted that students began to present evidence, draw conclusions, ask questions, look at them from different aspects, and indicate the strategy. However, despite the increasing frequency of students presenting strategies and showing evidence, there has been a need to develop dimension of high order knowledge.

THE FIFTH CYCLE: HIGH ORDER KNOWLEDGE

At the end of the fourth cycle, the need to develop a high-level knowledge dimension related to how problem solving, research, and evidence were done became evident. The fifth cycle lasted three weeks and a total of 11 interviews were conducted with the teacher. The overall action plan developed by the researcher and classroom teacher was formed within the framework of the following problems:

- Experiments are applied in the form of presentation in a science lesson and students know the results of the experiments from the beginning
- Students think in a hasty way
- Students' sense of curiosity does not reach at the desired level
- The teacher unwittingly blocks the student to student interaction
- Students do not know how to research
- Teacher explains the solution rather than teaching how to solve the problem to students in mathematics course
- The teacher does not give students enough time to strategize
- Teacher does not provide much opportunity for students to present evidence in class

In the fifth cycle, it is aimed to develop ways of questioning, using evidence and solving problems in a discipline with a high-level knowledge dimension that is primarily tried to be developed. Action plans have also been realized in the form of adapting activities determined by focusing on solving the problems into the dimensions of high order knowledge primarily, language of thinking, thinking dispositions, mental management and strategic spirit. 31 activities were designed and applied in this cycle. A total of 26 course hours of observations

were made during the fifth cycle, and a detailed (micro) analysis of 13 courses was made from these observations. As a result of this analysis, it has been stated that according to the fourth cycle, the frequency of use of thinking skills in the categories of analyzing and using information of students increased. In particular, it can be said that it is an important development for students to show evidence and provide information about their research. For example, in the following excerpt, the student who asked the question he was wondering in a social studies class stated that he did not know the answer and that he should think and investigate it until tomorrow:

Teacher: Well, think about it. Could be why? Let's think, your friend says My teacher says Student8 your friend says that when I look at sources, it's always first last name and then name, why is that?

Student8: I don't know, I need to think

Teacher: Think a little

Student8: I gonna investigate until tomorrow

Teacher: yes. It can be very nice (April 15, Pages:167)

In parallel with these findings, in the reflection interview conducted in the fifth cycle, the teacher stated that students present evidence, make inferences, improve their ability to ask questions, and start looking at them from different aspects. The quotes indicating this trend are presented below:

Teacher: I mean, let me say this. At least the skills of asking questions, preparing questions are a little improved than before. In other words, at least now, instead of preparing simple open-ended questions, instead of questions whose answers are clear and obvious, they have gained more skills in preparing questions based on thought, interpretation. A few students, at least that's all. ...

Teacher: when we got the answers to the questions, we found that their thinking developed a little more than before, so after thinking, they made some conclusions, and then they could look at things differently.

Teacher: now they can generate different questions by thinking. They can bring different interpretations.

Teacher: so when we asked students to identify the ways they should follow when showing evidence, they also made good determinations there. (April 6, Pages:36-37)

In the fifth cycle, increasing the transfer frequency of students and improving the transfer size could contribute positively to solving the problems that have appeared in the fifth cycle process.

THE SIXTH CYCLE: TEACHING FOR TRANSFER

Because of the significant increase in the frequency of transfer in the fifth cycle, the final dimension of a culture of thinking, the dimension of transfer was developed. The sixth cycle lasted six weeks and 11 interviews were conducted with the teacher. The researcher and the classroom teacher exchanged information about the current situation and sought solutions to the following problems identified below:

- Many questions are asked in a row in the lesson, but students are not given the opportunity to answer
- Students do not know how to research
- Failing to conclude the discussion
- Disorganized and hasty thinking of some students
- Students tell their friends about the solution instead of directing them to solve the problem
- Strategic deficiencies in solving mathematical problems
- Students cannot associate the concepts taught with everyday life

- No relationships with different disciplines

In the context of the sixth cycle, it has been aimed that students relate learned knowledge to their daily lives more. Action plans have been carried out in the form of adapting 31 activities determined by focusing on solving problems each week into the dimensions of transfer primarily, the language of thinking, thinking dispositions, mental management, strategic attitude and high order knowledge. A total of 35 course hours of observations were made during the sixth cycle, and a detailed (micro) analysis of 16 courses was made from these observations. As a result of this analysis, it has been stated that the students used the thinking skills related to the process of comprehension and metacognition as presented in Table 1 more frequently. In particular, there is an increase in the ability to summarize and in the frequency of specifying a result sentence compared to other cycles. In this cycle, when the questions asked by the students were examined, it was observed that they most often asked Why/How questions. In this cycle, in which transfer is intended to be improved, it has been observed that students relate the subjects taught most to their daily lives. For example, he expressed his opinion on the subject discussed in the social studies course by associating it with his daily life:

Student2: My teacher manager should be rich and patient, sensitive

Teacher: you say that the person who isn't rich can't manage.

Student8: my teacher, I will express my opinion. My teacher, now that the neighborhood headman is not rich, he's poor, but he runs the neighborhood. (May 5, Pages: 187-188)

In the interviews of reflection applied in the sixth cycle, it has been stated that students started to generalize, use a language of thinking, give answers after thinking a while, research, give feedbacks about their thinking in a hasty way, interact with each other despite the noisy environment, ask Why-How questions more than before, create a discussion environment for the first time, disprove the opposing views and to ask the points they wonder. Moreover, in this cycle it has been noted that a student presents a book as evidence, the other student states that he or she is experimenting to present evidence in a science lesson and another student uses the word of transfer. The most remarkable discourse of the teacher about the change he noticed in students is that there was a real discussion environment for the first time in the classroom. The quotes containing this opinion are presented below:

Teacher: I already mentioned this in my diary, so today, in fact, for the first time in the classroom, there was a full discussion in accordance with the rules of serious discussion.

Researcher: OK, there was noise or something, but the children participated with what they gave themselves.

Teacher: maybe yes, but for the first time there was a serious discussion, so what happened, what was happening in the discussion, that is, things before, when there was a counter-argument, when there was one, the others were usually loaded on it. Isn't that right? And they were intimidating him, but that's not what happened today. I mean, what happened today. Here were those who were on the side of the snake being a vertebrate, there were those who were on the side of the invertebrate. (May 4, Pages: 121).

DISCUSSION

This study includes some important findings about how the instructional scaffolding applied by using 'a culture of thinking' approach, can develop students' thinking skills. A culture of thinking approach can be a model that encourages the development of students' thinking skills that address the process of comprehension and metacognition. In this study designed as an action research, some important information has been obtained on some of the challenges encountered in the process of learning and teaching thinking. Although the lack of knowledge of teaching of thinking before the process plays a challenging and restrictive role, it has been determined that a certain level of diversity and frequency of use of thinking skills used by the

students increases compared to the beginning level. Despite this situation, in the process of the design of activity and material based on a culture of thinking it is undeniable that there is a gap between the knowledge the teacher knows and the application of this knowledge (Row, Subramaniam and Sathasivam, 2018).

During the use of the language of thinking, the first cycle, an increase in the variety of thinking skills used in all categories (retrieval, analyzing, knowledge utilization, cognitive metacognition, and self-system categories) was observed compared to other cycles. In particular, the presence of findings on metacognition without informing the teacher is thought to be associated with the use of the language of thinking being effective in increasing the variety and frequency of use of thinking skills. Astington and Olson (1990) also found that knowing the language of thinking and using it in the right places is associated with students' ability to think critically. In this context, it should not be ignored that language is very important in activating thinking and processing information, rather than just the transmission of content (Ritchhart, 2002; Perkins and Ritchhart, 2004). A similar study in which thinking skills were tried to be improved concluded that students significantly developed their ability to use language of thinking, practice thinking skills, and skills of metacognition (Burke and Williams, 2008).

Considering the findings of the thinking skills used during the sixth cycle (as a result of the ratio of the frequency of thinking skills obtained in each practice to the week of practice), it has been observed that the variety of thinking skills used by the end of the fourth cycle increased, while the variety of thinking skills used in the fifth cycle decreased by 28% compared to the fourth cycle, and also the 38% in the sixth cycle. This proves that teaching thinking skills is long-term and requires constant effort (Wolberg and Goff, 2012; Dajani, 2016; Gholam, 2019; Viña Leonardi, 2019). Failure to achieve the expected development from the fourth cycle in which strategic spirit is developed may be associated with a motivational problem related to the development of the teacher's thinking skills, as well as with the development of resistance to change (Garmston, 2001). In the process of developing thinking skills, the teacher's knowledge, skills and motivation are important variables in this regard (Costa, 2001; Fisher, 1999; Hurley and Nisbet, 2004; Dilekli, 2015; Ritchart, 2015). Although the effects of thinking skills programs are encouraging, the probability that they usually fail to make a lasting impact may be associated with a lack of teacher competence, professional development, and colleague solidarity in this regard (Leat, 1999). In other words, developing a culture of thinking in all or at least two classes of the school could increase the motivation of the teacher. Another reason for the decrease in teacher's motivation can be related to the fact that he expressed his worry about the inability to complete the curriculum while creating action plans during the fourth and the fifth cycles. In the case studies conducted by Yusoff, Semon and Embong (2017), it has been stated that the students needed much more time to be trained in terms of higher-order thinking skills and the teachers worried about that they couldn't complete the curriculum if they spent too much time in waiting the students to finish the tasks given. A decrease in the diversity of learners' thinking skills after the fourth cycle may also be associated with a decrease in the number of questions they ask. While there was a significant increase in the number of questions asked by students until the fourth cycle, it has been observed that there was 44% decrease in the number of questions in the 5th cycle and 76% decrease in the 6th cycle compared to the 4th cycle. In this context, it proves the possibility of a close relationship between the number of questions students ask and the thinking skills they use. Most of questions were asked about thinking dispositions and it could be due to the decrease in students' motivation to think and the inability of the teacher to motivate the students sufficiently in this regard (Perkins, Tishman, Ritchhart, Donis and Andrade, 2000). As a result of the development of thinking dispositions, the increase in the frequency of asking questions can be explained by the positive effects of studies aimed at developing direct interest and questioning tendencies in this cycle. It can be

said that the use of the culture of thinking approach increases the frequency of asking questions at a higher order, as well as the frequency of asking questions. In the literature, the existence of important findings showing asking questions as the most powerful teaching tool in the development of higher-order thinking skills supports this result (Dos, Bay, Aslansoy, Tiriyaki, Cetin and Duman, 2016; Nappi, 2017; Cumhur, 2018). Another important point that should be emphasized in the context of this study is that although progress has been made according to the initial level, it cannot be said that the use of these skills in the research process has turned into a series of strategies. In other words, the limited use of thinking skills aimed at knowledge utilization could not go beyond an experience structured by the teacher and researcher. However, the decrease in frequency of a skill often used in one cycle during the development of a culture of thinking in the later cycle was disappointing for the researcher in terms of understanding how quickly any development can disappear again. This situation is an indication that the approaches of the culture of thinking support the development of available thinking routines (thinking skills existing in the categories of comprehension of knowledge and metacognition prior to the study) rather than creating new ones in the context of analyzing the knowledge, its utilization and inclusion into the self-system. However, developing a culture of thinking that needs making thinking visible in the classroom is a process requiring time, practice, labor, interest, and investment from the teacher's point of view (Wolberg and Goff, 2012; Dajani, 2016; Yusoff, Seman, and Embong, 2017; Viña Leonardi, 2019). It can also be said that it is an extremely difficult process for the teacher, as it involves changing all the routines that the teacher uses in the classroom and transforming the classroom culture.

CONCLUSION

Compared to the baseline, the sixth cycle, in terms of a culture of thinking, students often talk less, the classroom environment is dominated by a non-discussion environment; towards the final dimension, a change has been observed towards an environment where more questions are asked, the information presented is questioned, the discussion environment is created, evidence is shown. Qualitative and quantitative progress has been made in thinking skills, which are used as a reflection of the development of dimensions of culture of thinking in the classroom. In particular, it was concluded that there was a significant increase in thinking skills based on comprehension of knowledge, analyzing knowledge and metacognition categories. The development of a culture of thinking model described in this study has been understood to be a multi-layered (dimensions and cultural forces involving types of thinking), gradual and long-term process. It can also be said that the culture of thinking model contributes to transforming the teacher-centered atmosphere in the classroom into a more learner-centered atmosphere, making learners more motivated to think. Although there is no very strong evidence that they progress at the desired level in all dimensions of culture of thinking, this model includes different types of thinking (metacognition, problem solving, decision-making, creative thinking, critical thinking, etc.), it can be said that it makes the act of thinking visible and creates an atmosphere that contributes to the development of thinking skills, especially towards the categories of comprehension of knowledge and metacognition. Although a culture of thinking is an abstract concept, it is very difficult to interpret which dimension is more effective in the development of thinking skills due to the cumulative progression of its dimensions. For this reason, it can be determined which dimension contributes more to the development of thinking skills by focusing on the dimensions of future studies one by one. Because the culture of thinking is a phenomenon directly related to the multidimensional and social environment, it is important to take the necessary measures to spread it over a long process and conduct it in the form of teamwork. In this study, which was carried out to develop a culture of thinking, it was concluded that the expected transformation did not fully occur,

especially in the last three dimensions (strategic spirit, high-order knowledge and transfer). Therefore, when developing a culture of thinking, the need to consider dimensions as a whole rather than developing them respectively and not degrade them to a model should not be ignored (Perkins and Ritchhart, 2004; Dilekli, 2015). Because it subdivides thinking and makes it difficult for the teacher to analyze, use and include knowledge into the self-system, it may have prevented the desired results from being achieved. In the application process, it should also be taken into account that the language of thinking can be effective in developing any dimension, such as a cultural force, rather than a culture of thinking dimension. It can also be said that the use of the culture of thinking model in terms of thinking skills can be effective in terms of developing awareness in students and creating new thinking routines in the classroom.

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Appendix A

Table1: Student thinking skills observed in the process of a culture of thinking approach.

Category	Codes	Pre-study 4 Weeks	First cycle 12 Weeks	Second cycle 4 Weeks	Third cycle 2 Weeks	Fourth cycle 2 Weeks	Fifth cycle 3 Weeks	Sixth cycle 6 Weeks
Retrieval	To choose / sort out	1	3	7	11	11	4	7
	Asking questions	4	24	35	8	19	16	15
	TOTAL	5	54	42	19	30	20	22
Comprehension	Express opinion	60	10	96	65	120	78	103
	Give examples	27	13	13	2	11	25	60
	Making a statement	22	67	85	41	107	116	122
	Simulation	9	3	1	2	3	-	10
	Compare	3	39	11	33	29	7	33
	Summarize	2	-	-	-	1	-	21
	Stating why	2	41	39	39	23	31	50
	Express result	-	5	1	-	-	-	28
	Translate differently	-	2	4	8	33	12	-
	Asking questions	-	-	29	4	32	30	23
	TOTAL	125	180	279	194	359	299	450
Analyzing	Guess	34	35	9	13	9	24	13
	Make inferences	-	44	21	2	12	24	22
	Error analysis	-	27	11	7	9	7	10
	Suggesting Alternative Views	-	5	15	4	2	4	12
	Generalization	-	2	-	1	-	-	-
	Classify	-	-	-	-	-	-	3
	Asking Questions	-	-	6	-	-	1	-
	TOTAL	34	113	62	27	32	60	60
Knowledge utilization	Transfer to learn	4	37	16	16	14	26	45
	To observe	-	1	-	10	-	5	3
	Research	-	-	6	2	4	2	6
	TOTAL	4	38	22	28	18	33	54
The metacognitive system	Reviewing your own learning	47	72	78	130	139	85	95
	Watching the lesson in progress	4	24	-	20	9	2	-
	Watching Your Friends Learn	2	54	39	26	58	15	18
	Seeking meaning / asking for explanation	-	9	6	-	1	-	-
	Presenting strategy	-	3	-	10	45	19	46
	Evaluate	-	-	5	3	-	10	14
	Naming the cognitive process	-	-	-	-	3	18	14
	Trying to refute the evidence presented	-	-	-	-	-	-	1
	Time management	-	-	1	2	-	2	-
	Asking Questions	-	17	7	24	12	4	7
	TOTAL	53	179	136	215	267	155	194
The self-system	Willingness to exchange ideas	-	50	29	14	12	17	28
	Willingness to show evidence	-	7	8	-	13	16	21
	Be curious	-	3	13	-	18	-	8
	Questioning the reliability of information	-	2	1	-	-	1	1
	Demanding time to think	-	4	11	-	4	5	4
	Asking Questions	-	-	-	-	-	1	-
	TOTAL	-	66	62	14	47	40	62

Appendix B

Table 3. Examples of planned activities in the action research process.

First cycle	Second cycle	Third cycle	Fourth cycle	Fifth cycle	Sixth cycle
Thinking language poster and word of the day Creating high-level questions for students The study of poetry acrostic is done.	Thinking alarm activity Question generation efficiency Hourglass activity The board I'm curious about Preparing slogans about thinking tendencies	Imagining and imagining the subject in the mind Story presentation about a scientist for Mental Management Making a poster to remind you of Mental Management Four thinking activities	Paired problem solving effectiveness Strategy development for essay writing Developing a research strategy Developing a strategy for solving problems	Using experiments for high-level knowledge How to classify living things in science Research on the first person to go to the moon Research on the author of the text	Ask non-governmental organizations to research and associate their functions with daily life Associating the environment, which is the subject of mathematics, with daily life

PRESERVICE TEACHERS' KNOWLEDGE AND AWARENESS OF SUPPORTING EARLY LITERACY

Abstract: This study aims to investigate preschool and primary school preservice teachers' knowledge and awareness of early literacy skills. Basic qualitative research approach was applied and data were collected through interview forms. A total of 158 preservice teachers (78 preschool preservice teachers and 80 primary school preservice teachers) attending the faculty of education at a state university in Turkey participated in the study. Data obtained from the participants were content analyzed. The results revealed that preservice teachers studying at both departments are familiar with early literacy skills while they have limited knowledge of its content and sub-skills. It is also found that most of the preschool preservice teachers define early literacy as letter recognition and pronunciation, school readiness and learning how to read and write at an early age; and primary school preservice teachers as learning how to read and write at an early age. Since preservice teachers representing both groups have misconceptions about the concept of early literacy, it would be appropriate to organize courses that offer examples of classroom practices concerning early literacy skills for preservice teachers attending the undergraduate program.

Keywords: Early literacy, preschool preservice teacher, primary school preservice teacher, teacher education

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INTRODUCTION

Acquiring reading and writing skills can be defined as an exciting journey for all children. In Turkey, formal literacy teaching starts as of the first grade of primary school while skills that prepare children for the formal reading-writing process begin to develop in the preschool period in informal environments and in line with children's own hobbies and interests. Although some suggestions have been made regarding how literacy is acquired and developed; there is an ongoing debate about what early literacy is. Opinions about the early literacy approach based on the argument that literacy development begins far before children start formal education are commonly accepted nowadays (Neuman & Dickinson, 2001).

The number of studies looking into the development of early literacy in the early period is increasing day by day. Recent studies show that children fulfill critical cognitive tasks in literacy development during the period from birth to age six and that quality education given in the early period makes significant contributions to children's achievement as good readers and writers (Neuman & Dickinson, 2001). Research reveals that practices and interactions of early literacy affect reading achievement at primary school (Cabell, Justice, Konold & McGinity, 2011; Güldenoğlu, Kargin & Ergül, 2016; Kendeou, Broek, White & Lynch, 2009; Missall et al., 2007; Spira, Bracken & Fischel, 2005; Storch & Whitehurst, 2002). Similarly, some studies report that early literacy has an effect on reading achievement in later grades as well (Cunningham & Stanovich, 1997; Juel, 1988, Scarborough, 2001; Storch, & Whitehurst, 2002).

EARLY LITERACY AND TEACHER RELATIONSHIP

"Early literacy is a term which refers to children's literacy knowledge and skills before they become actual literates." The sounds children make, their interest in writing around them, their interactions with technology are important in terms of literacy development. The main point here is that literacy is developmental (Makin & Whitehead, 2004,10). Literacy development starts at the early stages of life and continues lifelong. A dynamic relationship exists among reading, writing, speaking and listening skills and each of them affects the other (Morrow, 2012). Early literacy can be defined as children acquiring literacy skills in such areas as reading and writing in the early years of their lives (Makin & Speeding, 2003). Some theories include different viewpoints and opinions about the development of literacy. It is appropriate to mention the "emergent literacy" theory that came out in the early 1980s (Sulzby & Teale, 1991). The term emergent literacy was first introduced by Marie Clay in 1966. The theory stands against the other views accepted about the acquisition of literacy. It is completely different from the Maturation Theory, which argues that literacy education should be delayed until children are 6.5 years old. Emergent literacy refers to a functional level of performance rather than the child's chronological age (Tracey & Morrow, 2006). Emergent literacy explains the formation of literacy without drawing clear borders between pre-reading and actual reading (Whitehurst & Lonigan, 1998).

Information concerning the elements of the terms emergent literacy and early literacy was generated based on quantitative studies examining the relationships between pre-literacy and actual literacy states and qualitative studies looking into preschool children's behaviors towards materials and activities that support reading and writing (Neuman & Dickinson, 2001; Whitehurst & Lonigan, 1998). Based on research, it was found that early literacy skills of preschool children predicted their later literacy achievement. These skills were classified as *alphabet knowledge* (knowledge of names and sounds associated with printed letters), *phonological awareness* (perception of the phonetic characteristics of the spoken language independent of meaning), *automatized naming of letters or numbers* (rapidly naming a series of random letters and numbers), *automatized naming of objects or colors* (rapidly naming objects or color e.g., "car", "sun", "house", "person"), *print awareness* (ability to write letters,

his/her name) and *phonological memory* (ability to recall speech-based information) (National Early Literacy Panel, 2008).

Early literacy development is the shortest but one of the most vital stages of literacy development. Primary school teachers know that young children who make a good start at school experience much less difficulty in their later academic life. On the other hand, those who cannot make a good start may have to struggle frequently during their school life (Snow, Burns & Griffin, 1998). Teachers play a pivotal role in creating early language and literacy environments for children (Hindman & Wasik, 2008). The power of preschool teachers to develop early literacy skills has a considerably big effect on children's future academic achievement (Dennis & Horn, 2011). In their study, Çakmak and Yılmaz (2009) found that activities offered by preschool education institutions are effective on children's development of reading habits. Deford (1985) reported that the teacher has a critical importance in children's overall success in learning to read. She aimed at revealing teachers' beliefs about reading using the instrument the Theoretical Orientation to Reading Profile (TORP) and observed 14 teachers as well. As a result, she found a strong correlation between the teachers' beliefs about reading and their self-reports concerning the practices. However, related studies have not always given such results. The study conducted by Ergül et al. (2014) showed that approximately half the preschool teachers defined the term early literacy as the child's learning to read and write in the preschool period. The authors associated this finding with the fact that the teachers explained the phenomenon with its literal meaning and stated that teachers failed to follow the developments in the field properly. As a result of the study they conducted in kindergartens through observation and questionnaires, Bryant, Clifford and Peisner (1991) found that only 20% of the kindergartens focused on developmental practices. They once again found that teachers' beliefs and knowledge about developmental practices were inadequate. Hindman and Wasik (2008) aimed to determine the nature of teachers' literacy beliefs and the background factors relating to these beliefs using the instrument Teacher Literacy Beliefs Questionnaire-TBQ. They concluded that teachers lack certain knowledge about literacy. They determined that the teachers' beliefs about oral language and vocabulary knowledge varied by the years of experience in teaching profession, which revealed professional experience as an important variable. In the study carried out by Kerem and Cömert (2005), preschool teachers ranked the activities for preparation for reading and writing in the last place among the in-service training topics they wanted to participate.

Teachers' level of knowledge about literacy is considered critical in shaping classroom practices and planning the right learning experiences; thereby promoting children's early language and literacy development. Levels of knowledge included both content knowledge (how written and spoken language is structured, the functioning of developmental processes) and practical knowledge (knowledge of effective strategies and practices to enhance early language and literacy) (Piasta, Park, Farley, Justice & O'Connell, 2020). Studies show that teachers' high quality language and literacy practices enhance children's early literacy learning (Piasta, 2016) and many studies emphasize the role of teacher-child interaction in promoting this learning (e.g. Byrne et. al., 2010; Hill, 2019; Maureen, van der Meij & de Jong, 2020; Pianta, Belsky, Vandergrift, Houts & Morrison, 2008). These studies reveal the critical role of educators in selecting and implementing the practices that would facilitate children's early literacy development. Theoretically, planning the practices to develop these skills depends on the teachers' level of related knowledge (Schachter, 2017). Preschool and primary school teachers' education and experiences of preservice professional development have critical importance in creating developmentally appropriate learning environments and sustaining high quality early literacy experiences for young children (NAEYC, 2009). It is significant to know more about teachers' pedagogical experiences during their professional training process in order to obtain the best results in young children's development. In previous studies have not

found a study that together addresses the early literacy skills of preschool and primary school preservice teachers who acquire or improve their literacy skills to children. However, it is needed to determine the awareness of teacher candidates who will work at both levels in the formal literacy process of children. With this study, the knowledge and awareness of early literacy skills of preschool and primary teacher preservices were revealed. The research questions created within this scope are as follows:

1. What is the knowledge of preschool and primary school preservice teachers' regarding early literacy in children?
2. How is the awareness of preschool and primary school preservice teachers' regarding early literacy in children?

METHOD

RESEARCH DESIGN

The present study, which aimed to examine preservice teachers' knowledge and awareness of early literacy skills, used the basic qualitative research approach. Qualitative research deal with how individuals construct reality as a result of their interactions with their social world. Therefore, basic qualitative research underlines how people make sense of their lives and experiences (Merriam & Tisdell, 2016).

PARTICIPANTS

Data were collected from senior preschool and primary education preservice teachers attending the faculty of education at a state university in Turkey. In order to select the participants, the study employed criterion sampling among the sampling strategies used in qualitative research. In criterion sampling, cases or events meet some predetermined criteria (Miles & Huberman, 1994). In this respect, the criteria were set as being a senior student and being about to complete teacher education in the present study. In addition, another criterion was established as the preservice teachers' taking theoretical courses on "first reading writing instruction and preparation for primary school and primary school curricula".

The study was participated by a total of 158 participants - 78 preschool and 80 primary school preservice teachers. As for the demographical characteristics, 71 of the preschool preservice teachers were females and 7 were males while 56 of the primary school preservice teachers were females and 24 of them were males.

DATA COLLECTION

Data were collected using "The Interview Form on Preschool Preservice Teachers' Early Literacy Skills" and "The Interview Form on Primary School Preservice Teachers' Early Literacy Skills" developed by the researchers. The interview forms designed for preschool preservice teachers and primary school preservice teachers consist of five and six open-ended questions respectively. These questions were asked to preservice teachers' in the form of open-ended questionnaire questions and the participants were asked to write their responses in the blanks provided. The preservice teachers were given enough time to write down their opinions. Data were collected in May 2019. The participants were asked the following questions:

Table 1. Interview Questions

Questions for Preschool Preservice Teachers	Questions for Primary School Preservice Teachers
1. What is “early literacy”? What is your opinion about the terms?	1. What is “early literacy”? What is your opinion about the terms?
2. What are early literacy skills?	2. What are early literacy skills?
3. Are early literacy skills important in the preschool period? Why?	3. Are early literacy skills important? Why?
4. What reading-writing skills should a child who completed preschool education and ready to start the 1 st grade have acquired?	4. As a primary school preservice teacher, what reading-writing skills do you expect a child who starts the 1 st grade to have?
5. As a preschool preservice teacher, what are your expectations from parents in teaching early literacy skills?	5. As a primary school preservice teacher, what are your expectations from parents in teaching early literacy skills?
	6. As a primary school preservice teacher, what are your expectations from preschool education about early literacy skills?

As seen in Table 1, preschool and primary school preservice teachers were asked questions that were similar in content. All qualitative research processes focus on the meaning attributed to the question or problem by the participants rather than the meaning the researchers attribute to the study (Creswell, 2017). To this end, no explanation or information was provided on what the term “early literacy” is for the participating preservice teachers, but the study aimed to understand the meaning attributed to the term by the preservice teachers.

DATA ANALYSIS

The data obtained from preservice teachers were analyzed by content analysis method. Content analysis is a technique based on analyzing all kinds of written or oral communication content that allows to study human behavior (Fraenkel, Wallen & Hyun, 2012). The aim of content analysis is to reach the concepts and relationships that could interpret the data obtained. In this context, the data is first conceptualized and then collected under themes by organizing according to the concepts that come out (Yıldırım & Şimşek, 2008).

In the analysis of qualitative data, two approaches are used, hand and computer usage. In computer-aided qualitative data analysis methods, researchers use qualitative data analysis programs in the stages of storing, sorting, representing or visualizing data (Creswell, 2012). This study used Nvivo 12, one of the computer-aided qualitative data analysis programs. Firstly, all of the handwritten raw data were transferred to the computer environment by the researchers. Then, the answers given by each participant to the questions were examined one by one and "nodes" (code) were created. Based on the codes generated from the preservice teachers' opinions, relationships were specified and themes was created accordingly.

In order to increase the validity of the study, opinions were taken from field experts while developing the interview forms. Moreover, verbatim quotations from the participants are presented in the findings section of the study. Participants' identities were kept secret for confidentiality in the verbatim quotes and pseudonyms were used instead of real names. Preschool preservice teachers were coded as PPT1, PPT2, ...etc. and primary school preservice teachers as PsPT1, Ps PT2, ...etc. For increased reliability, both researchers conducted coding separately during data analysis. They later came together to revise the similarities-differences among the codes-themes and reach a consensus.

RESULTS

In order to determine preservice teachers' knowledge and awareness of early literacy, senior students' opinions were taken and the responses given to questions were coded under themes and sub-themes. Findings are presented in the following tables and some direct quotations of the participants are listed below.

Table 2. Preservice teachers' conceptual definitions concerning early literacy

Participating Groups	Theme	Total content
Preschool Preservice Teachers	Letter recognition and pronunciation	43
	Readiness	33
	Learning to read and write at an early age	14
	Interest in reading-writing	4
	Total	122
Primary School Preservice Teachers	Learning to read and write at an early age	50
	Readiness	28
	Letter recognition and pronunciation	14
	Total	92

As seen in Table 2, preschool preservice teachers provided 122 responses under 4 themes and primary school preservice teachers gave 92 responses under 3 themes concerning the early literacy concept. Examining the responses of preschool preservice teachers about early literacy, it is seen that they frequently defined the term as “letter recognition and pronunciation” and “readiness”. Primary school preservice teachers, on the other hand, defined early literacy as “learning to read and write at an early age”. The participants' examples for their conceptual definitions are presented below:

“Learning the alphabet and to read before starting primary education. Acquiring the skill before their peers.” (PPT72)

“Learning to read and write with their own means through the non-professional education taken from their families and being able to read as an adult before starting education at school.” (PPT12)

“Early literacy is children's recognition of letters and being familiar with them before primary school. Early literacy makes things easier for teachers and students at primary school.” (PsPT5)

“Acquisition of reading-writing skills of children in the early childhood period.” (PsPT8)

Table 3. Preservice teachers' definitions concerning early literacy skills

Participating Groups	Theme	Total content
Preschool Preservice Teachers	Pre-writing skills-activities	46
	Letter recognition	45
	Phonetic/phonological awareness	32
	Reading/Writing awareness	30
	Number recognition	17
	Oral language skills	15
	Ability to read stories	4
	Total	183
Primary School Preservice Teachers	Letter-alphabet knowledge	47
	Pre-writing skills-activities	24
	Number recognition	13
	Oral language skills	12
	Reading/Writing awareness	9
	Phonetic/phonological awareness	5
	Total	109

As seen in Table3, preschool preservice teachers made 183 responses under 7 different themes and primary school preservice teachers provided 109 responses under 6 different themes concerning early literacy skills. Preschool preservice teachers frequently defined early literacy skills as “pre-writing skills-activities”, “letter recognition” and “phonetic awareness”, “reading/writing awareness”. Primary school preservice teachers, on the other hand, defined early literacy skills as “letter-alphabet knowledge” and “pre-writing activities- skills”, “number

recognition”, “oral language skills”, “reading/writing awareness” and “phonetic/phonological awareness”. The participants’ related examples are presented below:

- “Letter knowledge, recognition of sounds, ability to produce letter sounds, number recognition” (PPT22)
 “Activities that the child can do especially in terms of cognitive development within the scope of reading writing activities. Depending on the child’s age, activities on pencil grasp, counting objects, matching, criticizing etc. promote literacy skills.” (PPT 48)
 “The ability to recognize the letters and numbers he/she sees and to produce the sounds.” (PsPT 20)
 “Early literacy does not only mean the child’s ability to recognize letters. Early literacy also enables the child to develop language, speaking, learning skills and easy communicate easily. ” (PsPT 68)

Table 4. The importance of early literacy for preservice teachers

Participating Groups	Theme	Total content
Preschool Preservice Teachers	Important	63
	Contribution to Readiness	36
	Learning to read-write easily	24
	Facilitating adaptation to primary school	14
	Developing oral language skills	14
	Positive contribution to academic achievement	10
	Developing mental skills	5
	Developing fine motor skills	4
	Establishing a reading culture	3
	Developing social skills	3
	Not important	2
	Total	65
Primary School Preservice Teachers	Important	69
	Learning to read-write easily	16
	Contribution to Readiness	14
	Being more successful than other peers	11
	Positive contribution to academic achievement	10
	Being ready to read and write	8
	Helping the primary school teacher	5
	Preparing the child for primary school	4
	Creating interest in reading	1
	Not important	16
	Total	85

As understood from Table 4, concerning the importance of acquiring early literacy skills at an early age, preschool preservice teachers and primary school preservice teachers provided 65 (under 2 themes and 9 sub-themes) and 85 (under 2 themes and 8 sub-themes) responses respectively. Almost all preschool preservice teachers consider early literacy “important”. They expressed that they found early literacy skills important since these skills contribute to readiness, facilitate learning to read and write and make primary school adaptation easier. Likewise, most of the primary school preservice teachers stated that they saw early literacy “important” in terms of learning to read and write easily and contributing to readiness. Some of the related quotations of the participants are presented below:

- “They are important at the primary school preparation stage. The child will adapt himself to the environment better.” (PPT39)
 “It is important. Meaningful learning requires preparation/ pre-knowledge. Acquiring this pre-knowledge makes things easier for children at school. It provides meaningful transitions for the things to be learnt.” (PPT 26)
 “I see it important because that education given to the child at an early age is considered to make the child more successful in their future academic life. It provides a more successful education environment in education.” (PsPT 3)
 “Early literacy skill is important. The child learns to read more quickly than other peers.” (PsPT 14)

Table 5. Early literacy skills in transition to primary school

Participating Groups	Theme	Total content
Preschool Preservice Teacher	Letter-alphabet knowledge	44
	Pencil grasp	33
	Ability to make sound-symbol connections	35
	Number recognition	27
	Writing awareness	22
	Ability to do pre-writing activities	18
	Having acquired hand-eye coordination	18
	Knowing the direction of reading-writing	18
	Ability to read visual materials	8
	Ability to understand what s/he listens to	4
	Ability to write his/her name	4
	Willingness to read and write	4
	Total	216
Primary School Preservice Teachers	Letter-alphabet knowledge	45
	Pencil grasp	18
	Number recognition	11
	Developed fine motor skills	11
	Ability to make sound-symbol connections	10
	Ability to do pre-writing activities	8
	Having acquired hand-eye coordination	8
	Willingness to read and write	4
	Developed oral language skills	4
	Ability to write his/her name	2
	Ability to conduct visual reading	2
	Total	125

Table 5 shows that preschool preservice teachers and primary school preservice teachers provided 216 (under 12 themes) and 125 (under 11 themes) responses respectively concerning the reading-writing skills a child is supposed to have when starting primary school. Preschool preservice teachers frequently emphasized that children starting primary school must have certain skills like “letter-alphabet knowledge”, “pencil grasp”, “making sound-symbol connections” and “number recognition”. Primary school preservice teachers, on the other hand, often stated that children are supposed to have such skills as “letter-alphabet knowledge”, “pencil grasp”, “developed fine motor skills”, “making sound-symbol connections”. Some participant verbatim quotes are presented below:

“Must pretend to read, know the left-right direction of writing, know numbers, have at least little familiarization with letters, be able to grasp a pencil, maintain hand-eye coordination” (PPT1)

“Must be able to hold the pencil properly. Must be able to draw lines correctly. Must be able to maintain hand-eye coordination. Must have developed a positive attitude towards reading and writing.” (PPT 5)

“He/she can write his/her own name. he/she can tell a tale about a picture. He/she may know numbers.” (PsPT 47)

“Skills like holding books correctly or the reading direction of a book are enough for reading. For writing, pencil grasp is important.” (PsPT 65)

Table 6. Preservice teachers' expectations from families

Participating Groups	Theme	Total content
Preschool Preservice Teachers	Buying and reading books	28
	Having children do reading writing activities	23
	Practicing and supporting at home	21
	Care and communicate with the child	17
	Designing manipulative play and materials	11
	Communication with the teachers	9
	Total	109
Primary School Preservice Teachers	Having children do reading writing activities	38
	Care and communicate with the child	29
	Buying and reading books	27
	Designing manipulative play and materials	10
	Sending children to preschool institutions	5
	Not teaching them to read and write	3
	Total	112

As seen in Table 6, preschool preservice teachers provided 109 responses under 6 themes and primary school preservice teachers gave 112 responses under 6 themes concerning their expectations from families in children's acquisition of early literacy skills. Preschool preservice teachers explained their expectations from families by highlighting the necessities of "buying and reading books", "having children do reading and writing activities" "practicing and supporting at home". Primary school preservice teachers, on the other hand, expressed their opinions as "having children do reading and writing activities", "caring and communicating with children" and "buying and reading books". Responses of some participants are presented below:

"They must provide a convenient environment at home. Materials related with reading and writing must be various and interesting. There must be writing and letters in the child's room. An environment must be provided which is rich in stimuli like calendars, recipes and alphabet toys. Books, magazines, newspapers, maps, chalks, pencils, brushes, paint are required materials for writing and painting on paper."(PPT51)

"I expect them to revise all the activities done at school when they come home and support them with examples from daily life."(PPT17)

"Some painting activities, nursery rhymes, lullabies and riddles may help setting the ground for the acquisition of the skills."(PsPT9)

"For teaching early literacy skills, families should play games that can attract children's attention. They can buy colorful letter books to increase children's interest in letters." (PsP19)

Table 7. Primary school preservice teachers' expectations from preschool education

Theme	Total content
Introducing the letter	31
Teaching numbers	15
Designing activities that can develop hand-eye coordination	15
Designing manipulative play and materials	12
Stimulating an interest and curiosity for reading	10
Having children do pre-writing activities	9
Teaching proper pencil grasp	5
Designing visual reading activities	5
Designing activities that can improve listening skills	5
Making children love school	4
Total	111

Table 7 shows that primary school preservice teachers gave 111 responses under 10 themes concerning their expectation from preschool education in teaching early literacy skills. Primary school preservice teachers expressed their opinions about their expectations from preschool

education mostly under the themes “introducing the letter”, “teaching numbers”, “Designing activities that can develop hand-eye coordination”. Some participant quotations are given below:

“Having children draw pictures, do pre-writing activities, play games and listen to songs to feel sounds etc..” (PsPT6)

“[I expect them] to have done pre-writing activities. To have learnt pencil grasp and to use scissors. To have taught letters at least as shapes.” (PsPT 25)

“[Children] should be made aware of numbers and letters.” (PsPT 42)

DISCUSSION

The results indicated that preschool preservice teachers defined the term early literacy as letter recognition and pronunciation, school readiness and learning to read and write at an early age. More than half of the primary school preservice teachers were seen to define early literacy as learning to read and write at an early age and few primary school preservice teachers defined it as recognizing and pronouncing letters. Based on this finding, it can be said that preschool preservice teachers defined the term early literacy better while primary school preservice teachers are mistaken in defining the term. In addition, preservice teachers were asked to explain what early literacy skills are. It was seen that preschool and primary school preservice teachers explained early literacy skills with only a few skills, failed to go beyond the limits of these skills and focused mostly on the sub-contents of school readiness (pencil grasp, motor development, pre-writing activities etc.).

It was observed that preservice teachers had difficulty classifying early literacy skills using their existing knowledge, and they used only presumptive expressions about the concepts when responding to questions (e.g. *child's recognition of the letters and numbers he/she sees, child's reaching maturity to be able to hold a pencil*) although they seemed to be more knowledge of certain skills (letter recognition, alphabet knowledge etc.). Studying preschool preservice teachers' opinions about early literacy, Altun and Tantekin Erden (2016) reported similar results to the present study and emphasized that a great majority of the participants did not know about the theoretical background and content of the term. Similarly, Ergül et al. (2014) examined preschool preservice teachers' opinions about early literacy, and stated that most of the teachers defined the term as readiness and explained it as learning to read and write at an early age. However, teachers' knowledge, beliefs and pedagogical experiences during teacher training processes are reflected on their later practices of education-teaching, and they are critical in supporting children to start primary school with ready skills. Children whose early literacy skills are enhanced have increased vocabulary, phonetic and writing awareness (Catts, Compton, Tomblin & Bridges, 2012; Grimmer, Solaria, McIntyre & Denton, 2018; Scarborough, 1998; Spira, Bracken & Fischel, 2005). These skills are predictors of learning to read, future academic achievement and developing reading habits (Rohde, 2015; Schachter et al. 2016). Crone and Whitehurst (1999) found in their study that when the first grade curriculum focused on developing children's reading skills, no difference was found in reading skills compared with the second grade. This, once again, reveals the importance of developing skills in the preschool period, which has a critical process in children's development.

Another finding of the study is that preschool and primary school preservice teachers see early literacy as an important skill. They expressed that early writing skills are important in that they contribute to the child's school readiness, make it easier for the child to learn to read and write and facilitate adaptation to primary school. Moreover, concerning the reading-writing skills children are supposed to have when they start the first grade, preservice teachers frequently emphasized children starting primary school need to have certain skills like having letter-alphabet knowledge, being able to grasp a pencil, building sound-symbol relationships and

recognizing numbers. Preservice teachers' approach to early literacy in the context of school readiness is consistent with the state's curricula and the literature (Altun & Tantekin Erden, 2016; Ergül et al., 2014; MoNE, 2013). However, in the study which determined the predictors of reading skills, Scarborough (2001) reported that visual and motor skills which are considered the traditional perspective in evaluating readiness are in fact the least powerful predictors of reading difficulties; while vocabulary knowledge, sentence and story recalling, writing awareness, which facilitate understanding, are the most reliable predictors of reading achievement in the early period. Although they consider early literacy important, preservice teachers' lack of knowledge of the concept caused them to concentrate on the sub-skills of school readiness in explaining the underlying reasons.

Regarding their expectations from families in acquiring early literacy skills, preschool preservice teachers expressed their expectations as buying and reading books for children while primary school preservice teachers frequently emphasized that parents should have children do reading-writing activities, care and communicate with children, and buy and read books for them. It is a well-known fact that reading books to children in the preschool period contributes to their literacy skills and language development, which is also confirmed by the findings of several studies. For instance, Lonigan & Whitehurst (1998) examined the effects of interactive book reading intervention by parents and families on the oral language skills of 3-4 year-old children from families with low socioeconomic conditions and found a positive change. In the experimental study conducted by Rasinski & Stevenson (2005), a fluency based home reading program (Fast Start), which involved reading short texts to children with their families, was applied and it was seen to have important effects on children's letter, word and reading fluency. Likewise, Farrant & Zubrick (2013) concluded that parent-child reading in the early childhood period affected children's vocabulary knowledge. Reading books to children in the home literacy environment promotes children's early literacy. It is understood that the preservice teachers in both groups think parents' buying and reading books for their children is effective in acquiring early literacy skills. According to the Family Literacy Theory arguing that domestic experiences help children with literacy development, parents and parent participation play a crucial role (Tracey & Morrow, 2006). It has been shown by several studies that particularly home literacy environment (Burgess, Hecht & Lonigan, 2002; Weigel, Martin & Bennett, 2006) and home literacy activities (Evans, Shaw & Bell, 2000; Hood, Conlon & Andrews, 2008; Roberts, Jergens & Burchinal, 2005) contribute to children's early literacy development.

Primary school preservice teachers were asked about their expectations from preschool education. Primary school preservice teachers expressed their opinions mostly under the themes of introducing letters, teaching numbers and designing activities that can develop hand-eye coordination. As one can see, preservice teachers did not express opinions within the context of early literacy skills. Considering the skills that children are supposed to have acquired when starting primary school, primary school preservice teachers' expectations from preschool education are thought to remain weak. However, primary school teachers are expected to have more knowledge of the early skills before starting primary school. For example, Piasta, Connor, Fishman & Morrison (2009) compared first grade teachers' knowledge of early literacy and word-reading gains of the students in their classes. They found that the instruction given by teachers with more early literacy knowledge was more effective on developing students' word-reading skills compared with the instruction by less knowledgeable teachers. When planning curriculum and classroom practices for their students, teachers are expected to be good assessors in order to be able to answer the questions what do the students know? And what do they need to learn? At this very point, critical deductions can be made regarding teacher training. When the content of the undergraduate curriculum for teachers is examined, it is seen that no course is included on knowing and assessing young children or on the development of preschool

children for primary school preservice teachers. Courses on early literacy skills are not common in neither of the teacher-training curriculum, which can be thought as the reason behind preservice teachers' misconception. Clark (2020) reported that primary school preservice teachers who attend courses including reading instruction techniques, methods of reading assessment, and ways of gathering information about children and supporting children under risk have increased self-efficacy in reading instruction at primary schools. In addition, studies report that neither preservice teachers nor professional teachers see themselves competent in early literacy instruction and that they state the undergraduate education they receive is not sufficient to prepare them as teachers with early literacy awareness (Özdemir & Bayraktar, 2015; Şahiner, 2013). In this regard, it is considered important that both related undergraduate programs and the in-service training programs during the year they start profession include courses and subjects on early literacy.

Children know many things about reading long before they start formal education, which lays the foundations of learning to read and write (Whitehurst & Lonigan, 2001). Practices used in preschool and primary school classrooms are complementary to this pre-development. Studies show that teachers' levels of knowledge of early literacy are reflected on their classroom practices (Ergül et. al., 2014; Kuzborska, 2011; Lynch & Owston, 2015; Regassa & Teshome, 2015; Schachter, 2017). Research makes emphasis on the importance of strengthening educators' knowledge and awareness levels through professional development in enhancing particularly early literacy (e.g., Cunningham, Etter, Platas, Wheeler, & Campbell, 2015; Egert, Dederer & Fukkink, 2020; Markussen-Brown et. al., 2017; Piasta et al., 2017). For primary school teachers who set the educational goals and plan the practices in reading-writing instruction, it is only possible to include especially children under possible risk into interventions based on a correct causal model at very early ages through evaluating initial skills in the early process and participating in required practices before it is too late (Scarborough, 2001). Interventions based on the correct casual model have been proven to be effective in reducing future risks for reading (Bingham, Culatta & Hall-Kenyon, 2016; McBreen & Savage, 2020; Spira, Bracken, Fischel, 2015; Vaughn & Fletcher, 2012). The results of the present study revealed the important fact that pedagogical knowledge of both preschool and primary school teachers must be enhanced in the pre-service period so that they can support and develop early literacy skills of children and apply to early intervention when necessary.

CONCLUSION

Preschool and primary school teachers' awareness of such a critical skill as early literacy at the end of their undergraduate education was the starting point of this study. Results proved that preservice teachers from both departments are familiar with the concept but the lack of knowledge concerning its content and sub-skills. Although they frequently mentioned some skills like letter recognition, pronouncing the letters based on the concept early literacy, they did not often talk about such skills as understanding, which sets the basis for reading, listening, vocabulary, knowledge of story elements, writing awareness and phonological memory. This could be a little worrying since classroom practices of preschool and primary school teachers, who play a key role in the development of young children, are dependent on their knowledge and beliefs. Based on this fact, courses with a direct content of early literacy can be included in undergraduate curricula to enhance preservice teachers' knowledge level of early literacy. Moreover, early literacy knowledge can be promoted through activities like courses, seminars or conferences in the year before preservice teachers start the profession. Thus, focusing on the content of early literacy will help new teachers understand why some children cannot learn to read in the expected time in first grade.

Hence, teachers working with young children should be able to assess and practice in terms of early literacy, what children can achieve and what they need to know when they start school. Teachers also need to be competent in early literacy practices and successfully evaluate both children's prior knowledge and new skills to be learned. Accordingly, it is important to organize courses on the techniques of assessing the child, classroom assessment approaches (observations, tests etc.) that measure early literacy skills for primary school preservice teachers during teacher training. It should also be noted that this study focused on preservice teachers' awareness. So, early literacy awareness and classroom practices of teachers already working in the field can be investigated by future studies. Effects of professional experience and in-service trainings on early literacy knowledge should be examined, as well.

The study was conducted in qualitative research design with senior students at the departments of preschool education and primary school teaching at a state university. The homogeneous structure of the sample can be accepted as a limitation. However, qualitative studies enable to reach more in-depth information to explain a phenomenon. In this respect, it should be remarked that the findings of the present study are specific to our own sample. However, reviewing the related literature, it is possible to assert that the findings of the present study are similar to those of some previous studies. For more generalizable results, different data collection techniques (questionnaires, forms etc.) can be used with larger samples.

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AGGRESSION AND EMOTIONAL INTELLIGENCE AS PREDICTORS OF PHUBBING

Abstract: Our skills and attitudes have an effect on our behaviors. Phubbing, which is described as ignoring the interlocutor during communication by focusing on the cellphone, is also highly effective in our behaviors. In this context, this study aimed to determine the predictive effect of aggression and emotional intelligence on the level of phubbing. The study group consisted of 768 adult individuals [Female:461, Male:307] living in different provinces of Turkey. Participants' ages ranged from 22 to 57. The data of the study were collected using the Phubbing Scale, KAR-YA Aggression Scale, Emotional Intelligence Scale, and a personal information form. According to the findings obtained from the study, there was a significant negative relationship between phubbing and emotional intelligence, a significant positive relationship between phubbing and aggression, and a significant negative relationship between aggression and emotional intelligence. According to the preliminary analysis, sex did not cause a significant difference in phubbing scores, while marital status and level of education caused a significant difference. According to the results of the hierarchical regression analysis, emotional intelligence and aggression were found to be predictors of phubbing behaviors. The research findings were discussed under the literature, and some recommendations were made.

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INTRODUCTION

Technology is one of the leading tools of change in the ever-changing world. Especially, smartphones that almost everyone has been using recently and the Internet technology, which makes smartphones more practical, have made phones indispensable for people. The use of smartphones with Internet technology has offered people many activity options, such as conducting business in many areas, keeping up with the world, and enjoying their time. By making phones indispensable, this situation has led to the emergence of a behavioral problem called phubbing (Macquarie Dictionary, 2013). The term, phubbing, which refers to deliberately ignoring someone while using a mobile phone, was coined by combining the words phone and snubbing. The term was first used in the Macquarie Dictionary in 2013. Smartphones, which make it easier for people to communicate with anyone anywhere and to interact with anyone very close or on the other side of the world, can harm social interaction due to behaviors like phubbing, despite their apparent advantages in connecting people. Phubbing behavior cannot be evaluated independently of the attitudes or behaviors we have. Phubbing occurs when a person suddenly turns their gaze slightly towards their phone and plunges into it during social interaction. Phubbing is a process where a person interacts with their phone during a conversation or communication with others, and avoids interpersonal communication, and this behavior can considerably damage social interactions (Ang et al., 2019). Phubbing behavior, which we can be subjected to (phubbee) or the doer of (phubber), manifests itself as a behavior that is widely observed everywhere in today's technologically advanced societies (Haigh, 2015) and almost everyone does it (Nazir, 2017). While phubbers have problems in eye contact and communication, most people isolate themselves from their own environment (Karadağ et al., 2016). Therefore, phubbing is generally perceived as disrespectful, rude, and socially inappropriate behavior (Vanden Abeele et al., 2016). Studies show that phubbing is associated with lower perceived quality of communication (Chotpitayasunondh & Douglas 2018). This is because when people are together, they feel connected to each other. Factors that eliminate or ignore this connection can seriously damage the quality of communication. Although mobile phones and other technological devices serve as efficient tools in people's lives, researchers investigating the effects of phubbing agree that interruptions stemming from these devices can cause problems in relationships (McDaniel & Drouin, 2019). This is because when people do phubbing, the quality of face-to-face communication falls, and it becomes less empathetic (Misra et al., 2016). In addition, phubbing has negative effects on communication and relationship satisfaction as it negatively affects mental health and poses a threat to basic needs, such as a sense of belonging, self-esteem, the meaning of existence, and having control (Chotpitayasunondh & Douglas, 2018). Przybylski and Weinstein (2013) also showed that the use of smartphones in social interactions negatively affected the way individuals who can normally communicate well evaluate each other. Experimental studies have shown that these interactions are not a matter of lower quality interactions that trigger phubbing, but that phubbing is responsible for these undesirable situations (Chotpitayasunondh & Douglas 2018; Dwyer et al., 2018; Vanden Abeele et al., 2016). Since phubbing is regarded as disrespectful behavior towards others, it can harm real-life social relationships (Karadağ et al., 2015). However, although people often see phubbing behavior as annoying and disrespectful, they also keep doing the same thing (Aagaard, 2020). As a result, phubbing is a problematic behavior that can harm both the phubber and the phubbee (Chotpitayasunondh & Douglas 2016). Phubbing is known to negatively affect various relational outcomes, such as making an impression, quality of interaction, and quality of relationship in interpersonal relationships (Krasnova et al., 2016; Miller-Ott & Kelly, 2017; Vanden Abeele et al., 2016). Although the factors that lead to phubbing are listed as mobile phone addiction, internet addiction, social media addiction, mobile game addiction, depression,

and nomophobia (Afdal et al., 2019), the frequency of phubbing is affected by the characteristics of individuals. Phubbing behavior can be affected by many individual characteristics due to its motivations and consequences and may play a role in the emergence of different behaviors. The literature shows that phubbing can affect social communication and lead to negative psychological consequences (Chotpitayasunondh & Douglas, 2018; Ergün et al., 2020; Wang et al., 2017). Besides, it can be thought that aggression and emotional intelligence may be associated with phubbing behavior based on the results of studies that phone addiction harms psychological health by causing anxiety, anger, and aggression (Gracia et al., 2020), low-quality relationships are associated with anger (Belu et al., 2016), and that there is a negative relationship between smartphone use and emotional intelligence (Demir & Cenkseven-Önder, 2021).

Emotional intelligence is the ability of an individual to understand and describe his/her emotions, as well as understanding the emotions of others and organizing all these emotions in a way that will continue and improve his/her social life (Goleman, 2018). Briefly, emotional intelligence is the level of competence that an individual has about when, where, in what proportion, and how to use his/her emotions. Also, emotional intelligence is a skill that is learned and developed at different ages (Titrek, 2011), and it is the way through which one evaluates and expresses his/her emotions accurately (Salovey & Mayer, 1990). Emotional intelligence is not a domain of cognitive intelligence (Bar-On, 1997). Individuals with high emotional intelligence are those with a high level of adaptation and high problem-solving skills (Perera & DiGiacomo, 2015). Those who are successful in regulating their emotions can facilitate their social interactions, make more accurate decisions about their social interactions, and are more accepted in their environment by being more initiative in every field (Kaya & Birol, 2018). Since low emotional intelligence may lead to inadequacy in human relations and adaptation skills in different social areas, people pay attention to applications offered by smartphones. Therefore, phubbing behavior becomes inevitable. When the literature is examined, there are studies investigating the relationship between emotional intelligence and mindfulness and psychological well-being (Deniz et al., 2017) coping with stress (Aslan, 2018) loneliness (Özdemir & Tatar, 2019) academic performance (MacCann et al., 2020), problem-solving skills (Ertuğrul & Kutluca, 2020), smartphone addiction (Demir & Önder, 2021), cyberbullying (Kırat & Dilmaç, 2021), and communication skills (Raeissi et al., 2021). Although there are studies that address the relationship between emotional intelligence and different variables, no research, except for the study of Juliah (2019) and Bitar (2021), which deals with the relationship between phubbing and emotional intelligence, has been found. This shows that the relationship between phubbing and emotional intelligence is an important field of study that needs to be addressed.

Another feature that affects phubbing, which is considered an important behavioral problem in terms of human relations, is the aggressive thoughts, feelings, and behaviors that individuals exhibit under stress and tension. Aggression, which is increasing every other day in Turkey and the world, is defined as all kinds of acts or behaviors intended to hurt or harm others (Ballard et al., 2004; Freedman et al., 1998; TBMM, 2007; World Health Organization, 2002). While behavioral approaches explain aggression as a learned behavior (Kaymak Özmen, 2004), it is seen as a secondary behavior caused by anger emotion according to emotional approaches. The review of the literature indicated there was no research that directly revealed the existence of a relationship between aggression and phubbing behavior, while there were studies that reported the internet usage time and using technology and social media frequently and in unhealthy dimensions might be related to aggressive treatment and behaviors in individuals (Koo & Kwon, 2014; Werner et al., 2009; Yu & Cho, 2016; Yen et al., 2011). For example, Ybarra and Mitchell (2004) found relationships between the use of the Internet for social networks and aggression. Ko et al. (2009b) revealed the problematic relationship between internet use and

aggression. However, Lim et al. (2015) found that internet addiction and aggression predicted each other mutually, and Kim et al. (2008) reported that internet addiction and frequently played online games were positively correlated with aggression. Similarly, in recent studies conducted in Turkey on the subject, significant relationships have been revealed between the level of problematic internet use and violent and aggressive behaviors (Gümüş et al., 2015; Durak et al., 2018). Although smartphones trigger phubbing behavior, it is the internet technology that draws the attention of dynamic individuals on their phones. If there were no Internet, people would not always pay attention to their phones, as the options offered by the phone would be limited. For this reason, the relationship between the Internet and aggression can be addressed by associating it with phubbing.

As can be seen above, the use of communication technologies, smartphones, and social media brings many advantages, as well as behavioral problems such as phubbing that can harm human relationships. This study is important in terms of identifying variables associated with phubbing, which we often encounter in communication because knowing more about the factors associated with phubbing will shape our understanding of social behavior, which is influenced by rapidly developing communication technologies all over the world. Thus, people will be able to reconsider their social communication norms and their own behavior. In this context, the present study aimed to determine whether aggression and emotional intelligence predicted phubbing behavior in adult individuals. For this purpose, we aimed to test the following question.

1. *Do aggression (physical aggression, verbal aggression, hostility, anger) and emotional intelligence predict phubbing scores significantly?*

METHOD

RESEARCH MODEL

The quantitative research method was adopted in the study. As a research design, the correlational survey model was used to examine the relationships between phubbing, aggression, and emotional intelligence. Correlational survey models aim to determine the existence or degree of the relationship between two or more variables (Karasar, 2005).

STUDY GROUP

The study was conducted with adults living in different provinces of Turkey. A total of 768 adults [female: 461 (60.02%), male: 307 (39.98%)] participated in the study. Participants' ages ranged between 22 and 57 ($\bar{X} \pm sd = 33.26 \pm 8.00$). The age range in the research was determined as the 20-60 age group based on the young adulthood and adulthood periods, two of the life periods. The simple random sampling method was employed in the study and participation was on a voluntary basis. In simple random sampling, each subject in the universe has an equal and independent chance of being selected (Balcı, 2010). This is the rule of nonbias, and the assumption that the sample will represent the universe is associated with nonbias (Bakioğlu & Kurnaz, 2011). While conducting sampling, the maximum number of people that could be reached by using the maximum diversity sampling, which is one of the purposive sampling techniques that reflects the diversity of individuals at the maximum level, was targeted (Yıldırım & Şimşek, 2016). Based on this assumption, the study group was formed with randomly selected participants.

Table 1. Demographic characteristics of participants

Demographic Variables	Gender		Marital Status		Level of Education				
	Female	Male	Married	Single	Primary school	High school	Associate degree	Undergraduate degree	Master' s degree
	461	307	402	366	129	140	99	347	56

DATA COLLECTION TOOLS AND APPLICATIONS

The Personal Information Form: This form, created by the researchers, has questions about age, sex, marital status, and education level of the participants.

The Phubbing Scale: This scale was developed by Karadağ et al. (2015). It was developed to measure individuals' tendency towards phubbing. At the exploratory factor analysis (EFA) stage the principal component analysis with oblimin principal axis rotation was used and obtained two factors. These factors explained 56.19% of the total variance. Then, confirmatory factorial analyses (CFA) were performed to test model data fit. The goodness-of-fit indices showed an acceptable model data fit (RMSEA=.06, χ^2 /df=3.20, GFI=.92, AGFI=.91, CFI=.94). The scale consists of a total of 10 items and 2 factors, namely (i) communication disorder (5 items; α = .87) and (ii) phone passion (5 items; α = .85). It uses a 5-point Likert-type measuring scale with options between never (1) and always (5). The lowest and highest scores that can be obtained from the scale vary between 10 and 50. A score of 40 or greater obtained from the scale expresses individuals' phubbing addiction (Karadağ et al., 2015). Internal consistency values of the subscales were .77 and .79 (Balta et al., 2020). In this study, the internal consistency coefficient of the scale was examined using Cronbach's alpha method and was calculated as .81.

The KAR-YA Aggression Scale: For the psychometric properties of the scale developed by Karataş and Yavuzer (2016), item analysis, exploratory factor analysis, confirmatory factor analysis, criterion-related validity, internal consistency coefficient, split-half, and test-retest methods were used. As a result of the exploratory factor analysis, a scale consisting of four factors, namely, physical aggression, hostility, anger and verbal aggression, and 23 items was obtained. A total score can be obtained from the scale. Four factors explain 51.71% of the total variance. Cronbach's alpha internal consistency coefficient of the scale was calculated as .92 for the overall scale, split-half test coefficient as .80 for both halves, and test-retest reliability coefficient as .86. Confirmatory factor analysis results performed on a different sample also confirmed the four-factor structure of the scale (X^2 = 543.52, X^2 /df=2.426, p = .000, NFI = .94, NNFI = .96, RFI = .93, CFI = .96, GFI = .86, AGFI = .83, RMR = .09, SRMR = .06, IFI = .96, RMSEA = .07) (Karataş & Yavuzer, 2016). Cronbach's alpha coefficient was found as .92 for the overall score with the data of the present study.

The Schutte Emotional Intelligence Scale: This scale was developed by Schutte et al. (1998) to determine the level of emotional intelligence. In the present study, we used the version that was adapted to Turkish culture by Tatar et al. (2011). The scale has 41 items and is a 5-point Likert-type scale scored between 1 and 5. For each item on the scale, individuals are asked to state to what extent they agree on the statement of the item. The results of the sampling adequacy statistics showed that the correlations between items were suitable for factor analysis (KMO = .92). In addition, according to the Bartlett's Test of Sphericity, the level of correlation between items was enough to perform factor analysis (χ^2 (820) = 16705.78; p < .001). Cronbach's alpha internal consistency coefficient for the entire scale is .82 (Tatar et al., 2011). The alpha value for this study was found as .85.

PROCEDURE

Participants in this study were selected on a voluntary basis, and their informed consent was obtained. The scales used in the study were filled out face to face and using pen and paper. The data of the study were collected in different provinces in 2020 with the contribution of psychological counselors living in the provinces where the application was carried out. After the purpose of the study was explained in the scale applications, the Phubbing Scale, the Aggression Scale, the Emotional Intelligence Scale, and the Personal Information Form were administered to the participants. The participants were told that their responses to the scales would be kept confidential, which aimed to prevent social desirability bias. The administration of the scales took approximately 20 minutes.

ANALYSIS METHODS

Within the scope of this study, the relationship between variables was examined and first of all, the homogeneity of the data was tested. The sample had a normal distribution. The skewness value ranged between $-.21$ and $.81$, and the kurtosis value was between $-.55$ and $.35$ for all variables. Skewness and kurtosis coefficients of close to ± 1 can denote that the scores do not deviate much from normal values (Büyüköztürk et al., 2010). T-test, one-way analysis of variance (ANOVA), Pearson correlation coefficient, and hierarchical regression analysis were used in data analysis. The sample had a normal distribution. Skewness and kurtosis values were within acceptable limits for all variables. Outliers with Mahalanobis distance values were calculated, and 6 data with extreme values were removed from the data set. The Durbin-Watson test that is used to test autocorrelation should have a value in the range of $1.5 - 2.5$ (Kalaycı, 2010). It was found as 2.06 in this study. A tolerance value of $> .2$ and a VIF value of < 10 indicate that the scale has acceptable values (Green & Salkind, 2010). In this study, tolerance values ranged between $.37$ and $.89$ and VIF values between 1.07 and 2.67 . There was no multicollinearity problem between the independent variables (Table 4). The data were analyzed on SPSS 22 software package.

RESULTS

Table 2. The effect of sex and marital status on phubbing

Variables		N	$\bar{X}$	Sd	$t_{(756)}$	p	Cohen's d
Sex	Female	461	25.96	7.45	1.20	.23	.08 / 0%
	Male	307	26.62	7.34			
Marital status	Married	402	24.82	7.34	-5.62	.00	.41 / 17%
	Single	366	27.77	7.19			

As seen in Table 2, the phubbing scores of the participants did not differ significantly according to sex variable ($t_{(2-766)} = 1.20$, $p > .05$), whereas there was a significant difference according to marital status variable ($t_{(2-766)} = -3.25$, $p < .05$). The results indicated that the phubbing scores of married individuals were lower. The value of d is interpreted as follows: $20 \leq d < .50$, a low effect; $.50 \leq d < .80$, a moderate effect; $.80 \leq d$, a large effect (Cohen, 1988). Marital status had a low to moderate effect on phubbing tendency.

Table3. The effect of education level on phubbing

		N	$\bar{X}$	Ss	F	p	η^2
Level of education	Primary school	129	22.38	7.22	12.53	0.00	.05
	High school	140	26.60	7.52			
	Associate degree	96	26.75	7.30			
	Undergraduate degree	347	27.53	7.13			
	Master's degree	56	25.17	6.55			

One-way analysis of variance (ANOVA) was conducted to determine whether the level of education significantly differentiated the phubbing scores. According to the Tukey test, the

phubbing scores of primary school students were significantly lower than those of the high school, associate, and undergraduate students. There was no difference between the other groups.. As seen in Table 3, the level of education significantly differentiated the phubbing scores ($p < .05$). *The interpretation of η^2 value is as follows: $.01 \leq \eta^2 < .06$, a low effect; $.06 \leq \eta^2 < .14$, a medium effect; and $.14 \leq \eta^2$, a large effect* (Cohen, 1988). Education level had a low to moderate effect on phubbing tendency.

Table4. Correlation between variables and descriptive statistics

	Mean	Sd	1.	2.	3.	4.	5.	6.	7.	Skewness	Kurtosis
1. Phubbing	26.23	7.41	1							.28	-.13
2. Emotional Intelligence	151.10	18.27	-.13*	1						-.21	-.55
3. Physical aggression	13.35	5.59	.15*	-.26*	1					1.1	1.1
4. Verbal aggression	9.45	3.74	.16*	-.22*	.59*	1				.60	-.20
5. Hostility	15.04	5.51	.17*	-.30*	.49*	.48*	1			.62	-.14
6. Anger	11.16	5.04	.21*	-.24*	.71*	.67*	.54*	1		.81	-.13
7. Aggression	49.01	16.48	.21*	-.31*	.86**	.79*	.78*	.88*	1	.81	.35

* $p < .01$

Table 4 presents the correlation coefficients between the participants' phubbing tendencies, emotional intelligence, physical aggression, verbal aggression, hostility, anger, and total aggression levels, the arithmetic means of the variables, standard deviation values, and the skewness and kurtosis values of the scales.

The r value is interpreted as follows: $.10 \leq r < .30$, a low effect; $.30 \leq r < .50$, a medium effect; and $.50 \leq r$, a large effect (Cohen, 1988). As seen in Table 4 that shows the results of the correlation analysis, there was a weak positive relationship between phubbing and aggression and its sub-dimensions, a weak negative relationship between phubbing and emotional intelligence, and an almost moderate and negative relationship between aggression and its sub-dimensions and emotional intelligence.

The examination of the correlation analysis results in Table 4 indicated that there was a positive relationship between phubbing and aggression, a negative relationship between phubbing and emotional intelligence, and a negative relationship between aggression and emotional intelligence.

RESULTS OF REGRESSION ANALYSIS

Hierarchical regression analysis was performed to determine whether the participants' aggression and emotional intelligence scores predicted the phubbing scores. In hierarchical regression analysis, the researcher enters the predictive variables in a specific order determined by theoretical or empirical evaluations. Thus, by calculating the change in corrected R^2 in each step of the hierarchical regression analysis, a variance increase is observed in the regression model after each variable or group of variables (Büyüköztürk, 2018). Since marital status and education level significantly differentiated phubbing scores and had a normal distribution, they were defined as dummy variables and included in the regression analysis. Since the effect level of demographic variables without other variables is wondered, first of all, the predictive effect of these variables was examined. Then, the analysis continued according to the level of relationship. The results of the hierarchical regression analysis performed to determine whether the aggression and emotional intelligence scores of the participants predicted the phubbing scores are given in Table 5.

Table5.Summary of hierarchical regression analysis

		Independent variables	R ²	F	β	t
Phubbing	Model 1	Marital status Education Level	.07	29.53*	-.14 -.19	-3.79* -5.13*
	Model 2	Marital status Education Level Emotional intelligence	.09	26.00*	-.14 -.20 -.15	-3.18* -5.39* -4.20*
	Model 3	Marital status Education Level Emotional intelligence Physical aggression	.10	22.10*	-.13 -.20 -.12 .11	-3.54* -5.52* -3.29* 3.08**
	Model 4	Marital status Education Level Emotional intelligence Physical aggression Verbal aggression	.11	18.61*	-.13 -.20 -.11 .06 .09	-3.53* -5.50* -3.09** 1.40 2.07***
	Model 5	Marital status Education Level Emotional intelligence Physical aggression Verbal aggression Hostility	.12	16.72*	-.12 -.21 -.09 .03 .06 .11	-3.35* -5.72* -2.56*** .66 1.35 2.58***
	Model 6	Marital status Education Level Emotional intelligence Physical aggression Verbal aggression Hostility Anger	.12	15.39*	-.11 -.21 -.09 -.03 .01 .08 .14	-3.16** -5.78* -2.54*** -.65 .23 1.98*** 2.58***

*p <.001, **p<.01, ***p<.05

As seen in Table 5, according to the results of the hierarchical regression analysis, the predictive effect of dummy variables was 7% in model 1, whereas it increased to 9% with the inclusion of emotional intelligence in the second phase. In the next stages, the total predictive effect increased to 12% with the inclusion of aggression sub-dimensions (physical aggression, verbal aggression, hostility, anger) in the analysis. According to these results, it was found that aggression sub-dimensions predicted phubbing positively and that emotional intelligence predicted phubbing negatively. According to the results of the analysis, it was determined that physical aggression, verbal aggression, hostility, anger and emotional intelligence were significant predictors of phubbing. The R² value is interpreted as follows: .02 ≤ R² < .13, a small effect; .13 ≤ R² < .26, a moderate effect; and .26 ≤ R², a large effect (Cohen, 1988). In the light of these findings, 88% of the variance was affected by other variables since there was a low predictive effect of around 12%.

DISCUSSION AND CONCLUSION

This study aimed to determine whether aggression and emotional intelligence in adult individuals predicted phubbing behavior. According to the results of the study, emotional intelligence and physical aggression, verbal aggression, hostility, and anger, which are the sub-dimensions of aggression, were significant predictors of phubbing behavior.

In the preliminary analysis, sex did not significantly differentiate phubbing scores. On the other hand, marital status and education level significantly differentiated phubbing scores. Regarding sex, Blachnio and Przepiorka (2019) stated that females scored higher than males in phubbing behaviors, such as communication disorder and phone obsession. Çizmeci (2017) also found that sex significantly differentiated phubbing scores. On the other hand, consistent with the data of this study, Al-Saggaf et al. (2019), Brañas-Garza et al. (2018), and Rand et al. (2016) stated that sex did not affect the frequency of phubbing.

On the other hand, marital status significantly differentiated phubbing scores. Benvenuti et al. (2020) and Çizmeci (2017) found that consistent with the findings of this study, phubbing scores differed significantly according to marital status. When the literature was examined, no findings contrary to these findings were found.

Another finding of this study was that education level didn't significantly differentiate phubbing scores. Yıldız-Durak (2019) stated that education level was a predictor of smartphone addiction, which is the most important dynamic of phubbing. This result was consistent with our study findings. Çizmeci (2017) found that in parallel with the data of this study, education level significantly differentiated phubbing behavior. On the other hand, Al-Saggaf et al. (2019) stated that the frequency of phubbing did not differ significantly according to the level of education. Considering the variables of sex, marital status, and education level, there were different results in the literature. As a result, it can be said that the socio-demographic variables used in this study are not a determining factor that defines phubbing behavior. Because the cause of technology-based behavioral problems such as phubbing may be more multidimensional, environmental, and attitudinal, demographic characteristics that one has may not have the desired effect in revealing the direction of behavior. However, the fact that there is much more need for technology today and that smartphones have a very important place in the social, emotional, and professional life areas of adults of all ages, regardless of gender and education level, shows the need for conducting more comprehensive further research on this subject.

In this study, it was found that there was a significant relationship between emotional intelligence and phubbing and that emotional intelligence predicted phubbing. Julia (2019) found that there was a negative relationship between phubbing behavior and emotional intelligence. In another study, no relationship was found between smartphone use, which leads to addiction and is one of the main dynamics of phubbing, and emotional intelligence (Van Deursen et al., 2015). However, a negative relationship was found between emotional intelligence and inappropriate use of the Internet and mobile phones (Beranuy et al., 2009; Griffiths et al., 2012; Reisoğlu et al., 2013; Usta, 2017), and it was determined that emotional intelligence was a predictor of problematic Internet use (Ançel et al., 2015). In their study with the adult population, Parker et al. (2008) found that low emotional intelligence was a strong predictor of problematic internet use. Studies showing a negative relationship between problematic internet use and emotional intelligence indicate that people who spend time on the Internet have less emotional skills than other individuals (Mia et al., 2012), excessive use of the Internet is associated with the inability to express emotions (Okçu, 2012), and that emotional intelligence is low due to emotional inadequacy in individuals using the Internet excessively.

(Engelberg & Sjöberg, 2004), all of which reveal a relationship between phubbing and emotional intelligence that manifests itself with excessive use of the Internet and smart phones. Another important result of the study was that the level of aggression in adult individuals predicted phubbing behavior. In the regression analysis, it was determined that physical aggression, verbal aggression, hostility, and anger sub-dimensions of aggression were low-level positive predictors of phubbing behavior. The review of the literature indicated that, as emphasized before, there was no research result showing that violence and aggression attitudes and behaviors directly explained phubbing behaviors. However, it can be said that the relationship of the Internet and smartphone use with aggression also applies to phubbing, as excessive use and abuse of the Internet and smartphones triggers phubbing behavior. Many studies revealed a significant relationship between the problematic use of the Internet and technology, which is one of the most important problems of our age and the trigger of phubbing, and aggression (Gümüş et al., 2015; Ko et al., 2009a; Koo & Kwon, 2014; Ko et al., 2009b; Lim et al., 2015). When some studies on this subject conducted in recent years were examined, a significant relationship was found between internet addiction and aggressive behaviors (Durak et al., 2018; Kim et al., 2008; Ulusoy, 2008). The tendency for violence, too, had a predictive effect on problematic internet use (Gümüş et al., 2015). It is also reported that online games that affect phubbing (Parmaksız, 2018) show a positive correlation with aggression (Kim et al., 2008; Ulusoy, 2008). In addition, it is known that problematic internet use affects the tendency towards violence (Gümüş et al., 2015). Individuals with higher internet usage frequency tend to commit to cyberbullying more (Erdur-Baker, 2007). In another study, which supported our findings, a positive correlation was found between smartphone addiction and aggression (Kim et al., 2015). Based on the results of this study, the result that the problematic use of smartphones and the Internet, which are the main dynamics of phubbing behavior, is correlated with violence and aggression also confirms the relationship between phubbing and aggression. In addition, although physical aggression, verbal aggression, hostility, and anger, which are sub-dimensions of aggression, were determined as variables associated with smartphone use (Kim, 2017; Nuri et al., 2021) and internet use (Evren et al., 2019; Khatoon et al., 2018), only physical aggression and hostility sub-dimensions were found to be predictors of internet addiction (Evren et al., 2019). In our study, all sub-dimensions of aggression were found as predictors of phubbing behavior. Fengqiang et al. (2016) and Teng et al. (2014) found that internet addiction positively predicted aggression and was associated with low self-control. At the same time, low self-control predicted aggression (physical aggression, verbal aggression, anger, hostility) positively in our study (Teng et al., 2014). Reflecting on this point of view, it can be said that the phubbing tendency, which can be associated with internet addiction and aggression, can be reduced by gaining self-control.. However, no research findings have been found showing the existence of a direct relationship between the sub-dimensions of the aggression scale and phubbing. In this respect, it can be said that there is a need for new in-depth research with different methodologies and populations that can reveal these relationships and their justifications in more detail. In addition, when phubbing behavior is examined, a social exclusion behavior stands out (Xie & Xie, 2020). Social exclusion often leads to negative emotional disturbances such as aggression (Twenge et al., 2001). Also, several studies have proven that social exclusion increases aggression (Dewall & Bushman, 2011; Ren et al., 2018). On the contrary, telling people who are socially rejected that they are accepted can reduce the tendency towards aggression (Dewall & Bushman, 2011). Based on all these findings, it can be said that phubbing behavior can be reduced with the correct use of smartphones and the Internet.

Besides, social, behavioral, and emotional problems caused by phubbing behavior can be minimized.

The results of this study are important in properly understanding the phubbing behavior that we all do or others do to us from time to time. Necessary awareness should be raised for the causes and consequences of phubbing behavior, which has been brought to our lives by the developing technology and turned into an inevitable problem in our social relationships, and for the measures that can be taken regarding this behavioral problem. This problem is a risk for all age groups, but it is thought to pose greater risks, especially for children and adolescents. Schools, institutions providing mental health services, and other units working on technology addiction should see this risk and take necessary precautions. Since all dimensions of aggression predicted phubbing tendencies, psychoeducational programs can be organized for individuals with a tendency toward aggression. In addition, public awareness activities can be organized to raise awareness that all kinds of tendencies toward aggression can be harmful. Also, since emotional intelligence is a skill that is acquired later, activities to gain this skill can be included in the school curriculum. Thus, individuals can be encouraged to gain positive attitudes, and their tendency toward inappropriate behavior such as phubbing can be reduced.

Results can be analyzed comparatively by repeating the study with sample groups with different socio-demographic characteristics. While trying to adapt to the developing and changing world, it is thought that the problem of phubbing, which occurs due to intense contact with smartphones in daily life, will increase gradually in Turkey and that mental health professionals will encounter this situation more frequently. For this reason, it is thought that different studies are needed to comprehensively investigate other psychological factors, which are thought to affect the phubbing problem, and solutions. In future studies, the reasons for individuals' tendencies for phubbing can be better understood by examining the relationship of phubbing with different personality traits and attitudes. However, the results of the present study are limited to the measurement tools and the sample used in this study. Since this research was conducted with a cross-sectional research method, causal relationships could not be determined. Social desirability bias may have been involved in the research data since the measurement processes were based on self-report. Since the use of smartphones is a behavior that almost everyone does, the small sample size of this study is an important limitation to the generalizability of the results. Moreover, the small number of demographic data, which is thought to be an effective factor in the tendency towards phubbing, is another limitation of the study.

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TECHNOLOGY EDUCATION IN PRIMARY SCHOOLS: AN OVERVIEW OF TURKEY AND SCOTLAND

Abstract: Technology education varies across countries depending on the goals they set to achieve. Therefore, comparative research on different technology education approaches can provide a holistic perspective and contribute to the literature. This paper compared the technology-focused courses offered by primary schools in Turkey and Scotland. A qualitative research design was adopted. Data were collected using document review and analyzed using descriptive analysis. The results pointed to differences in technology policies, manifesting themselves in the curricula of the courses offered by the schools. However, the courses also had something in common in terms of structure, goal, content, and approach to learning and teaching. We discussed the differences and similarities based on literature. In order to reveal different dimensions of technology education, comparative education studies that address different countries can be suggested.

Keywords: Technology, technology education, primary schools, primary education, comparative studies

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INTRODUCTION

Educational institutions are responsible for helping students develop life skills. However, those skills change over time. The skills, values, and attitudes one needs to have to be an effective and useful citizen in today's world are more diverse than ever (Snape, 2017). Those changes are parallel to everyday life changes. In other words, changes and developments in everyday life directly affect the scope of education. Technology is one of the factors that has profoundly changed everyday life. It is broadly defined as all kinds of changes people make in nature to meet their own desires and needs (Garmire & Pearson, 2006) or as a process by which technical knowledge is put into practice (Erdemir, Bakırcı & Eydur, 2009).

Technology is a dynamic and regenerating phenomenon directly related to needs. The scope of technology is constantly transforming because needs and conditions are in a constant flux of change. Based on the definitions, we can state that a simple spear made thousands of years ago was the most novel technological product back then. We are witnessing technological breakthroughs and scientific progress, making the Internet the most novel technological product of today (Şad & Arıbaş, 2010). We can see the transformative power of technology in social, cultural, and political spheres, manifesting themselves as applications that make our lives easier (Yalçın & Yayla, 2016). Each new technology replaces an old one, revolutionizes every sphere of our lives, and lets us go beyond what once seemed like limits (Doğan, 2012; Dinç, 2019). Social changes make technology an integral part of life, affecting all that we do (Hussain, Hashmi & Gilani, 2018; Volk, 2007). Therefore, we need far more complicated and profound skills today than what we used to have. From a broader perspective, societies need people with skill sets that enable them to manage, plan, and use technology in different fields (Soobik, 2014). To achieve that goal, countries have to provide their citizens with an education that meets the needs of the era in a wide variety of fields.

Education helps students keep up with developments (Şimşek et al., 2008). The primary goal of education is to equip them with the skills, knowledge, and attitudes they need to become productive members of society (Yılmaz, 2007; Amankwah, Oti-Agyen & Sam, 2017). Today, children are born into a world dominated by ever-evolving technology. Therefore, they need to know the basics of technology to use it in everyday life (Öqvist & Högström, 2018). Nelson, Palonsky, and McCarthy (2010) also maintain that students should have the technological know-how and positive attitudes towards it to become productive members of society. This requires us to reconsider the role, content, and goals of education (Bellanca & Brandt, 2010). Economic, environmental, industrial, and social changes have pushed for a transformation in technology education (Autio, 2009). Schools are responsible for preparing students for life and teaching them how to use technology to solve problems (Heddens & Speer, 2006). Therefore, we can state that technology is now a permanent and integral component of education (Jimenez, Prieto & Garcia, 2019). One of the primary goals of education today is to turn students into technology-literate people who can access information (Özgüç & Cavkaytar, 2016). Therefore, there is a growing body of research integrating technology into education (Gürfidan & Koç, 2016).

With advances in science and technology, schools have focused not only on teaching students about technology but also on helping them develop the skills they need to use technology effectively and efficiently (Aktay & Güvey Aktay, 2015). Social change, technology, and education are intertwined, with technology having a more guiding role in this relationship (Uça Güneş, 2016). Advances in technology also make it all the more important in education than ever before (Köseoğlu et al., 2007; Seferoğlu, Akbıyık & Bulut, 2008), paving the way for the concepts of "educational technologies" as educational tools (Aktay & Güvey Aktay, 2015) and "technology education" relating to technology literacy (Boser, Palmer & Daugherty, 1998; Şenel & Gençoğlu, 2003).

The term “educational technology” refers to the technology used in education (Çoklar & Bağcı, 2009). The abacus is one of the earliest educational technologies used for arithmetic calculations for almost three thousand years (Akçay, 2017). Teachers today use technology to introduce topics, make presentations, interact, cooperate, record notes, print educational materials, and guide students and help them develop skills (Nelson, Palonsky & McCarthy, 2010). Educational technologies are critical for modern education systems (Al-Alwani, 2014) because it provides effective teaching (Amemado, 2014; Glowatz & O’Brien, 2017). Technology has an important place in students’ lives as it makes educational activities more fun (Budinski & Milinkovic, 2017; Aktay & Güvey Aktay, 2015). We must use technology carefully in education and continuously update it and evaluate its effectiveness to enhance learning (Ashford-Rowe & Holt, 2011; Dolenc & Abersek, 2015). Educational technologies play a crucial role in education because they have numerous benefits (Ozan & Taşgın, 2017). Technology education aims to help students acquire technology literacy (Wicklein, Smith Jr, & Kim, 2009). Technology education provides students with the opportunity to learn technological know-how, techniques, and strategies (Hussain, Hashmi & Gilani, 2018). Technology is everywhere and entwined in our daily lives so much so that schools teach students how to use it to turn into technology-literate individuals (Güngören, Bektaş, Öztürk & Horzum, 2014). Technology education involves teaching students about the pros and cons of technology and how to use, manage, evaluate, and comprehend it (Fantz & Katsioloudis, 2011). In other words, technology education aims to help students understand what technology is and what impact it has on their lives. Students receiving education on technology can use it to make observations, design materials and tools, make mathematical calculations, plot graphs, and understand and do mechanical drawings. Technology education is an interdisciplinary science that achieves the integration of environmental education into school curricula (Karaağaçlı & Mahiroğlu, 2005). Technology education consists of creative experiences and innovative activities that allow students to use their knowledge and skills (McLaren, 2007). Technology education provides students with unique and innovative opportunities to make sense of, control, and use technology (Boser, Palmer, & Daugherty, 1998; Reinsfield, 2016). Technology education has been introduced to help students develop the skills they need to understand and use technology (Niiranen & Hilmola, 2016). Therefore, it is a promising means of helping students gain self-esteem, develop social skills, and adapt to school (Ernst & Moye, 2013). The goal of technology education is to allow students to acquire the skills they need to perform various practical tasks (Soobik, 2013). Children participating in technology activities can develop research skills and learn to discuss, reflect on, and formulate thoughts and ideas (Tu, 2006). Technology education has undergone a significant transformation since its onset (Reinsfield, 2016). Current technology education has been designed to promote technological skills, technological literacy, and technological perspective (Seery, Kimbell, Buckley & Phelan, 2019). Today we live in an age of technology. Therefore, technology teaching and research has become a much wider field than ever. Most research emphasizes that schools should provide students with more technology learning-teaching activities (Seery, Kimbell, Buckley, & Phelan, 2019) and incorporate them into all courses (Autio, 2016). The definition and execution of technology education vary across countries depending on cultural differences and agendas of certain groups (Şenel & Gençoğlu, 2003). This highlights the importance of comparative educational research, whose sole purpose is to solve educational problems by comparing and contrasting the educational concepts, strategies, and options of two or more regions, countries, or continents (Türkoğlu, 2012). Researchers undertaking comparative educational studies make different applications visible and thus pave the way for improvements. When the literature is examined, no study comparing technology education

approaches at primary school level has been found. Therefore, this study has been deemed necessary in terms of contributing to the field.

Scotland, an autonomous state in the United Kingdom, places particular emphasis on technology education and technology use in education due to digitalization. Scotland has established a unit under the Ministry of Education to keep up with technological developments and to draw a road map. What is more, primary schools in Scotland offer technology education as a core course. For the past few semesters, the UK has been in the top ten in some international exams [PISA (Programme for International Student Assessment)]. Moreover, schools in Scotland outperform their counterparts in England and Ireland in some fields. Therefore, we think that comparing technology education activities in primary schools in Scotland and Turkey will contribute to the field.

This paper compared technology education in primary schools in Scotland and Turkey. The research questions are as follows:

1. How do primary schools in Turkey provide technology education?
2. How do primary schools in Scotland provide technology education?
3. What are the similarities between technology education in Scotland and Turkey?
4. What are the differences between technology education in Scotland and Turkey?

METHOD

RESEARCH DESIGN

This study adopted a basic qualitative research design to compare the technology education in primary schools in Scotland and Turkey. In the most general sense, basic qualitative research designs are research designs that are not based on phenomenology, grounded theory, narrative analysis, critical ethnography. They focus on how events or facts are understood and interpreted (Merriam, 2015). This study conducted a comparative review of how technology education was understood and used in Scotland and Turkey.

DATA COLLECTION

The analysis of technology education in primary schools in Turkey and Scotland was based on their curricula. Data were collected using document review. Defined as material culture in anthropology, records, documents, artifacts, and archives are rich data sources (Patton, 2014). Document review involves selecting documents appropriate for research purposes. In general terms, document review is a systematic process in which the researcher reviews and evaluates printed or electronic materials (Bowen, 2009). In qualitative research, transcribing interviews turns them into materials or documents. However, the “document” in document review refers to data containing words and/or images recorded without the researcher intervening in the process (Silverman, 2018). We also analyzed written materials and collected data from the current primary school curricula on the official websites of the Ministries of Education of Turkey and Scotland. The analysis was based on Yıldırım and Şimşek’s “five stages of document review” (2018). We collected documents, checked their originality, used and examined them, and analyzed data.

DATA ANALYSIS

Themes were developed to address the educational approach of each country. After analysis, the data were summarized and interpreted under the titles “Technology Education in Primary Schools in Turkey” and “Technology Education in Primary Schools in Scotland.” For transferability, it is necessary to describe the research process and results in detail, which is referred to as “descriptive analysis” by Yıldırım and Şimşek (2018). Therefore, we also elaborated on the research process and results.

Four researchers analyzed the data and discussed the controversial points and differences of opinion until they reached a fully consensus on analyze. They then consulted an expert

researcher in research methods about the findings and the process and made revisions based on expert feedback. The analysis was conducted over a long period to review the data repeatedly and prevent possible data loss. In line with Yıldırım and Şimşek's (2018) recommendations for validity and reliability in qualitative research, we compared the results with the raw data and checked for verifiability and understandability at the end of the process. This research is limited to the two countries (Turkey and Scotland) considered and the respective programs obtained from the official websites of these countries.

RESULTS

TECHNOLOGY EDUCATION IN PRIMARY SCHOOLS IN TURKEY

This section addressed how primary schools in Turkey offered technology education and used technology in education. The technology education curriculum of the "Information Technologies and Software" (ITS) course was developed to serve as a roadmap for teachers and was last updated in 2018. The curriculum has some topics in common. For example, the topic of "The Perspective of the Curricula" explains how the curriculum approaches technology education and contains the subtopics of "values" and "qualifications," the latter of which is the first to address the concept of technology. The curriculum talks about several competencies defined as personal, social, academic, and professional qualifications at both national and international levels (Ministry of National Education, 2018). The "Turkey Qualifications Framework" (TQF) research has determined those qualifications. The TQF, designed in harmony with the European Qualifications Framework, is a national framework that refers to all qualifications acquired through vocational, general, and academic curricula, including primary, secondary, and higher education or other learning environments (Vocational Qualifications Institution, 2020). Some of the qualifications are communication in the native language, communication in foreign languages, learning how to learn, social and civic competencies, taking initiatives, entrepreneurship, math competence, and basic science-technology qualifications. The curriculum defines "technology competence" as the execution of knowledge and methodology to meet demands and needs, a competence of which students in Turkey are expected to adopt. "Digital competence" is another skill set in the curriculum. It refers to the skill needed to use "information communication technologies" safely and critically for work, everyday life, and communication (Ministry of National Education, 2018). It involves the effective and efficient use of technologies (computer and Internet).

The ITS course directly addresses technology education in primary schools in Turkey. Its curriculum, as a single file containing all headings, shows teachers how to deliver the course. In the broadest sense, the ITS course aims to teach primary school students how to use information technologies effectively and adopt basic software skills. The course also has a number of unique goals (Ministry of National Education, 2018):

The ITS course helps students

1. Develop awareness of the correct and effective use of information technologies
2. Use technology ethically and safely
3. Recognize that they can use technology for communication and research
4. Use information technologies to develop products
5. Develop problem-solving and computational thinking skills
6. Learn how to design algorithms
7. Use different logic structures to solve problems
8. Use programming languages to design games

The ITS course focuses on four fundamental skills: computational thinking, reasoning, problem-solving, and designing algorithms. The ITS curriculum emphasizes that every student should be involved in learning and that theory and practice should go hand in hand. Students should integrate new knowledge into everyday life experiences and use information

technologies to solve real-life problems. The curriculum presents real-life problems to help students develop problem-solving skills. It has a thematic approach that groups topics under themes, which are “Information Technologies,” “Ethics and Security,” “Communication, Research, and Cooperation,” “Developing Products,” and “Problem Solving and Programming.” The content of the themes is as follows:

Table 1. Themes and Their Contents in ITS Curriculum in Turkey

<i>Themes</i>	<i>Contents</i>
Information technologies	Transformation of information and communication technologies (ICTs) throughout history; pros and cons of ICTs; working principles of computer and other components
Ethics and Security	Confidentiality and ethical values for the correct and responsible use of technology
Communication, Research, and Cooperation	Encouraging students to use communication technologies to develop research, collaboration, and communication skills and to access and share the right information
Developing products	Topics to help students develop original products, express their thoughts in different ways, and choose and use the right tools and materials to structure knowledge
Problem Solving and Programming	Designing algorithms, using assignment, sequential logic, decision structure, loop structures, and selecting the appropriate programming to solve problems

Four different competence levels are specified in the themes (D1, D2, D3, and D4) based on individual differences and developmental characteristics in the curriculum. Therefore, learning activities are carried out at different levels. This allows teachers to implement different activities for students with different competence levels in the same classroom. The choice of activity depends on students’ readiness, teachers’ qualifications, and students’ and parents’ demands. The beginner level (D1) includes activities related to basic concepts and process flows. The intermediate level (D2) introduces the details of information technologies and programming logic. The upper-intermediate level (D3) involves activities tailored to incorporating information technologies into everyday life and developing applications in block-based programming environments. The advanced level (D4) addresses the proper and safe use of information technologies and complex applications of programming processes. Schools with technological infrastructure can use block-based programming tools and materials (D3), while those with limited technological infrastructure can use alternative computer-free activities (games, drama, paper-pencil activities, etc.)

The ITS curriculum specifies learning outcomes at every theme and level and describes them in detail. The Table 2 shows the number of learning outcomes at every theme and level (Ministry of National Education, 2018):

Table 2. Distribution of Outcomes by Themes in ITC Curriculum in Turkey

<i>The name of the theme</i>	<i>Competence level</i>	<i>Number of outcomes</i>	<i>Total number of outcomes</i>
Information Technologies	beginner level (D1)	4	17
	intermediate level (D2)	5	
	upper-intermediate level (D3)	3	
	advanced level (D4)	5	
Ethics and Security	beginner level (D1)	3	12
	intermediate level (D2)	3	
	upper-intermediate level (D3)	3	
	advanced level (D4)	3	
Communication, Research, and Cooperation	beginner level (D1)	2	12
	intermediate level (D2)	3	
	upper-intermediate level (D3)	3	

	advanced level (D4)	4	
Developing Products	beginner level (D1)	1	4
	intermediate level (D2)	1	
	upper-intermediate level (D3)	1	
	advanced level (D4)	1	
Problem Solving and Programming	beginner level (D1)	7	41
	intermediate level (D2)	11	
	upper-intermediate level (D3)	10	
	advanced level (D4)	13	
Total			86

Each learning outcome was assigned a code specifying the course code, theme no, level no, and the number of learning outcomes. For example, “IT.2.D4.3” refers to the “Information Technologies” course with the theme no “2,” level no “4,” and three (3) learning outcomes. The theme of “Problem Solving and Programming” has the highest number of learning outcomes. The themes of “Information technologies,” “Ethics and Security,” and “Communication, Research, and Cooperation” have a higher number of D4 learning outcomes than the others. The learning outcomes are written in the form of statements addressing teachers who may observe those outcomes in students. The curriculum has a total of 86 learning outcomes. Table 3 shows the different outcomes for different levels. As can be seen in the table, these outcomes differ according to the level they are in.

Table 3. Learning Outcomes from Different Themes and Levels in ITS Curriculum in Turkey

Themes					
Learning Outcomes	Information technologies	Ethics and Security	Communication, Research, and Cooperation	Developing products	Problem Solving and Programming
	IT.1.D1.1 Recognizing common technological tools	IT.2.D1.1 Respecting the rights of others in using technology	IT.3.D1.1 Appreciating the transformation of communication technologies	IT.4.D1.1 Using electronic waste to design toys	IT.5.D1.1 Designing simple everyday life process flows
	IT.1.D2.2 Explaining the relationship between simple hardware and software	IT.2.D2.1 Listing things to do to use information technologies safely	IT.3.D2.1 Explain the software curricula needed to use the Internet	IT.4.D2.1 Using electronic waste to design real-life models	IT.5.D2.6 Pseudo-coding to solve problems
	IT.1.D3.1 Looking into the contributions of information technologies to everyday life	IT.2.D3.1 Providing examples to illustrate disturbing behavior when online	IT.3.D3.1 Conducting simple online research	IT.4.D3.1 Using digital content to create stories	IT.5.D3.1 Explaining the concept of algorithm
	IT.1.D4.3 Distinguishing between the pros and cons of technology	IT.2.D4.3 Detecting fake accounts on social media platforms	IT.3.D4.3 Realizing that not every piece of information on the Internet is credible	IT.4.D4.1 Using digital content to make posters	IT.5.D4.1 Using block-based programming tools to develop accurate algorithms to achieve goals

TECHNOLOGY EDUCATION IN PRIMARY SCHOOLS IN SCOTLAND

This section investigated how primary schools in Scotland approached technology education. Scotland has a curriculum called “Curriculum for Excellence” (CfE) regulating students' learning activities and basic principles at all levels. The curriculum has four main objectives: turning students into (1) successful learners, (2) confident individuals, (3) responsible citizens, and (4) effective contributors. It aims to help students acquire certain attributes and capabilities. It addresses the concept of technology and aims to ensure that all Scottish students grow to be responsible citizens capable of using technology for learning purposes and evaluating environmental, scientific, and technological goals (Education Scotland, 2020a).

The Curriculum for Excellence consists of eight areas, one of which is “technologies” (Education Scotland, 2020b). Primary school technology education has been designed within the framework of the area of “technologies,” which consists of three documents: “experiences and outcomes,” “principles and practice,” and “benchmarks,” the last of which consists of statements for teachers on how to plan learning, teaching, and assessment effectively. “Technologies” is considered an indispensable curriculum area for Scotland’s economic well-being (Education Scotland, 2020c). The curriculum involves practical and work-related activities to transform students into creative individuals with technological skills, knowledge, understanding, and attributes. The curriculum specifies technological education goals as follows (Education Scotland, 2020c):

Learning in the technologies enables children and young people to be informed, skilled, thoughtful, adaptable and enterprising citizens, and to:

- develop understanding of the role and impact of technologies in changing and influencing societies
- contribute to building a better world by taking responsible ethical actions to improve their lives, the lives of others and the environment
- gain the skills and confidence to embrace and use technologies now and in the future, at home, at work and in the wider community
- become informed consumers and producers who have an appreciation of the merits and impacts of products and services
- be capable of making reasoned choices relating to the environment, to sustainable development and to ethical, economic and cultural issues
- broaden their understanding of the role that information and communications technology (ICT) has in Scotland and in the global community
- broaden their understanding of the applications and concepts behind technological thinking, including the nature of engineering and the links between the technologies and the sciences
- experience work-related learning, establish firm foundations for lifelong learning and, for some, for specialised study and a diverse range of careers.

The curriculum places particular emphasis on the “technologies” area and stipulates that teachers approach the area from an interdisciplinary perspective and provide students with different learning activities based on individual and local characteristics. The curriculum includes the themes of “technological developments,” “effective use of information and communication technology to enhance learning,” “business,” “computing science,” “food and textile technology,” and “craft, design, engineering, and graphics.” When addressing these themes, teachers should consider social, economic, and ethical factors and sustainability and plan their lessons accordingly. The goal of the themes is to help students develop knowledge, skills, attributes, and capabilities related to 13 concepts or areas, which are a broader expression of the themes:

- Awareness of technological developments (Past, Present and Future), including how they work.

- Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
- Using digital products and services in a variety of contexts to achieve a purposeful outcome
- Searching, processing and managing information responsibly
- Cyber resilience and internet safety
- Understanding the world through computational thinking
- Understanding and analysing computing technology
- Designing, building and testing computing solutions
- Food and textile technologies
- Designing & constructing models/products
- Exploring uses of materials
- Representing ideas, concepts and products through a variety of graphic media
- Application of Engineering

Students who receive technology education based on the curriculum are expected to acquire the following knowledge and skills:

- knowledge and understanding of the key concepts in the technologies
- curiosity, exploration and problem-solving skills
- planning and organisational skills in a range of contexts
- creativity and innovation
- skills in using tools, equipment, software, graphic media and materials
- skills in collaborating, leading and interacting with others
- critical thinking through exploration and discovery within a range of learning contexts
- discussion and debate
- searching and retrieving information to inform thinking within diverse learning contexts
- making connections between specialist skills developed within learning and skills for work
- evaluating products, systems and services
- presentation and communication skills.
- awareness of sustainability

The curriculum is believed to contribute to the “Skills for Scotland” project prepared by the Ministry of National Education to specify the skills learners are expected to develop. Therefore, the curriculum is based on applied education to help students develop the skills they need in business life. The goal of technology education is to ensure that students develop the following skills:

- curiosity and problem-solving skills, a capacity to work with others and take initiative
- planning and organisational skills in a range of contexts
- creativity and innovation
- skills in using tools, equipment, software and materials
- skills in collaborating, leading and interacting with others
- critical thinking through exploration and discovery within a range of learning contexts
- discussion and debate
- searching and retrieving information to inform thinking within diverse learning contexts
- making connections between specialist skills developed within learning and skills for work
- evaluating products, systems and services
- presentation skills

The curriculum also elaborates on what approaches teachers should adopt to help students develop those skills. According to the curriculum, students’ experience with technology and learning outcomes should appeal to their entrepreneurial drive and encourage them to work and

develop practical products because this is how they can learn better. Teachers should incorporate different approaches and allow students to work alone or in teams to enrich their experience. The curriculum states that experiences and learning outcomes should promote out-of-school learning. It also stipulates that teachers focus on problem-solving and collaborative and practical activities to measure and evaluate learning in the “technologies” area. Those activities should determine how well students develop technological skills and understand and use technological concepts. Teachers should monitor progress on a daily basis and choose activities that allow students to put their knowledge and skills into practice. Assessment and evaluation approaches should focus on how students incorporate their knowledge and skills into work and everyday life. The curriculum adopts a holistic approach and relates the “technologies” area to the other areas. It also shows teachers how to do it. The curriculum also has statements that explain to teachers how to develop in-service learning activities and dispel the technology-related misconceptions that students may have.

The curriculum organizes the learning outcomes under different topics. It basically has five subject areas divided into subheadings referring to the content of subject areas. It addresses not only information technologies but also technologies used in different fields. It has a spiral structure in which the subject areas are the same at all grade levels evolving from simple to complex in content. The Table 4 shows the subject areas and their content.

Table 4. Curriculum Organisers and Experiences and Outcomes for Planning Learning, Teaching and Assessment in Technologies Curriculum in Scotland

Curriculum Organisers	Experiences and Outcomes for planning learning, teaching and assessment
Digital Literacy	Using digital products and services in a variety of contexts to achieve a purposeful outcome
	Searching, processing and managing information responsibly
	Cyber resilience and internet safety
Food and Textile	Food and Textile
Technological Developments in Society and Business	Awareness of technological developments (Past, Present and Future), including how they work.
	Impact, contribution, and relationship of technologies on business, the economy, politics, and the environment.
Craft, Design, Engineering and graphics	Design and constructing models/product
	Exploring uses of materials
	Representing ideas, concepts and products through a variety of graphic media
	Application of Engineering
Computing Science	Understanding the world through computational thinking
	Understanding and analysing computing technology
	Designing, building and testing computing solutions

The learning outcomes in the curriculum are written in the tone and style of students to raise their awareness of their own learning. A separate document also contains statements intended to guide teachers for each outcome. Those statements show teachers what each outcome corresponds to in practice and what criteria to adopt to assess them. Each heading of each area has one to three outcomes, and each area has three to five outcomes. The number of outcomes ranges from 15 to 20, depending on the grade level. Each outcome is assigned numbers and letters indicating the area, grade level, subheading, and the number of outcomes, respectively. Some of the areas, content, and outcomes, and related statements are as follows:

Table 5. Outcomes and Benchmarks to Support Practitioners' Professional Judgement in Technologies Curriculum in Scotland

<i>Outcomes</i>	<i>Benchmarks to support practitioners' professional judgement</i>
TCH1-01a: I can explore and experiment with digital technologies and can use what I learn to support and enhance my learning in different contexts.	Communicate and collaborate with others using digital technology for example, email, Glow or other platforms. Opens and saves a file to and from a specific location. Identifies the key components of frequently used digital technology and whether it is a piece of hardware or software. Uses digital technology to collect, capture, combine and share text, sound, video and images.
TCH1-04b: I can use a range of tools and equipment when working with textiles.	Uses a range of equipment when working with textiles, for example, scissors, rulers/tape measures, bodkin and wool.
TCH1-05a: I can explore the latest technologies and consider the ways in which they have developed.	Identifies changes to technologies for example, televisions and mobile phones.
TCH1-09a: I can design and construct models and explain my solutions.	Creates and justifies a solution to a given design challenge considering who is it for, where and how will it be used Uses appropriate tools and joining methods to construct a model.
TCH1-14b: I understand how computers process information.	Demonstrates an understanding that computers take information as input, process and store that information and output the results.

DISCUSSION AND CONCLUSION

This study focused on curricula to compare the technology education offered by primary schools in Turkey and Scotland. Primary schools in Turkey employ the Information Technologies and Software (ITS) course curriculum, while those in Scotland employ the Curriculum for Excellence (CfE). The results pointed to some similarities and differences between the two curricula. The first thing they have in common is that they both set their goals clearly. However, there is a difference in content between them. For example, the ITS curriculum sets the goals of acquiring problem-solving and computational thinking skills, using different logic structures, developing an understanding for designing algorithms, and programming to design games. However, CfE makes no mention of those goals. On the other hand, the goals of CfE focus on helping students develop an understanding of technologies and emphasize the local and global impact of those technologies. In other words, CfE aims to raise students' awareness of the global impacts and benefits of technology. Unlike the ITS curriculum, CfE contains items to make students appreciate the environment and sustainable development and help them make informed choices about economic and cultural issues, and develop an understanding of the nature of engineering. Both curricula emphasize product development, ethical and responsible use of technologies, and learning by doing. Ergas (1987) categorizes the technology policies developed by countries into two: mission-oriented and diffusion-oriented. According to him, countries with mission-oriented technology policies (England, America, France, etc.) regard technological innovations and technology education as a means of achieving national goals. On the other hand, those with diffusion-oriented technology policies (Germany, Switzerland, Sweden, etc.) focus on expanding technological capabilities to the industrial structure to promote adaptation and transforming students into employees in the technology sector. Based on the results concerning the "goals" section of both curricula, we can state that Turkey undertakes diffusion-oriented technology policies, while Scotland undertakes mission-oriented technology policies. This may be the major difference between the two curricula.

The second result is that there is a curriculum for each course in Turkey, while CfE is organized based on learning areas. There are structural differences in technology-oriented courses or learning areas between the two curricula. The ITS curriculum focuses directly on technology

education at the primary school level. Based on the thematic approach, the ITS curriculum is a single-document curriculum that varies across grade levels. All teachers and educational professionals can use it. On the other hand, CfE addresses subjects and concepts (deemed appropriate for primary school children the earliest) grouped under specific learning areas, one of which is “technologies.” The technologies curriculum area is a three-document curriculum that is one for all grade levels. The three documents focus on “experiences and outcomes,” “principles and practice,” and “benchmarks (for teachers).” Based on the results, we can state that the ITS curriculum and CfE have similar content, although they have been developed in different ways.

Each curriculum groups its content under subject headings. The curricula are similar in this respect, but they differ in the subject content. The ITS curriculum focuses on information technologies and software but does not address technological developments in other areas or knowledge and skills related to those areas. The Science and Social Sciences courses discuss the technological developments in other areas. However, rather than elaborating on technological topics, they only intend to raise students’ awareness. On the other hand, CfE encompasses a broader spectrum than the ITS curriculum because it provides information on areas where technology is used effectively, such as digital literacy, food and textile technology, craft, design, engineering, and graphics. Therefore, we can state a significant difference in technology education between primary schools in Scotland and Turkey. There used to be a course called “Vocational Training” offered by primary schools in Turkey. Its content was similar to that of the “food and textile technology” and “craft” areas of CfE. However, the “Vocational Training” course was removed with the amendment made to the curriculum in 2005 and replaced by the “Technology and Design” course covering the design-related subject areas of CfE. After a while, the Technology and Design course has been replaced by the Information Technologies and Software course. Science is the course that discusses engineering-related subjects. The fact that the ITS curriculum focuses on information technologies and software says two things about Turkey: first, it pays particular attention to those areas, and second, it aims to train expert educators who can provide students with in-depth information and help them develop skills in the field of information technologies and software. The ITS curriculum helps students develop problem-solving and computational thinking skills, use different logic structures, acquire an understanding of algorithm design, and program through game designs. It also focuses on goals that require more profound knowledge and skills in those areas. These results show that the ITS curriculum intends to transform students into individuals with deeper knowledge and skills in those areas. On the other hand, CfE has a broader spectrum of subjects that address basic knowledge and skills in multiple areas. With the Curriculum for Excellence, Scotland intends to provide primary school students with information on different technological areas and help them develop related skills in order to turn them into individuals equipped with the necessary attributes of today. Pavlova (2012) also states that technology education in Scotland is based on the basic qualifications model to encourage students to develop transferable personal skills. Dakers (2005) argues that today we are confused about the concept of technology because we used to define it more clearly before it has been broken down into subdimensions (nanotechnology, food technology, etc.). He adds that this confusion manifests itself in technology education curricula. According to Fagerberg (2016), innovations in non-technological fields (climate change, aging, etc.) are becoming more prominent, affecting the education curricula. The points emphasized by Fagerberg (2016) and Dakers (2005) may account for the difference we observed between the ITS curriculum and CfE. Another reason may be the meaning the two countries attribute to basic education, in general, and technology education, in particular.

Both curricula adopt a similar approach to help students develop certain skills. The “qualifications” section in the ITS curriculum is the first to address the concept of technology.

That section focuses on skill sets needed in everyday and work life. Turkey conducted a study on the topic and developed the “Turkish Qualifications Framework” action plan. Based on the framework, it added the “qualifications” section to the curriculum encompassing all courses. Two of those qualifications are directly related to technology. Similarly, Scotland undertook the “Skills for Scotland” project to determine the skills for students to develop and added those skills to the area curricula. Although both countries followed a similar path to determine the target skills, they ended up focusing on different skills. The ITS curriculum targets four fundamental skills: computational thinking, reasoning, problem-solving, and designing algorithms. Of those skills, CfE focuses only on problem-solving and targets different skills. Some of the skills (software use and presentation skills) are directly related to technology. Most CfE skills are life skills, while most ITS curriculum skills are related to information technologies. The global trend in technology education today is not solely about acquiring knowledge and skills but is also about operating all factors (attitudes, emotions, etc.) to acquire qualifications needed to solve complex problems in different contexts (De Vries et al., 2016). According to the model developed by Gibson (2008), technological competence consists of knowledge, values, and problem-solving skills brought together within the framework of the right conceptual knowledge. Therefore, we can state that both ITS curriculum and CfE incorporate knowledge, skills, and values into technology education to promote students' multidimensional development.

Both curricula group the target goals under certain learning outcomes presented with codes. Each code in the ITS curriculum refers to the course name, theme no, learning level, and outcome no. On the other hand, each code in CfE refers to the learning area, grade level, the subheading of the subject area, and outcome no. Both curricula have statements intended to present the learning outcomes to teachers. Those statements assist teachers in evaluating learning. According to Rasinen et al. (2009), the freedom granted to teachers to plan their lessons causes them to overlook technological developments. Therefore, the researchers maintain that it is useful to predetermine learning outcomes and add statements about them to curricula to guide teachers. They have concluded that technology education is adversely affected by teachers not receiving adequate in-service training on technology education. At this point, we recommend that both countries provide teachers with in-service training on technology education on a regular basis.

The Curriculum for Excellence has 15-20 learning outcomes, while the ITS curriculum has 86, indicating that the latter focuses on a large number of learning outcomes. The Curriculum for Excellence has several outcomes for each area but elaborates on those outcomes. Most learning outcomes in the ITS curriculum are under the theme of “Problem Solving and Programming,” while CfE does not concentrate on any particular area.

There are similarities and differences in the learning-teaching approach to technology education between Turkey and Scotland. Both curricula suggest an interdisciplinary approach to technology education. According to Jarvinen and Rasinen (2015), one of the goals of technology education should be to identify problems in other disciplines and find technological solutions. However, they also argue that teachers do not know how to adopt an interdisciplinary perspective to deliver technology education. Technology transforms teachers' roles, and therefore, teacher training programs should emphasize technology education (Andersson, 2006). Academics should transfer their technological knowledge to undergraduates to turn them into effective teachers equipped with the necessary skills (Ritz, 2012). Teacher training programs should inform preservice teachers why technology is used in class and how to do it (Başal, 2015). Therefore, authorities should take these factors into account and revise teacher training policies accordingly. What is more, educational institutions should provide teachers with training on approaching technology education from an interdisciplinary perspective.

The curricula are also similar because they both aim to encourage students to put theory into practice. Both countries adopt an operational learning-teaching approach to technology education and aim to enable students to use learning outcomes in everyday and work life. The literature also corroborates the benefits of the operational learning-teaching approach. Many educational theorists, such as Dewey and Froebel, recommend applied education (McLain, Irving-Bell, Wooff & Morrison-Love, 2019). Learning by doing is at the center of technology education (Rasinen et al., 2009) because it is concerned with finding ways to develop technological environments that respond to students' needs (de Vries, 2009). According to Compton et al. (2011), technological literacy refers to understanding the relationship between the functionality and form of technology. One way to help the young understand the nature of technology is by engaging them in developing new and evolving technologies (Barlex, 2011). Therefore, it is crucial to ensure that students learn by using technological tools and materials. Research shows that there is a strong connection between students' manual skills and the way they learn technology (Jarvinen & Rasinen, 2015) and that students prefer learning by doing to theory-based learning when it comes to technology education (Jarvinen & Rasinen, 2015; Hašková & Dvorjaková, 2016). Therefore, one of the strengths of the curricula is that they provide students with the opportunity to learn about and interact with various technological tools and materials (Jablansky, Alexander, Dumas, & Compton, 2019). Our results show that both Turkey and Scotland have a similar understanding in that regard.

Technology education should be based on effective and practical curricula that ensure students' safety (Mondal, 2021). Therefore, we can state that it is of paramount importance in technology education to ensure that students adopt ethical and responsible behavior. Both ITS curriculum and CfE emphasize the effective/efficient and ethical/responsible use of technology.

Both ITS curriculum and CfE pay particular attention to students' characteristics and have appropriate content. The Curriculum for Excellence has statements that guide teachers on how to go about applying the curriculum based on students' characteristics, but it contains no statements regarding which learning outcome to emphasize depending on which individual characteristic. On the other hand, the ITS curriculum emphasizes that issue and divides the learning outcomes into four levels. Teachers executing the ITS curriculum are at liberty to decide which learning outcome to present to which student, depending on student characteristics and cooperation with parents. The same approach is adopted by Finland because it increases engagement and encourages students to find creative solutions to problems during learning (Rasinen et al., 2009). Given that every student is unique, we think that that approach is likely to receive positive feedback because it takes individual characteristics into account.

Technology education requires infrastructure and tools and materials. Inadequate infrastructure and lack of tools and materials hinder technology education. According to Hašková and Dvorjaková (2016), the approach to technology education depends on the school facilities and technical equipment available. Therefore, the stronger the infrastructure, the more different and effective methods teachers can use to deliver technology education. Some teachers in Turkey work in schools with inadequate infrastructure. Therefore, the ITS curriculum provides them with alternatives regarding the approach they can adopt and the activities they can use under those circumstances. On the other hand, CfE gives no such guidance. This can be accounted for by the difference between the level of confidence Turkey and Scotland have in their infrastructures. In order to reveal different dimensions of technology education, comparative education studies that address different countries can be suggested.

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THE EXAMINATION OF THE RELATIONSHIP BETWEEN TEACHERS' COMMITMENT TO THE CURRICULUM AND TEACHER AUTONOMY BEHAVIORS

Abstract: The aim of the present study was to reveal the relationship between teachers' commitment to the curriculum and teacher autonomy. The study was conducted during the fall term of the 2020-2021 academic year by means of google forms administered to 956 students on social platforms. The data collection instruments utilized in the study were the Teacher Autonomy Scale and the Curriculum Commitment Scale. To analyze the data, descriptive analyses, correlation analysis, and MANOVA were conducted. The results of the study revealed that teachers were committed to the curriculum and displayed behaviors of autonomy. It was revealed that there was a moderate degree of correlation between teacher autonomy and commitment to the curriculum. A low level of positive relationship was identified between teachers' commitment to the curriculum and their levels of autonomy in the curriculum, professional development, and professional communication.

Keywords: Commitment to the Curriculum, Teacher Autonomy, Opinions of the Teacher, Quantitative Research.

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INTRODUCTION

CURRICULUM COMMITMENT

As implementers of predefined goals, content, methods and activities, teachers are responsible for the achievements of their students (Demirel, 2010). Hence, teachers' viewpoints regarding the curriculum are important.

It is indicated in the related literature that there is a discrepancy between the intended curriculum and the enacted curriculum (Mihalic, 2002; Bayrak and Erden, 2007; Öztürk, 2012; Tokgöz, 2013; Han, 2013; Bümen, Çakar and Yıldız, 2014; Yazıcılar, 2016; Bay, Kahramanoğlu, Döş, Turan-Özpolat, 2017; Bümen, 2019; Bümen and Yazıcılar, 2020). Elimination of teachers' anxieties associated with the implementation of a curriculum increases the effectiveness of the enacted curriculum (Gökçek, 2008), and studies on decision making processes enhance the understanding of how theory is transformed into practice (Tokgöz, 2013). Thus, studies addressing teachers' daily class activities, their perceptions, beliefs, and their approaches to the way the intended curriculum is enacted are essential (Öztürk, 2012; Han, 2013; Tokgöz, 2013; Bümen, 2019). The transformation process and teachers' approaches to the implementation of the curriculum, the level of curriculum implementation, decisions regarding learning products (Fullan and Pomfret, 1977) are related to teachers' consciousness of their roles in the implementation of the curriculum (Tokgöz, 2013), how teachers adapt to changing curricula (Gökçek, 2008), how a transition from a teacher-centered approach to a learner-centered approach would affect roles within the organization are all related to curriculum commitment (Bümen, et al., 2014; Bümen, 2019). Previously, issues regarding the sources of challenges encountered during the implementation of novelties in the curriculum were regarded as a "black box" (Fullan and Pomfret, 1977). Most scientific curricula are implemented in different contexts and are developed based on different learning outcomes. The concept of curriculum commitment, also named as curriculum adherence or curriculum integrity, which focuses on problems emerging in the implementation of novelties in the field of education, necessitates the identification of how well these novelties are implemented when compared with the original form of the curriculum design (Mihalic, 2002). According to Becker (2002), commitment to the curriculum is the degree of consistency between the curriculum elements defined by curriculum developers and the implementation of this curriculum. Curriculum commitment is the teachers' and other stake holders' implementation of the designed curriculum by remaining loyal to its original form. It has been reported in the literature that with the identification of curriculum commitment, the reasons underlying the success or failure of the novelties, what elements are changed in the curriculum, and the outcomes of these changes can be determined (Bümen et al., 2014; Bümen, 2019). Dusenbury, Brannigan, Falco and Hansen (2003) proposed five dimensions in measuring teachers' commitment to the curriculum: "adherence, dose, the quality of program delivery, participant responsiveness, program differentiation". Adherence is the effective implementation of the elements of the curriculum, such as materials and activities. Dose refers to the frequency, quantity, and duration of the curriculum. The quality of program delivery is the way the pedagogical techniques recommended in the curriculum are enacted by the implementers of the curriculum. Participant responsiveness is an indicator of the levels at which individuals participating in the program develop ownership of the novelties in the curriculum. Finally program differentiation refers to the features that distinguish the new curriculum from similar or prior curricula (Dusenbury et al., 2003).

TEACHER AUTONOMY

Öztürk (2012) states that the teacher, who is one of the most important elements that play a role in the implementation of the target approaches of curricula, is given limited authority to regulate the education process. Reforms in education have raised discussions in autonomy,

adaptation and control in curricula (Archbald and Porter, 1994). Adapting to the reforms for the improvement of education has a considerable impact on each professional teacher's feelings of autonomy (MacBeath, 2012).

Short (1992) identifies autonomy "as a dimension of empowerment, [which] refers to teachers' beliefs that they can control certain aspects of their work life. This may be control over scheduling, curriculum, textbooks, and instructional planning. The hallmark of autonomy is the sense of freedom to make certain decisions" (p. 12). Ingersoll (2003) defines teacher autonomy as a dimension of power that is "a function of the extent to which teachers influence the decisions that are most central to their work" (p. 47). Teacher autonomy can be defined as teachers' being able to plan and implement their professional activities, to use their own discretions in the arrangement of the work environment, and to participate in administrative processes (Pearson & Moomaw, 2005). While Özaslan (2015) defines teacher autonomy as the possibility for teachers to implement their own decisions in work life (p. 26), Bümen (2019) defines it as teachers having certain authorities and freedom in topics related to their profession and in decision making processes (p. 178). According to Çolak (2016), teacher autonomy is having the right to make decisions as regards the education process, school and students.

Öztürk (2011) listed the dimensions of teacher autonomy as the planning and implementation of education, participation in important decisions regarding education and school management, and the development of teachers' professional knowledge and proficiency.

The autonomy to be granted to teachers is categorized in the related literature as the planning and implementation of education (Freidman, 1999; Pearson & Hall, 1993; Öztürk, 2012), participation in the management process (Freidman, 1999; Ingersoll, 2007; Öztürk, 2012) and professional development (Steh and Pozarnik, 2005). Autonomous teachers can effectively and comprehensively reflect their own preferences and decisions onto their teaching based on students' interests and needs (Short, 1992; Pearson and Moomaw, 2005). Moreover, autonomy refers to the ethical responsibility of teachers and the competency they acquired (Steh and Pozarnik, 2005). Teacher autonomy is associated with discipline and evaluation policies (Ayril et al., 2014) as well as with student success (Ayril et al.; TEDMEM, 2015). Schools that are managed democratically support teachers and teacher autonomy with decisions that impact student success (Lepine, 2007). Research studies show that, compared with people in traditional professions, teachers have limited power or control over key decisions that influence their work (Ingersoll, 2007). A common thread that appears when one investigates teacher motivation, teacher empowerment, and teacher stress and burnout is teacher autonomy. Hence, government officials, school board members, and principals must recognize and meet the need for teacher autonomy if they wish to motivate and empower teachers, minimize teacher stress, and prevent teacher burnout (Moomaw, 2005). It may be difficult for a centralized curriculum to meet regional and local students' needs. Therefore, studies on teacher autonomy are important in education in the area of curriculum studies (Bümen, 2019).

In teacher autonomy, an important concept is "adaptation," which is the understanding that curriculum materials are changed as they are implemented and that teachers also undergo change as they use the materials (Burkhauser and Lesaux, 2015). The approach of each teacher toward a curriculum must be one of adaptation, which involves creating, omitting and replacing. Teachers 'enact' curriculum materials as they read, evaluate and adapt them; for example, teachers adapt materials by adding or omitting lesson activities, increasing or decreasing teacher control over an activity, or changing the amount of time spent on an activity (Drake and Sherin, 2009).

Furthermore, it is stated that the patterns of adapting a curriculum to a class involves skipping, expanding, and reorganizing (Bümen and Yazıcılar, 2020). Öztürk (2012) regards

teacher autonomy as a condition where teachers abide by the curriculum but also a condition in which teachers' preferences and decisions are effective. The flexibility of the curriculum is a considerably important factor. The curriculum needs to leave teachers space so that they can reflect their own individual decisions in teaching. It is exactly for this reason that MacDonald (2003, p.140) claims that curriculum development experts working independently of schools reduce the impact of the teacher-proof curriculum understanding on teachers' implementation process to a "minimum". The disconnectedness between curriculum "development" and "implementation" left its place to more flexible implementations, such as the "School Based Curriculum Development" understanding, which empowers the teacher further and includes contextual sensitivity in implementations (Şahin and Kumral, 2013). There is a need for studies on such areas as the relationship between the teacher and the curriculum, how curricula are adapted, what kinds of adjustments are made and to what extent they can be made, the dilemmas experienced during the adjustments, what kinds of outcomes simplified curricula produce, what kinds of adjustments develop children further, the dimensions of the expected and needed teacher autonomy, and relationships between teacher autonomy and adjustments (Bümen, 2019). Teachers can implement a curriculum as stated in documents or make some changes and adjustments (Tokgöz, 2013). By stating that teachers should have roles extending beyond being solely the implementer of the curriculum in areas of curriculum implementation or in all in-class activities, it is advocated that the teacher should have an autonomous character (Yazıcılar and Bümen 2015, Öztürk, 2011). In brief, teachers are expected to establish a balance between commitment to the curriculum and teacher autonomy (Becker, 2002; Bümen, 2019). Accordingly, the present study aimed to identify teachers' commitments to the curriculum and teacher autonomy behaviors.

THE PURPOSE OF THE STUDY

The purpose of the present study was to reveal the relationship between teachers' commitment to the curriculum and teacher autonomy. To this end, the answers to the following research questions were sought:

1. What are the levels of teachers' commitment to the curriculum?
2. What are the levels of teachers' teacher autonomy behaviors?
3. Is there a significant difference in teachers' commitment to the curriculum and teacher autonomy behaviours in terms of
 - a. gender,
 - b. professional experience,
 - c. the faculty of graduation,
 - d. the existence of a post-graduate degree, and
 - e. the condition of being a branch teacher?
4. Is there a relationship between teachers' commitment to the curriculum and the sub-dimensions of the teacher autonomy behaviors? If so, what is the level of this relationship?

METHOD

This section presents information on the research design, the population and sample, data collection instruments, and the data collection and analysis processes employed in the present study.

RESEARCH DESIGN

Both the descriptive survey and the relational survey research design approaches, within the scope of quantitative study approaches, were adopted. The responses to the first, second, and third sub-questions of the study were sought by utilizing the descriptive survey. Descriptive studies make a complete and comprehensive description of a given situation or phenomenon.

The most prevalently used descriptive research design in the field of education is the survey (Fraenkel, Wallen and Hyu, 2012, p.15). The survey is the method which is used for the purpose of identifying certain characteristics of a group. In the descriptive survey method, questions are asked to a high number of people via forms such as questionnaires administered online, in person or by mail (Fraenkel, Wallen and Hyu, 2012, pp.12-13). The response to the fourth sub-question was sought by means of relational research. Relational studies are utilized when the aim is to reveal the relationship between more than one variable or when the aim is to make inferences based on this relationship (Fraenkel, Wallen and Hyun, 2012, p.12).

POPULATION AND SAMPLE

The population of the study consists of teachers working at public and private schools across Turkey. According to the 2019-2020 statistics reported by the National Ministry of Education [MoNE], there is a total of 1,117,686 teachers in Turkey. The sample size was calculated based on predicted items by utilizing the value $z_{a/2}=1.96$ for $\sigma = 1.50$, $d = 0.1$ and $\alpha = 0.05$ (Karagöz, 2019):

$$n = \frac{N \cdot \sigma^2 \cdot z_{a/2}^2}{d^2(N-1) + \sigma^2 \cdot z_{a/2}^2}$$

When the values were placed within the formula in the MS Excel file, the sample size was found to be $n=863,69$. The research data were collected by means of convenience sampling, which is one of the non-probability sampling methods. In convenience sampling, researchers establish their sample starting from the most accessible respondents. An important limitation that needs to be mentioned at this point is the decrease in generalizability when non-random sampling is utilized in online questionnaires (Cohen, Manion and Morrison, 2018). The condition of the participant teacher not having read the curriculum at all was identified as a criterion of exclusion in the present study. 1138 teachers were accessed within the scope of the study. However, the data analyses were performed with 956 data since data were eliminated based on such reasons as the participant teachers' inappropriate marking of the data, their lack of reading the curriculum, and the outliers that the analyses yielded. The demographic features of these 956 teachers are presented in Table 1.

Table 1. Teachers' Demographic Characteristics

Variable		Frequency	Percentage
Gender	Female	583	61.0
	Male	373	39.0
Faculty of Graduation	Faculty of Education	725	75.8
	Other Faculties	231	24.2
Type of Teacher	Preschool or primary school teacher	264	27.6
	Branch teacher	692	72.4
Post-graduate degree	No	716	74.9
	Yes	240	25.1
Experience	1-5 years	100	10.5
	6-10 years	166	17.4
	11-15 years	154	16.1
	16-20 years	178	18.6
	21 years and above	358	37.4

It can be observed in Table 1 that more than half of the teachers were female (61%), graduates of the faculty of education (75.8%), and branch teachers (72.4%). It is noticeable that 25% of the teachers held a post-graduate degree. Furthermore, 10.5% of the teachers had teaching experience ranging between 1-5 years, while 37.4% of the teachers had an experience of 21 years and above.

DATA COLLECTION INSTRUMENTS

In the present study, data were collected via the Curriculum Commitment Scale and the Teacher Autonomy Scale. The Teacher Autonomy Scale, which was used to identify the teachers' autonomy behaviors, was developed by Çolak and Altinkurt (2017) by using data obtained from teachers. To determine the participants' degrees of agreement with the items in the scale a 5-degree Likert scale was used: (1) I completely disagree, (2) I disagree, (3) I moderately agree, (4) I agree, (5) I completely agree. The Scale consists of 17 items categorized under four factors: teaching process autonomy, the curriculum autonomy, professional development autonomy, and professional communication autonomy. The variance ratio explained by the four factors was found to be 63.84%. The goodness fit indices that the confirmatory factor analysis yielded were found to be as follows: $\chi^2/df = 2.23$, GFI = .90, AGFI = .86, RMSEA = .06, SRMR = .06, CFI = .97, IFI = .97, NFI = .94, NNFI = .96, PGFI = .66. The Cronbach Alpha internal consistency coefficient for the whole scale was found to be .89, while the coefficients of the dimensions of the scale were as follows: .82 for the teaching process autonomy, .82 for the curriculum autonomy, .85 for the professional development autonomy, and .78 for the professional communication autonomy. The Cronbach Alpha internal consistency coefficient for of the whole scale in the present study was found to be .83, while the coefficients of the scale dimensions were found to be .82 for the teaching process autonomy, .77 for the curriculum autonomy, .74 for the professional development autonomy, and .74 for the professional communication autonomy. The Curriculum Commitment Scale was developed by Yaşaroğlu and Manav (2015) by using data obtained from teachers. The scale consists of 20 items, 16 of which are positively and 4 of which are negatively stated. The Cronbach alpha internal consistency coefficient of the single factor scale was calculated to be .892. The single factor structure explained 35.82% of the variance. The response form consists of a 5-point Likert scale: (5)- "I definitely agree, (4)- I agree, (3)- I am indecisive, (2)- I disagree, (1)- I definitely disagree. The Cronbach alpha internal consistency coefficient within the scope of the present study was calculated to be .90.

DATA ANALYSIS

The statistical analyses run to respond to the sub-questions of the present study were descriptive analyses, correlation analysis, and MANOVA. According to Pallant (2016), prior to MANOVA, the following prerequisites need to be met: elimination of outliers, the variables displaying a normal distribution and multicollinearity, the existence of a multicollinearity relationship, the non-existence of the singularity problem, and the homogeneity of variance-covariance matrix. Accordingly, all the data were analyzed and no missing data were encountered in the data set. In order to identify single variable outliers, whether the z scores were above +3 or below -3 was checked. The outliers that were not between these two values were excluded from the data set. Moreover, the outliers that appeared on the boxplot were also excluded from the analysis. In the final stage, to evaluate the single variable normality, the skewness and kurtosis coefficients of the variables and the histogram graph with the normal distribution curve were examined. As a measure of the normality assumption, the skewness and kurtosis coefficients need to fall between -1 and +1 (Morgan, Leech, Gloeckner & Barrett, 2004). It was observed that none of the scores were between the ± 1 limits and thus the scores did not display a significant deviation from the normal distribution. Hence, the single-variable normality assumption was obtained. To identify whether the variables display multivariate normal distribution, examining whether there are outliers in relation to the variables is recommended. In this way, it is claimed, any outliers that challenge the linearity assumption can be encountered (Büyüköztürk, 2019). To this end, first of all, the Mahalanobis distances for all the dependent variables to be used in MANOVA analyses were calculated. The data with Mahalanobis distances above 13.82, which was the value identified for the two variables, were removed from the data set. In the

final stage, the Mahalanobis distance values were found to range between .002 and 11.048, which are below 13.82, the value identified for a minimum of two variables (Pallant, 2016). When the Mahalanobis distances obtained in the present study were examined, it was observed that there were no outliers. Upon the examination of the scatterplot graphs of all paired relationships of the dependent variables, it was observed that the graphs were of oval shape and thus there was no condition that threatened linearity. When both variables display a normal distribution and if there is a linear distribution between two variables, the scatterplot graph displays an oval shape (Tabachnick and Fidell, 2013). The correlation analysis conducted to check the multicollinearity yielded a high correlation. The homogeneity assumption of the covariance matrices was tested by utilizing the Box's M Test. In this test, if the $p(\text{sig.})$ value is smaller than 0.05, the assumption cannot be confirmed, but if the $p(\text{sig.})$ value is greater than 0.05, the assumption is confirmed. In the tests conducted, because the $p(\text{sig.})$ value was above 0.05 ($p > 0.05$), it can be said that the homogeneity assumption of the variance-covariance matrices was met. The analyses that were conducted were interpreted based on the percentage, frequency, mean, and standard deviation values of the variables at the significance level of 0.05. The Cohen's d statistic, related to the level at which the significant variance was impacted by the difference between the mean values, was reported. The values obtained by measuring the eta square were interpreted as follows: .01= small effect size, .06= moderate effect size, .14=big effect size (Cohen, 1988).

ETHICAL PROCEDURES

The data of the present study were obtained by means of the "online survey". The reason for choosing this technique was based on the fact that it was highly difficult to reach teachers in person as schools were closed during the pandemic. Data were collected via online survey provided by Google Forms. On the first page of the online survey, information regarding the purpose of the study was presented. On the second page, the informed consent button was given. By pressing the "I read and confirm" button, the participants passed on to the questions in the questionnaire. This research was conducted after the Bandırma Social and Humanities Sciences Ethical Association of Onyedi Eylül University approved that the study was ethically appropriate.

FINDINGS/RESULTS

In this section, the results which the analyses yielded are presented respectively under the four sub-questions of the study.

FINDINGS REGARDING TEACHERS' CURRICULUM COMMITMENT LEVELS

The scores that teachers received in the 20-item Curriculum Commitment Scale ranged between 20-100. On the other hand, the scores of the teachers participating in the study were found to fall between 62-100. It was observed that the teachers' mean values in the Curriculum Commitment Scale ($\bar{X} = 85.32$) were above the scale median score. Thus, it can be deduced that teachers remain committed to the curriculum.

Table 2. Descriptive Statistics of the Teachers' "Curriculum Commitment Scale" Scores

Scale	n	Number of Items	min	max	$\bar{X}$	s
Curriculum Commitment	956	20	62.00	100.00	85.32	8.31

FINDINGS REGARDING TEACHERS' AUTONOMY BEHAVIORS

The score that teachers can get from the 17-item teacher autonomy scale ranges between 17 and 85. The scores of the teachers participating in the present study were observed to fall between 46 and 85. Hence, the teachers' mean scores from the Teacher Autonomy Scale ($\bar{X} = 66.19$) were found to be above the median value of the scale. Thus, it can be deduced that

teachers displayed autonomous behaviors. In the sub-dimensions of teaching process autonomy, curriculum autonomy, professional development autonomy, and professional communication autonomy, it was found that teachers received scores that were above the mean score value. Thus, it can be deduced that teachers displayed autonomous behaviors in the teaching process, the curriculum, professional development and professional communication /.

Table 3. Descriptive Statistics of the Teachers' "Teacher Autonomy Scale" Scores

Scales	n	Number of Items	min	max	$\bar{X}$	s
Teacher Autonomy	956	17	46,00	85,00	66,19	7.91
Teaching Process Autonomy	956	6	11.00	30.00	23,73	3.39
Curriculum Autonomy	956	5	7.00	25.00	19,27	3.11
Professional Development Autonomy	956	3	3.00	15.00	11.38	2.41
Professional Communication Autonomy	956	3	3.00	15.00	11.81	2.28

FINDINGS REGARDING CURRICULUM COMMITMENT AND TEACHER AUTONOMY BEHAVIORS BY GENDER

When the MANOVA results in Table 4 are examined, statistically significant difference can be observed between the independent variables of female and male, $F(2,953)=5.12$; $p=.006$; Wilks' Lambda=.99; Partial Eta Squared=.01.

a. Variance by Gender;

Table 4. The MANOVA Results of Teachers' Curriculum Commitment and Teacher Autonomy Behaviors by Gender

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	.99	5.12	2.00	953.00	.006	.011

In Table 5, the results obtained for the dependent variables are addressed separately and the between-subjects effects are presented.

Table 5. Tests of Between-Subjects Effects and Group Mean Scores by the Gender Variable

Dependent Variable	Gender	n	$\bar{X}$	s	df	Mean Square	F	Sig.	Partial Eta Squared
Curriculum Commitment	Female	583	85.92	7.98	1	543.04	7.92	.005	.008
	Male	373	84.38	8.72					
Teacher Autonomy	Female	583	66.09	7.91	1	13.71	.22	.640	.000
	Male	373	66.34	7.92					

It can be observed in Table 5 that there is a significant difference between the female and male teachers' scores in the dependent variable of commitment to the curriculum: $F(1,955)=7.92$; $p=.005$; Partial Eta Squared=.008. When mean scores are examined, it can be seen that female teachers, when compared with male teachers, have a higher level of commitment to the curriculum. However, the effect size is small, and no significant difference is found between females and males in terms of teacher autonomy.

b. Variance by Professional Experience;

The MANOVA results in Table 6 shows that there is no statistically significant difference in terms of the independent variable of professional experience: $F(8, 1900)=1.01$; $p=.427$; Wilks' Lambda=.99; Partial Eta Squared=.01. That is, the teachers' commitment to the curriculum and autonomy behaviors do not vary based on professional experience.

Table 6. The MANOVA Results of Teachers' Curriculum Commitment and Teacher Autonomy Behaviors by Experience

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared

Professional Experience	.99	1.01	8.00	1900.00	.427	.004

c. Variance by Faculty of Graduation;

The examination of the MANOVA results in Table 7 shows that there is a significant difference between the independent variables of graduation from an education faculty and non-education faculty, $F(2,953)=5.33$; $p=.005$; Wilks' Lambda=.99; Partial Eta Squared=.011.

Table 7. The MANOVA Results of Teachers' Curriculum Commitment and Teacher Autonomy Behaviors by Graduation

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Faculty of Graduation	.99	5.33	2.00	953.00	.005	.011

In Table 8, the results obtained for the dependent variables are addressed separately, and the between-subjects effects are presented.

Table 8. Tests of Between-Subjects Effects and Group Mean Scores by the Variable of Faculty of Graduation

Dependent Variable	Faculty of Graduation	n	$\bar{X}$	s	df	Mean Square	F	Sig.	Partial Eta Squared
Commitment to the Curriculum	Education	725	85.35	8.37	1	2.86	.04	.839	.000
	Non-Education	231	85.22	8.14					
Teacher Autonomy	Education	725	66.64	8.01	1	608.34	9.82	.002	.010
	Non-Education	231	64.77	7.42					

Upon examination of the values in Table 8, it can be observed that there is a significant difference between the dependent variables of being a graduate of an education faculty or a non-education faculty in terms of teacher autonomy scores: $F(1, 954)=9.82$; $p=.002$; Partial Eta Squared=.01. The mean scores show that the teachers who are graduates of a education faculty display higher levels of autonomy behaviors. However, the effect size is small, and there is no significant difference in terms of commitment to the curriculum.

d. Variance by Post-Graduate Degree;

When the MANOVA values in Table 9 are examined, it can be observed that there is no statistically significant difference between having or not having a post-graduate degree: $F(2,953)=5.33$; $p=.531$; Wilks' Lambda=.99; Partial Eta Squared=.001. That is, teachers' commitment to the curriculum and their autonomy behaviors do not vary based on post-graduate education.

Table 9. The MANOVA Results of Teachers' Curriculum Commitment and Teacher Autonomy Behaviors by Post-Graduate Degree

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Post-graduate degree	.99	.63	2.00	953.00	.531	.001

e. Variance by the Condition of Being a Branch Teacher;

The MANOVA values in Table 10 show that there is a statistically significant difference between being a branch teacher and not being a branch teacher: $F(2,953)=518.31$; $p=.000$; Wilks' Lambda=.96; Partial Eta Squared=.037.

Table 10. The MANOVA Results of Teachers' Curriculum Commitment and Teacher Autonomy Behaviors by the Condition of Being a Branch Teacher

Independent Variable	Wilks' Lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Being a Branch Teacher	.96	18.31	2.00	953.00	.000	.037

In Table 11, the results for dependent variables have been addressed separately and the between-subject effects are presented.

Table 11. Tests of Between-Subjects Effects by the Variable of Being a Branch Teacher Condition and Group Mean Values

Dependent Variable	Branch	n	$\bar{X}$	S	df	Mean Square	F	Sig.	Partial Eta Squared
Curriculum Commitment	Preschool and Primary School	264	87.50	7.67	1	1737.12	25.81	.000	.026
	Branch	692	84.49	8.40					
Teacher Autonomy	Preschool and Primary School	264	68.14	8.03	1	1384.35	22.64	.000	.023
	Branch Teacher	692	65.45	7.74					

When Table 11 is examined, it can be observed that there is a statistically significant difference between the branch teachers and non-branch teachers in terms of both curriculum commitment ($F(1, 954)=25.81$; $p=.000$; Partial Eta Squared=.026) and teacher autonomy behaviors ($F(1, 954)=22.64$; $p=.000$; Partial Eta Squared=.023). The mean scores show that preschool and primary school teachers have higher levels of curriculum commitment and autonomy behaviors. The effect size is small.

FINDINGS REGARDING THE RELATIONSHIP BETWEEN TEACHERS' CURRICULUM COMMITMENT AND AUTONOMY BEHAVIORS

According Büyüköztürk (2019), coefficients smaller than 0.30 show a low correlation, those between 0.30 and 0.70 show a moderate degree of correlation, and those above .70 display a high correlation. Thus, when the pearson correlation coefficients in Table 12 are interpreted based on these criteria, it can be observed that there is a moderate level of positive correlation between teacher autonomy and curriculum commitment ($r=.340$).

Table 12. The Relationship between Curriculum Commitment and the Sub-Questions of Autonomy Behaviors of Teachers

	Curriculum Commitment	Teacher Autonomy	Teaching Process Autonomy	Curriculum Autonomy	Professional Development Autonomy	Professional Communication Autonomy
Teacher Autonomy	.340**	1	-	-	-	-
Teaching Process Autonomy	.259**	.808**	1	-		-
Curriculum Autonomy	.231**	.759**	.552**	1	-	-
Professional Development Autonomy	.211**	.635**	.288**	.283**	1	-
Professional Communication Autonomy	.255**	.560**	.262**	.150**	.330**	1

** $p<0.001$, $n=956$

When the relationships between teachers' commitment to the curriculum and the sub-dimensions of teacher autonomy were examined, it was revealed that was a low level of positive correlation between curriculum commitment and teaching process autonomy ($r=.259$), curriculum autonomy ($r=.231$), professional development autonomy ($r=.211$), professional communication autonomy ($r=.255$). On the other hand, a high level of positive correlation was found between teacher autonomy and curriculum commitment ($r=.759$) and teaching process autonomy ($r=.808$).

DISCUSSION AND CONCLUSION

This research was carried out to find an answer to the first sub question of “what are the levels of teachers’ commitment to the curriculum?” Based on the results of the present study, it can be concluded that teachers are committed to the curriculum and they display teacher autonomy behaviors. Similarly, autonomy scores with respect to teaching process, curriculum, professional development and professional communication were observed to be high. Similar to the results in the present study, Aslan and Erden (2020) reported that even though teachers’ levels of commitment to the curriculum were high, mean scores for the variables of duration, differences among curricula, and teacher education remained at a moderate level. Moreover, Burul (2018) stated that teachers’ commitment or “adherence” to the curriculum in terms of the dimensions of “dose”, “the quality of program delivery”, “participant responsiveness”, and “program differentiation”, teacher education, and school climate dimensions had high mean scores. Moreover, Darama, Karaduman, Kahraman and Gundogdu concluded that as a result of the interviews made with the teachers those who implement the curriculum are undecided about the curriculum (2018). Tokgöz (2013) maintained that even if teachers remained committed to the curriculum, how the materials should be used was not expressed clearly in the curriculum, and thus, the textbooks provided for guidance throughout the implementation within the scope of the centralized curricula made teachers remain committed to the centralized curriculum. Moreover, Bümen, Çakar and Yıldız (2014) maintained that a renewal in the curriculum did not guarantee novelties in class and teacher behaviors.

Different from the results that the present study yielded, Yazıcılar (2016) reported that even though teachers had the perception that they needed to strictly abide by what was stated in the program of the yearly plan, they made many adjustments during the teaching process. Dikbayır and Bümen (2016) revealed that the teachers who were interviewed in different high schools were found to be displaying low levels of behaviors in the dimension of curriculum commitment. In another study (Han, 2013), it was revealed that teachers’ levels of commitment to the curriculum were low, while their functional paradigms were close to the original curriculum. Bay, Kahramanoğlu, Döş and Turan Özpolat (2017) revealed in a study conducted with science teachers that the mismatch between topic distribution and the time allotted were factors impacting commitment to the curriculum. Even though teachers remained committed to the curriculum, as stated by Becker (2002), curricula do not come in a single size to fit all. Strict commitment to curricula can cause needs to be overlooked. Becker (2002) and Bümen (2019) suggest that there needs to be a balance between commitment to and adjustment of the curriculum. According to Furtak et al. (2008), studies that investigate the match between the intended curriculum, the enacted curriculum and the achieved curriculum shed light on commitment to the implementation of the curriculum. In the present study, based on the finding that the overall mean scores of teachers’ commitment to the curriculum were observed to be high, it can be stated that teachers do not leave educational conditions to random implementations, that the centralized curriculum guides them, and they adopt changes made in the curriculum.

Regarding teacher autonomy answering the question “what are the levels of teachers’ teacher autonomy behaviors?” That the findings of the present study revealed that teachers displayed autonomy behaviors, with high autonomy sub-scores obtained in the dimensions of teaching process, curriculum, professional development and professional communication is consistent with some findings reported by other studies in the literature (Öztürk 2012; Üzümlü 2014, Yazıcı; 2016, Yorulmaz, Çolak and Çiçek-Sağlam 2018; Tokgöz Can, 2019). Öztürk (2012) reported that teachers were autonomous in the process of teaching as they were observed to include some topics that were not in the curriculum in their scope of teaching, to address

topics differently from how they were prescribed in the curriculum, to cover some topics more comprehensively than they were suggested in the annual plan, and to pass some topics quickly. In an experimental study conducted in Estonia by Errs et al. (2014), it was reported that teachers' participation in local decisions regarding centralized programs increased their professional autonomy perceptions. Different from the results of the present study with respect to autonomy, Şakar-Aslan (2013) stated that centralized exams prevented teachers from establishing a teaching approach peculiar to themselves. Güvenç (2011) reported that primary school teachers supported students' autonomy but did not provide students with sufficient decision making opportunities. The reason why teacher autonomy behaviors were at a high level in the present study could be attributed to the fact that teachers could reflect their own decisions and preferences in teaching methods and materials (Pearson and Moomaw, 2005).

As for third sub question is whether a significant difference in teachers' commitment to the curriculum and teacher autonomy behaviours in terms of gender, it was observed that female teachers were more committed to the curriculum when compared with male teachers. As for teacher autonomy behaviors, no significant difference emerged between female and male teachers.

Different from this result regarding commitment to the curriculum, no significant difference by gender was reported by Aslan and Erden (2020) in relation to primary school teachers and by Burul (2018) as regards primary and secondary school teachers. However, similar to the findings of the present study, Tokgöz Can (2019), Şakar-Aslan (2013), and Çolak and Altinkurt (2017) reported that there was no significant difference between teachers' autonomy behaviors and gender. Different from this finding, Yazıcı (2016) identified a significant difference between the teaching process and the curriculum autonomy sub-dimensions. Üzüm, (2014), Çelik (2016), and Yorulmaz et al. (2018) stated that male teachers' general autonomy perceptions were higher.

In the present study, in terms of professional experience, no significant difference was observed between teachers' commitment to the curriculum and their teacher autonomy behaviors based on professional experience.

In consistency with the results of the present study, commitment to the curriculum by primary school teachers as reported by Aslan and Erden (2020) and by primary and secondary teachers as stated by Burul (2018) did not show variance by professional experience. Furthermore, in a case study on Target Oriented Curriculum (TOC) conducted with three experienced teachers in Hong Kong by Carless (2001), it was revealed that while one teacher displayed behaviors predisposed to TOC, the other two teachers learned about the curriculum while they implemented it. Hence, based on the results of both this study and other related studies, it can be stated that teachers' being experienced or novice did not have an impact on curriculum commitment.

On the other hand, different from the results obtained in the present study, Egeler (as cited in Yıldırım, 2003) stated that experienced teachers had the tendency to prepare their daily lesson plans in a detailed manner and to use more teaching routines. Moreover, Burkhauser and Lesaux (2015) expressed that senior teachers were able to modify their program materials more effectively by taking into consideration both student needs and regional standards. The novice teachers followed the curriculum more closely and were more open to the lessons that the new curriculum could teach them. Most of the experienced teachers, on the other hand, resisted using and learning from the new materials; they tended to adopt or adapt the materials without fully engaging with them. In doing so, the authors suggest that these teachers may have missed opportunities that the novice teachers were able to capitalize on.

The finding that teacher autonomy behaviors do not show variance by professional experience is consistent with the finding reported by Çelik (2016). Different from this result, Yılmaz et

al. (2018) revealed that senior teachers believed that the school environment did not support autonomy very much. In a study by Canbolat (2010), it was revealed that teachers with low experience adopted educational autonomy more readily than experienced teachers did, but that senior teachers' education autonomy were more applicable. According to MacBeath (2012), teachers with a higher level of autonomy felt a higher level of job satisfaction, motivation and self-efficacy.

In the present study, related to the faculty of graduation, teachers who graduated from a education faculty were observed to display a higher level of teacher autonomy behaviors when compared to non-education faculty graduates. However, no significant difference was found between their commitment to the curriculum.

In consistency with this finding, Burul (2018) also revealed that teachers' commitment to the curriculum did not show variance in all the sub-dimensions based on the type of school graduated from. The reasons underlying this could be attributed to the fact that teachers who graduate from different education institutions do not perceive teaching as a job finding anxiety, that they give importance to their life-long learning, that they can make adaptations based on their own style, and that the quality of the education provided to the students display similarity.

In contrast to the findings of the present study, Üzümlü (2014) revealed that graduates from a non-education faculty had higher levels of autonomy perceptions. That teachers are found to have high levels of autonomy behaviors in this and other related studies is important with respect to the quality of the education provided. However, different from the present study, Özaslan (2015) revealed that participants from different types of school had common perceptions regarding the results of teacher autonomy dimensions and lack of autonomy. This condition could also be evaluated positively with respect to teachers' professional development autonomy. Anderson (1987) states that teacher autonomy development could, like a mirror, be reflective of teacher experience and status.

In the present study, regarding the existence of a post-graduate degree, it was revealed that teachers' commitment to the curriculum and their teacher autonomy behaviors varied depending on whether or not they held a post-graduate degree.

In consistency with this finding, Çelik (2016) and Tokgöz Can (2019) reported that teacher autonomy did not vary with respect to level of education. However, Aslan and Erdem (2020) found that secondary teachers' commitment to the curriculum varied by level of education. Şahin and Kumral (2013) stated that most teacher candidates held a "fixed" image that indicated a perspective where the curriculum could not be changed and that its content that needed to be strictly followed, and they perceived the teacher as a "technician". However, teacher autonomy is regarded as a prerequisite for teachers' own professional growth and also a result of professional training (Steh and Pozarnik, 2005). In the related literature, no curriculum commitment studies in terms of the post-graduate variable was encountered. However, it is stated in the literature that a transformation in teachers' mind-set is needed with respect to how the curriculum and the teaching profession are viewed during the preservice teacher training (Şahin and Kumral, 2013).

It was revealed in the present study that concerning the condition of being a branch teacher, when compared to branch teachers, preschool and primary school teachers displayed higher levels of commitment to the curriculum and teacher autonomy behaviors.

In consistency with this finding, Burul (2018) reported that primary school students were more committed in the school climate dimension when compared to secondary and high school students (Moomaw, 2005). Pence, Justice and Wiggins (2008) stated that preschool students remained more committed to the quality of Language focused curriculum (LFC) implementation. In another study by Çobanoğlu (2011), it was found that the beliefs of preschool teachers significantly predicted the way the curriculum was implemented. Hence,

the finding reported in this and other related studies that preschool and primary school teachers remained committed to the curriculum at a higher level than branch teachers could be attributed to the fact that teachers have lower-aged students, the curriculum includes holistic (mihver) subjects, the students possess holistic perception styles, and the students are given a lot of homework assignments. The relevant finding of the present study is also consistent with the situation the writers have stated.

Similar to the finding that preschool and primary school teachers display higher levels of teacher autonomy behaviors, Çolak and Altinkurt (2017) also stated that preschool and primary school teachers displayed higher levels of autonomy behaviors in the dimensions of teaching process and the curriculum when compared with vocational high school teachers. The lowest level of autonomy behaviors with respect to teaching process were identified among high school and vocational high school teachers. Different from this finding, Tokgöz Can (2019) stated that teacher autonomy did not vary based on the branch of the teacher. Furthermore, Öztürk (2012) reported that no significant difference was observed in the annual plans prepared by different teachers. According to the writer, when this situation is evaluated in terms of teacher autonomy, the impact of teachers' preferences and decisions are highly limited. Lepine (2017) stated that due to the complicated management structure of school, teachers' autonomy can change as ruled.

It is stated that schools that run in a bureaucratic manner do not value their teachers' opinions during decision making processes and that this prevents the development of teacher autonomy. That there was a significant difference between teacher autonomy behaviors in terms of the branch variable in the present study could be attributed to the fact that preschool and primary school teachers are together with their students for more than one academic year, learning is based on play, teachers closely witness their students' development in terms of cognitive, affective, and transformational learning, there are more social activities, and there are more frequent meetings with parents. All these are believed to increase teacher autonomy. *In the present study, related to the last sub question*, a moderate level of positive relationship was observed between teacher autonomy and commitment to the curriculum. However, a low level of positive relationship was observed between the teachers' commitment to the curriculum and the teaching process autonomy, curriculum autonomy, professional development autonomy and professional communication autonomy.

Thus, if teachers' commitments to the curriculum is in positive development, their autonomy behaviors improve. Webb (2002) conducted an interpretive case study in the Washington, USA, with 5 teachers and a school principal at a state school to investigate how teachers made use of autonomy. Teachers used their autonomy to make changes in the centralized curriculum after identifying their students' academic and emotional needs. Hence, it is observed that teachers' autonomy domains are in line with their professional beliefs and their professional education services and that their authority and participation in decisions are supported. These conditions increase commitment to the curriculum and thus the balance between these two elements would be established.

The present study revealed that there was a high level of positive relationship between teacher autonomy and curriculum and teaching process autonomies. In accordance with the finding, there are significant relationships among teacher autonomy dimensions. The strongest relationship is between curriculum autonomy and teaching process autonomy. Accordingly, the more teachers are autonomous in the curriculum, the more autonomous behaviors they display in the teaching process. This condition, which does not allow for the exact enactment of the curriculum in the literature, is explained with the concept of adaptation (Bümen, 2019). By making use of matrices, Drake and Sherin (2009) explained the strategies that teachers used before, during and after the implementation of the renewed curriculum to read, evaluate and use adaptation strategies such as replacing, creating, and omitting and revealed that

teachers made use of a wide variety of adaptation strategies owing to their prior experiences. Furthermore, it was reported by Yazıcı (2016) that among the autonomy dimensions, teachers displayed professional communication the most, while in other studies (Çolak and Altinkurt, 2017; Tokgöz- Can, 2019), it was reported that they displayed autonomy in the teaching process and professional development autonomy the most. With respect to adaptation, Bümen and Yazıcılar (2020) determined the following: While teachers at state high schools made adaptations in order to complete learning gaps, teachers at private high schools focused on increasing success and on preparing students for the university entrance exams. Thus, it can be claimed that teachers' curriculum adaptation behaviors are dependent on their professional experience and teaching styles (Drake and Sherin, 2009) or on the perception of autonomy within the school environment (Bümen and Yazıcılar, 2020). It was concluded in the present study also that despite centralized curricula, teachers displayed high levels of autonomy behaviors. That teachers display near-high levels of autonomy behaviors is important for the quality of education.

SUGGESTIONS

- 1) Even if teachers remain committed to the curriculum, the adjustments made should be compared with respect to their alignment with the original curriculum. As there are different findings regarding teacher autonomy behaviors, studies employing mixed designs could be conducted to investigate teaching process autonomy.
- 2) As there are different results regarding teacher autonomy in the literature, qualitative research studies could be conducted on the autonomy provided to teachers.
- 3) The reasons underlying differing findings with respect to the professional experience variable should be addressed in more depth in future studies.
- 4) In future studies teachers as a source could be categorized and quantitative studies on levels of autonomy dimensions and case studies examining how autonomy is implemented can shed light on the details of this topic.

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DIGITAL TECHNOLOGY USE OF KINDERGARTEN TEACHERS FOR PARENTAL INVOLVEMENT: E-NVOLVEMENT IN THE TURKISH CONTEXT

Abstract: The primary research aim of this current study was to better understand the digital technology use of Turkish kindergarten teachers in their parental involvement practices. A questionnaire designed by the authors was administered to 100 kindergarten teachers in five cities located within Turkey. It was revealed in the study results that the kindergarten teachers owned a variety of electronic devices and used those devices for both personal and educational purposes within the early childhood education setting. Teachers used digital technologies for their parental involvement practices less than they did for their own personal use or for other activities within the educational setting. The parental involvement types where teachers most often used digital technologies were for parenting and communicating. While the least popular parental involvement types where kindergarten teachers used digital technologies were decision-making and collaborating with the community. Teachers mentioned the two most common reasons for insufficient technology use for parental involvement were the parents' financial status and level of knowledge. A negative relationship between teachers' personal technology use and experience in the field increased, they were less likely to encounter problems regarding digital technology use for parental involvement.

Keywords: E-nvolvement, early childhood education, digital technology use, parental involvement

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INTRODUCTION

The early years of a child's life are a crucial period in the development of their cognitive, social, emotional, linguistic, and physical skills (Berk, 2003; Sommer, Samuelsson & Hundeide, 2013; Bakken, Brown & Downing, 2017). Importantly, through educational experiences in early childhood education (ECE) young children should be supported in every developmental domain including the accompanying short- and long-term benefits (McCoy et. al, 2017). Because of this importance, it is critical to investigate factors which affect success in ECE (Galindo & Sheldon, 2012). One of these factors is parental involvement (PI), which can be described as 'parent and teacher collaboration [in] children's learning' (Uludağ 2008, 809), and due to it being one of the quality determinants of ECE, PI and its effects have been investigated by a considerable number of researchers (McCoy, Yoshikawa, Ziol-Guest, Duncan, Schindler, Magnuson, Yang & Koepp, 2017; Morrow & Malin, 2004; Pianta, Barnett, Burchinal, & Thornburg, 2009; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2004). In past studies, compelling proof of the positive impact of PI on educational institutions, parents, and children's real time well-being as well as future success has been presented (Jeynes, 2005; 2012).

Despite the widely recognized benefits of PI, there remains a difference between what is suggested for PI through research and policy, and what is implemented in educational institutions as PI practices (Epstein, 2016; Hornby & Lafaele, 2011). As a result, the disconnect between research and practice has led to insufficient PI practices, which are severing the connection between home and school. (Christenson & Sheridan, 2001; Henderson & Berla, 1994). In previous research within the Turkish ECE context, kindergarten teachers find PI practices in their institutions to be insufficient, even though they agree on the importance of PI in quality ECE (Hakyemez, 2015). One factor that may be leading to this gap in understanding is the differences in how PI is defined. While the core of PI is the presumption of parents and educators sharing equal responsibility for children's learning (Organisation for Economic Cooperation and Development [OECD], 2001), PI is broadly defined as parents' involvement in their children's schooling (Grolnick & Slowiaczek, 1994). Although this broad definition is easy to present, it is still challenging to fully describe it in an absolute manner because PI is a loaded and multi-faceted concept (Bakker & Denessen, 2007) that parents and educators may conceptualize differently (Moore & Lasky, 1999; Rapp & Duncan, 2012). For example, while parents might define PI as taking their children to school and providing them with what they need for their education, for educators PI can mean the active participation and hands-on support of children in the learning process (Anderson & Minke, 2007; Lau Li, & Rao, 2012).

The aforementioned barriers for successful PI are not only based on different definitions but also stem from both educator, parent, and institution-related factors such as school environment (Berger, 2008), parents' social, emotional (Berger, 2008; Hill & Taylor, 2004; Taylor, Clayton & Rowley, 2004), and economic background (Lareau, 1987; Mahmood, 2013) as well as cultural and ethnic concerns (Baker & Stevenson, 1986; Hindman, Miller, Froyen & Skibbe, 2012). With the new technological advances of the modern era, there are new possibilities to close this gap and improve PI practices (Patrikakou, 2016). Digital technologies may help the schools and parents overcome the obstacles previously mentioned such as providing a variety of opportunities for parents to respond to and interact with teachers as well as opportunities for teachers to provide feedback. On the one hand, technology creates new and practical channels for supporting PI practices, while on the other, it might fall short especially regarding its accessibility across large and varied populations. As a result, another aim of this current study was to shed light on the possible shortcomings of digital technology use for PI within the ECE setting.

To define technology supported parental involvement, the term parental e-nvolvement was introduced. Parental e-nvolvement is defined as “parental efforts to plan, engage in, support, monitor, and/or assess the learning experiences of their children either at home or at school by predominantly using technological devices and media” (Şad, Konca, Özer & Acar, 2016). Importantly, a variety of actions for both teachers and parents are offered through parental e-nvolvement. For example, teachers can prepare e-portfolios, find sources and materials from the internet, easily communicate with parents and children via voice or video chat, and/or attend online courses for their professional development regarding PI. Meanwhile, parents can engage in a topic with their child through online searches to reach information as well as communicate with other parents, teachers, and/or school administrators. However, Runcorn (2018) reports that although some parents use digital technologies in daily life, they are not successful in using them for parental involvement due to social, cultural, socio-economic, and/or technological obstacles. Therefore, parents may need effective and consistent support as well as specific parental involvement opportunities that focus on digital technologies (Olmstead, 2013). As previously expressed, one of the barriers to successful parental involvement is that parents and teachers may not be available at the same time. However, the dynamic and asynchronous nature of communication provided through digital technologies can help cope with this challenge (Thompson, Mazer & Grady, 2015). Therefore, digital technologies within the context of parental involvement are often found to be mainly used by teachers and parents for communication (Ho, Hung & Chen, 2013).

USE OF DIGITAL TECHNOLOGIES AND PARENTAL E-NVOLVEMENT

More and more digital technologies have become a fundamental part of teachers' lives (Edwards, 2016). Although many kindergarten teachers use digital technologies daily, the implementation of digital technologies into their teaching practices often differs. The primary factors kindergarten teachers reported for influencing their use of digital technologies in ECE were age and years of experience (Inan & Lowther, 2010), self-efficacy (Sang, Valcke & Tondeur, 2010), competence and experience with digital technologies (Hew & Brush, 2007), and the attitudes of teachers towards using digital technologies within the classroom (Inan & Lowther, 2010). Although most kindergarten teachers have positive attitudes towards using digital technologies in ECE, they also think that digital technologies are difficult to use in this manner (Konca & Erden, 2021; Lindahl & Folkesson, 2012). Therefore, they may under use digital technologies within the ECE classroom because of a perceived difficulty of use. Some studies reveal that kindergarten teachers mostly use digital technologies for preparation of materials and activities as well as for music-based classroom activities (Russell, Bebell, L. O'Dwyer & O'Connor, 2003; Simsar & Kadim, 2017; Yurt & Cevher-Kalburan, 2011). In a recent study, it was reported that kindergarten teachers preferred using televisions and computers in the classroom in order for the children to watch cartoon films and listen to music (Konca & Erden, 2021).

Although the research mentioned above implies limited use of digital technologies, teachers can provide a variety of learning experiences for young children through developmentally appropriate learning environments and activities (National Association for the Education of Young Children [NAEYC] & the Fred Rogers Center, 2012). Also, successful two-way parent-school communication is important for parental involvement as parents should be encouraged to actively engage with the school community and listen to the school staff, while also giving attention to their children's needs (Young et al., 2013). Therefore, technology is widely used for increasing communication opportunities between parents and teachers such as blog-based home-school communication (Ozcinar & Ekizoglu, 2013) as well as through technology supported feedback systems (Oinas, Vainikainen & Hotulainen, 2017). In addition, utilizing classroom newsletters through blogs and social media can also enrich and improve the connection between the classroom and home (Walsh, Cromer & Weigel, 2014). For example,

online teacher and family communities can connect home and school through common or shared goals, interactivity, collaboration, and a sense of belonging (Zhang, Du, Sun & Ding, 2018). Besides, videos can provide rich information about children's in-school activities as well as promote parents' understanding of their children's development (Walsh, Romo & Jeon, 2018). Providing families with up-to-date and comprehensive information through digital technologies can also increase parents' engagement in their children's educational process (Gauvreau & Sandall, 2019). Through an action study, Cruz and Miranda (2019) show that teachers' using digital technologies to improve parental involvement results in more engagement of parents' in their children's school activities as well as a better understanding of the educational process. However, it is reported that barriers to teachers' technology use for communicating with parents were problems with connection quality, lack of time and skills of teachers, and additional fees for digital communication (Konca, Ozel & Zelyurt, 2016; Şad, Konca, Ozer & Acar, 2016). Besides, some parents seem to prefer face-to-face interaction rather than a voice call (Sormunen, Kirilina, Goranskaya & Tossavainen, 2018). Hosick (2018) investigates perceptions of parents and teachers regarding use of digital technologies for supporting parental involvement and indicates that teachers express the supportive nature of digital technologies regarding parent-teacher communications and fostering parent involvement. Digital technologies can ease communication even though teachers and parents have busy schedules. Teachers also express that parents' seeing actual footage of children's experiences through videos and photos help in their understanding of the children's school atmosphere.

Websites are used as a way of digitally communicating with parents to share news, announcements, and school activity information as well as pictures and videos of student's work. However, this avenue for digital sharing may be ignored because updating the website may require technical knowledge and more effort than is the case with the current social media platforms. In a study, Moss, Bergren and Maughan (2019) report that fewer than one third of schools have websites and very few have a page that belongings to teachers. Besides, parents are reluctant to use websites as is reported in one study that parents visit the websites of schools and teachers only 1 to 2 times per month (Olmstead, 2013).

Today, digital technologies are in many cases one of the most pervasive elements of people's lives. Just as in many other areas of technology, they have also gradually integrated into education. Now, digital technologies play a pivotal role in the educational development of children. There is an increasing interest by policymakers, administrators, teachers, and parents towards integrating digital technologies into education (Keengwe, 2007). Televisions, computers, touch screen devices, internet access, digital game-based learning opportunities and some software programs are the first that come to mind when digital technologies are considered for an educational context. In this current study, the use of digital technologies in the context of PI practices within ECE were explored. In Turkey, early childhood curriculum underlines the importance of parental involvement and encourages kindergarten teachers to improve parental involvement (Ministry of National Education, 2013). However, although teachers have positive attitude towards the use of digital technologies in ECE, it was revealed that they used digital technologies for certain activities (Simsar & Kadim, 2017).

In a position statement by the NAEYC and the Fred Rogers Center (2012) regarding use of technology in ECE, teachers should use digital technologies to "help children save, document, revisit, and share their real-life experiences through images, stories, and sounds" (p. 7). Parent involvement is influenced by processes and complex relationships, rather than parents' simply attending events, and as a result, schools have a role of reaching out to parents for improving their involvement (Ferrara, 2009). Therefore, through digital technologies great opportunities can be provided for teachers to document children's work and share it with children's families.

For this current research, PI is described as a multi-faceted collaboration between parents and educational institutions in various activities, which are conducted through kindergarten teachers' initiatives. As a result, the multidimensional nature of PI through the PI types suggested by Epstein's (2016) overlapping spheres of influence (OSoI) model were explored. Epstein (2016) explains the dynamics of PI in her model, which is concentrated on the role played by educators (Tekin, 2011). In this model, Epstein (2016) proposes six types of PI:

- *Parenting*; helping parents providing a supportive environment for their children.
- *Communication*; implementing different ways to inform parents about educational activities and their children's progress.
- *Volunteering*; encouraging parents to contribute to educational activities.
- *Home learning*; designing activities for parents to support their children's learning at home.
- *Decision-making*; involving parents in the decision-making process of the educational institution.
- *Collaborating with the community*; including community resources and services for educational programmes.

The current study adopts OSoI model as theoretical framework and was designed based on those PI types. To complete the theoretical framework, research tool created accordingly. In this way, the aim of this research was to explore the current state of digital technology use in PI practices within ECE from the point of view of educators. In addition to getting a grasp of viewpoints regarding use of technology in PI, the teachers' personal digital technology use, their attitudes towards using digital technology in ECE, and potential insufficiencies in their practices were also investigated. Results derived from this research could be used to integrate digital technologies in PI practices of teachers, and improve parental involvement in ECE. The research questions of this research were provided below;

- What is the current state of kindergarten teachers' technology use in early childhood education for parental involvement in Turkey?
- What are the associations between kindergarten teachers' technology use for parental involvement and their gender, experience in the field, and personal technology use of teachers?
- What are kindergarten teachers' self-reported obstacles that prevent technology use in parental involvement?
- What are the associations between kindergarten teachers' self-reported obstacles that prevent technology use in parental involvement and gender, experience, and personal technology use of teachers?

METHOD

This quantitative study is designed as a cross-sectional descriptive survey placing research in positivist paradigm (Fraenkel & Wallen, 2009). The main purpose was to gain descriptive information regarding kindergarten teachers' technology use in parental involvement. Additionally, the relationship between background variables on their technology use for parental involvement and the reasons behind the insufficient methods are investigated.

SAMPLE

Data were collected from 100 early childhood educators through a survey. Accessible population was 2187 kindergarten teachers working at a public early childhood education school in chosen five cities which were situated in central region of Turkey, near country's capital city. Cluster sampling method was used and 20 kindergarten teachers from each city included in the sample. There were a variety of reasons for choosing the cities as the research

sample. Firstly, the population of these cities were not as dense as larger metropolitan areas in Turkey, which allows for the data to be more representative of the regional population. Secondly, there may have been stark differences between the larger and smaller cities in terms of technological resources. Investigating the state of technology use for PI practices in smaller cities creates an opportunity to catch a glimpse of the bigger picture. Finally, this sampling method allowed for the data collection to be completed easily, because one of the researchers was residing in the targeted region. the Detailed demographic information of the participants.is presented in Table 1.

An online data gathering tool was used in addition to face-to-face data collection procedures. While printed version of the questionnaire was administered to 65 teachers, 35 teachers fulfilled the questionnaire through online version. The permission to conduct the current research was granted by the Ministry of National Education (TMOE) following application submission in 2018. Although there was no approved IRB for the study, ethical considerations (European Early Childhood Education Research Association [EECERA], 2015) were taken into account throughout the study. First, included in the questionnaire was informed consent which only targeted the early childhood educators; therefore, no details regarding minor children were pursued. Then, even though no personal information except for gender was gathered at any point in this study, the gathered information was kept completely anonymous.

Table 1. Descriptive statistics of participants' background variables

Variable	N	%
Gender		
Female	86	86
Male	14	14
Age		
20-30 years old	36	36
31-40 years old	52	52
41-50 years old	12	12
Experience in the field		
7 months - 5 years	24	24.7
>5-15 years	56	57.7
>15-35 years	17	17.5
Education level		
Open university (bachelor)	4	4
University (bachelor)	92	92
Master's degree	4	4
Age group		
3 years old	6	6
4 years old	16	16
5 years old	56	56
6 years old	22	22
Type of ECE institution		
Public kindergartens	53	53
Private kindergartens	4	4
Public ECE classroom in a primary school	43	43

INSTRUMENT

The survey instrument was a questionnaire prepared and administered by the authors and the language used was Turkish. The questionnaire was designed to measure early childhood educators' technology use regarding parental involvement practices as well as within their own personal life. Within the framework of Epstein's model, an item pool was created by the authors of the research. The items aimed to combine digital technology use and parent involvement practices of teachers. To ensure validity of the questionnaire, the item pool was presented to an

expert group which consisted of a researcher focusing on parental involvement, a researcher from instructional technology department, and an expert in the field of measurement and evaluation. The last version of the questionnaire was piloted through administering to a group of kindergarten teachers. As there was no need for revising, the piloted version of the questionnaire was used for entire data collection of this research. A reliability test was conducted for all items in the questionnaire, and it was determined to be reliable (see Table 2).

Table 2. Instrument

Name of the section	Number of items	Type of the items	Reliability score (α)
Personal technology use "Technology is an indispensable part of my life"	19	Multiple choice and 5-point Likert (1-strongly disagree, 5-strongly agree)	.78
General view on technology use PI "I feel supported in my technology use"	12	5-point Likert (1-strongly disagree, 5-strongly agree)	.71
Parenting "Parents can reach me via e-mail when they need my assistance"	14	5-point Likert (1-never, 5-always)	.87
Communication "I communicate with parents via e-mail"	13		.81
Volunteering "I take photos of parents' volunteering activities"	9		.82
Learning at home "I give simple homework for children to do with their parents by using technological devices"	5		.79
Decision-making "I use a Facebook group to involve parents in decision-making"	6		.75
Collaborating with the community "I share newsletters via e-mails to inform parents about the community activities for children"	12		.88

DATA ANALYSIS

Method of the text should mainly give information about the methodological construction and the process followed throughout the study. Descriptive and inferential statistics were used in this study. Descriptive statistics were utilized to describe kindergarten teachers' use of digital technologies for parental involvement. A multiple regression and a logistic regression analysis were used to predict teachers' digital technology use for parental involvement based on their gender, work experience, and personal digital technology use. According to Tabachnick and Fidell (2007) sample size, multicollinearity, outliers, normality, linearity, and independence of residuals assumptions should be checked before conducting the regression analysis. To ensure multicollinearity, correlations between the independent variables were below .80, VIF scores were below 10, and tolerance values were above .20. When Mahalanobis distance was checked, no outliers was seen. To check normality, linearity and homoscedasticity, residual scatter plot was checked, and concluded that the assumption was verified. Lastly, Durbin-Watson score showed that independence of residuals assumption was satisfied.

RESULTS

KINDERGARTEN TEACHERS' USE OF DIGITAL TECHNOLOGIES FOR PARENTAL INVOLVEMENT

The personal use of digital technologies among kindergarten teachers was surveyed to determine if this in any way influenced their use of digital technology for parental involvement.

As presented in Table 3, kindergarten teachers owned a variety of electronic devices, and as can be seen, ownership of a smartphone (94%), television (90%), and computer (84%) was widespread among participating teachers. Also, half of the teachers reported using their devices to connect to the internet for more than two hours per day. Regarding the use of digital devices for educational purposes in an ECE setting, they reported using social media (81%), accessed online sources such as blogs (80%), checked e-mail (73%), used the devices for planning activities/materials (61%), listened to music/watched videos (52%), and made video calls (27%). As many of them were social media users, the platforms they utilized were also investigated. WhatsApp (95%), Instagram (67%), YouTube (63%), and Facebook (56%) were the most common social media platforms reported being used by the teachers.

Table 3. Personal digital technology use of kindergarten teachers (N=100)

Device Ownership		Average Time Spent Online	
Computer	84%	0-1 hour	19%
Smartphone	94%	1-2 hours	33%
Television	90%	2-3 hours	20%
Digital Camera	36%	3-4 hours	12%
Printer	78%	4+ hours	16%
Personal Use Purposes		Platforms	
Social Media	81%	Facebook	56%
Music/video	52%	Twitter	18%
Video chatting	27%	Instagram	67%
Plans/materials	61%	WhatsApp	95%
E-mail	73%	Pinterest	46%
Accessing sources	80%	YouTube	63%

As a first step in understanding how Turkish early childhood educators viewed technology use in general as well as within PI practices, the educators' personal technology use was investigated. The mean score ($M_{PTU} = 3.68$, $SD = .484$) showed that Turkish early childhood educators hold positive views regarding technology use in their personal lives.

Kindergarten teachers were also queried about how often they used technology in their PI practices. It is shown in their responses that Turkish early childhood educators incorporated technology into their PI practices less than they used digital technology in their personal lives and/or for other activities within the educational setting (Table 4).

Table 4. Early childhood educators' technology use for personal, educational, and parental involvement purposes

	Minimum	Maximum	Mean	Std. Deviation
Personal technology use (PTU)	2	5	3.68	.484
Technology use for parental involvement				
<i>Parenting</i>	1	4.64	3.06	.746
<i>Communication</i>	1	3.62	2.88	.756
<i>Volunteering</i>	1	4.44	2.55	.784
<i>Learning at home</i>	1	4.00	2.69	.887
<i>Decision-making</i>	1	4.17	2.12	.836
<i>Collaborating with the community.</i>	1	4.17	2.42	.839
<i>TOTAL</i>	1	4.12	2.46	.517

The popularity of technology use in different types of PI are demonstrated through descriptive statistics presented in Table 4. According to the mean scores, the most common type of PI in which kindergarten teachers used technology was *parenting* ($M = 3.06$, $SD = .746$), while the

least popular was *decision-making* ($M = 2.39$, $SD = .836$). Moreover, the overall mean score of kindergarten teachers' use of technology for PI was 2.26 ($SD = .517$).

ASSOCIATIONS BETWEEN KINDERGARTEN TEACHERS' TECHNOLOGY USE FOR PI AND THEIR BACKGROUND

To investigate how well teachers' gender, work experience, and personal use of technology predicted their technology use for parental involvement, a multiple linear regression analysis was carried out. Besides, Cohen's f^2 values were calculated to determine effect size. Results of the regression analysis were presented in Table 5.

Table 5: Results of Multiple Regression Analysis between predictor variables and PI types

	B (B Coefficients)	Multiple Regression	ANOVA			F (e.size)
Parenting	<i>Gender</i> =-2.968 (-.107)	$R=.420$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.010 (.085)	$R^2=.177$	Regression	3	1428.819	5.935*
	<i>Pers. Tech. Use</i> =.582* (.422)	$S.E.=8.95800$	Residual	83	6660.393	(.22)
Communication	<i>Gender</i> =-3.221 (-.131)	$R=.195$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.000 (-.001)	$R^2=.038$	Regression	3	239.867	1.094
	<i>Pers. Tech. Use</i> =.213 (.175)	$S.E.=8.55055$	Residual	83	6068.285	(.04)
Volunteering	<i>Gender</i> =-2.064 (-.115)	$R=.350$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.017* (.220)	$R^2=.123$	Regression	3	414.855	3.869*
	<i>Pers. Tech. Use</i> =.237* (.265)	$S.E.=5.97826$	Residual	83	2966.387	(.15)
Learning at home	<i>Gender</i> =-.140 (-.014)	$R=.320$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.005 (.106)	$R^2=.103$	Regression	3	111.244	3.166*
	<i>Pers. Tech. Use</i> =.158* (.313)	$S.E.=3.422$	Residual	83	972.148	(.12)
Decision making	<i>Gender</i> =-.417 (-.035)	$R=.201$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.005 (.091)	$R^2=.041$	Regression	3	61.030	1.170
	<i>Pers. Tech. Use</i> =.111 (.187)	$S.E.=4.170$	Residual	83	1443.153	(.05)
Collaborating with the community	<i>Gender</i> =.458 (.019)	$R=.225$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.013 (.122)	$R^2=.051$	Regression	3	309.029	1.481
	<i>Pers. Tech. Use</i> =.236 (.197)	$S.E.=8.34016$	Residual	83	5773.334	(.06)
Parent Involvement	<i>Gender</i> =-8.419 (-.092)	$R=.410$	Source	<i>df</i>	<i>SS</i>	$F (f^2)$
	<i>Experience</i> =.050 (.124)	$R^2=.168$	Regression	3	11031.66	3.959*
	<i>Pers Tech. Use</i> =1.548* (.340)	$S.E.=28.09614$	Residual	83	77079.982	(.21)

As presented in Table 5, the linear combination of gender, experience, and personal technology use of teachers significantly predicted the PI types of parenting, volunteering, and learning at home. While teachers' personal technology use did significantly contribute to the models, gender and experience did not, so this means that there was an association between teachers' personal digital technology use and their digital technology use for parental involvement.

REASONS FOR NOT USING TECHNOLOGY FOR PI PRACTICES BY PI TYPE

As was determined from the results of this current study, participants stated that insufficient technology use occurred in at least one of the six types of PI. Overall, more than half of the participants reported insufficient technology use in all six of the parental involvement types (Table 6). Among these six types, using technology to involve parents in the decision-making process was rated as the most problematic with 70% of participants stating insufficient technology use for this specific PI type. On the other hand, according to 58% of participants, the least problematic PI type for technology use mentioned was communication.

To identify the reasons why technology use was insufficient among kindergarten teachers during specific types of PI, frequency tests were run for the multiple choice items for possible reasons (participants could choose more than one option). These options were as follows:

1. Use of technology is not suitable for this type of PI
2. I do not have sufficient knowledge on use of technology for this type of PI
3. I do not have sufficient technological equipment to use for this type of PI
4. Parents oppose to use of technology for this type of PI
5. School administrators oppose to use of technology for this type of PI
6. Parents' financial status is not sufficient to use technology for this type of PI
7. Parents' level of knowledge is not sufficient to use technology use for this type of PI
8. Our education system does not support the technology use for this type of PI
9. Education legislations are limiting the use of technology for this type of PI
10. It is hard to use technology for this type of PI
11. I do not find beneficial to use technology for this type of PI

Table 6. Percentages of self-reported reasons for insufficient PI practices

	PI practices are insufficient (%)	Reasons for insufficiency (%)										
		1	2	3	4	5	6	7	8	9	10	11
Parenting	63	0	6	14	2	1	25	29	13	11	12	5
Communication	58	1	1	4	8	1	20	22	11	7	13	7
Volunteering	67	9	7	15	4	0	23	19	11	9	10	4
Learning at Home	65	5	7	8	4	2	22	20	5	8	9	8
Decision Making	70	18	3	9	8	2	19	18	7	5	13	5
Collaborating with the Community	69	11	4	8	5	2	23	27	6	9	8	87

As a result, the two most common reasons cited for insufficient technology use across all PI types were that “Parents’ financial status is insufficient to use technology for this type of PI” and “Parents’ level of knowledge is insufficient to use technology for this type of PI”. The least common reason cited was that “School administrators oppose the use of technology for this type of PI” (Fig. 1). Additionally, none of the participants provided any other type of response to the open-ended question option.

THE ASSOCIATIONS BETWEEN THE REASONS AND BACKGROUND VARIABLES

To understand the underlying reasons behind participants’ stated problems, the relationship between the problems encountered and the teacher’s demographic variables were analyzed. A logistic regression analysis was conducted to investigate the association between teachers’ gender, experience, personal technology use, and whether teachers encountered problems during their technology use for parental involvement. Teachers’ problems were converted to 0-1 level before the analysis. While 0 referred to no problem encountered, 1 referred to teachers encountered problems during technology use for parental involvement.

Table 7. Results of logistic regression analysis between the problems encountered and demographic variables of teachers

	B	S.E.	Wald	Sig.
Gender	.226	.884	.065	.798
Experience	-.009	.004	6.231	.013
Personal Tech. use	-.081	.042	3.647	.056
Constant	6.531	2.515	6.740	.009

It was indicated in the results from the regression analysis in this current study, that there was a significant relationship between gender, experience, personal technology use, and problems

of teachers during parental e-nvolvement ($\chi^2(3)=11.221$). Although gender (Wald = .065, $p>.05$) did not significantly relate to the problems stated by participants, the experience of teachers (Wald = 6.231, $p<.05$), and personal technology use of teachers (Wald = 4.113, $p<.05$) did significantly influence the problems they encountered during digital technology use for parental involvement. Therefore, it was indicated in these results, that as personal technology use and experience of teachers increased, they were less likely to encounter problems regarding digital technology use for parental involvement.

DISCUSSION

The overarching goal of this current study was to better understand the digital technology use of Turkish kindergarten teachers in their parental involvement practices by highlighting the predictors of e-nvolvement as well as the reasons behind their self-reported insufficiency. For this purpose, the frequency of digital technology use for different PI types was investigated, along with kindergarten teachers' personal and professional use of digital technology. Based on the findings of this current study, it was determined that kindergarten teachers actively employed digital technologies in their daily life. Also, they owned a variety of digital devices, and utilized them for several different purposes such as social media, e-mail, accessing online sources, and planning activities/materials for their classrooms. According to Yurt and Cevher-Kalburan (2011), it is common that Turkish kindergarten teachers use digital technologies for planning their educational activities and accessing informative resources. Moreover, it is stated that they have positive attitudes regarding digital technology use in both their daily life and classroom settings (Kol, 2015; Sahin, Tas, Ogul, Cilingir & Keles, 2014).

In this current study, first research question was addressing the kindergarten teachers' technology use for parental involvement and it was determined that although participants actively used and had positive views regarding digital technology use in their personal life and educational activities, their use of digital technologies for parental e-nvolvement was found to be considerably low. In a previous study focusing on parental involvement activities by Hakyemez (2015), it is reported that Turkish kindergarten teachers prefer communication as a parental involvement modality more often than they do involving parents as volunteers or within the decision/making process. Considering their general gravitation towards communication as a parental involvement type, it was not surprising that they commonly integrated technology into this type of parental involvement. Similarly, Gu (2017) reports in a case study conducted in Sweden that school websites are mostly used for communication purposes rather than catering to the other types of parental involvement.

On a more general level, the total mean score for parental e-nvolvement was low which indicated that participating teachers infrequently used digital technologies for parental e-nvolvement. In order to answer the third research question, which is to uncover teachers' self-reported obstacles that prevent technology use in parental involvement, it is important to investigate the parental involvement practices of Turkish kindergarten teachers on a more general level as well as their self-reported reasons for their insufficient practice of parental involvement. It is shown in previous research that although Turkish kindergarten teachers' value parental involvement and use it often, they still state their practices were insufficient (Hakyemez, 2015). Importantly, similar results were also determined in this current study, where kindergarten teachers regarded technology use as important for ECE but also believed e-nvolvement practices were insufficient. This can be evidence that a gap between the rhetoric and practice exists (Cottle & Alexander, 2014; Hakyemez, 2015; Hakyemez-Paul, Pihlaja & Silvennoinen, 2018; Hakyemez-Paul, Lähteenmäki & Pihlaja, 2021; Hornby & Lafaele, 2011). When it comes to the kindergarten teachers' reasons for low parental e-nvolvement, the two most stated reasons were parents' financial status and lack of knowledge regarding parental e-

nvolvement. Although kindergarten teachers linked financial status of parents to the availability of digital devices in households, it is revealed in a recent nationwide report that 98.7% of families own a smartphone, 55.5% have a computer, 26.7% have a tablet computer, and 88.3% have access to the Internet (Turkish Statistical Institute [TUIK], 2019).

As previously mentioned, it is reported in other studies that there is a gap between what educators think regarding parental involvement and how the practices are carried out, which in the end results in the insufficiency of these practices. For example, in a study by Epstein (2016), some of the primary reasons for insufficiency in parental involvement practices are the lack of time, personal differences between teachers and parents as well as a lack of knowledge and training among parents. Although in this study the use of digital technology was proposed as a solution to such barriers, it was shown in the results that even though use of digital technology did aid in overcoming issues with time, such implementations continued to have limitations and this brings the attention back to the gap between rhetoric and practice (Cottle & Alexander, 2014; Hakyemez, 2015; Hornby & Lafaele, 2011). However, these limitations seemed to be quite like those reported for parental involvement practices that revolved around parents' resources and capabilities. At this point a contradiction surfaces; even though the digital technology use is very common in Turkish households (TUIK, 2019), participants of this study linked financial status of parents to the availability of digital devices hence the low level of parental e-nvolvement. These results were especially surprising considering that participants reported most of their students came from middle class families and therefore were expected to have the financial means and an acceptable knowledge for owning and using digital technologies. This contradiction might be a sign that teachers had a misconception of parents' resources and capabilities, which requires further investigation to clarify.

Finally to answer the fourth research question, the association between self-reported obstacles that prevent technology use in parental involvement and background variables such as gender, experience, and personal technology use of teachers was investigated because along with self-reported reasons, there are also a variety of other factors that influence teachers' digital technology use in early childhood education (Konca et al., 2016). Background variables of teachers are highlighted as one of the categories regarding the difficulties and barriers of teachers' integrating digital technologies into early childhood education (Sang et al., 2010). Importantly, experience in early childhood education (Inan & Lowther, 2010) as well as the competency and personal technology use of preschool teachers (Hew & Brush, 2007) are key factors that likely affect teachers use of digital technologies in early childhood education (Inan & Lowther, 2010). Although Turkish kindergarten teachers practices and views regarding parental involvement did not correlate with their experience in the field (Hakyemez, 2015), similar to previous studies, it was revealed in this current study that personal technology use and the experience of kindergarten teachers influenced their parental e-nvolvement as well as the problems they encountered during parental e-nvolvement. It was implied through these results that although kindergarten teachers' technology use for parental involvement and their personal purposes differed, the use of digital technologies for personal use significantly predicted teachers' parental e-nvolvement. In other words, the more they used digital technologies in their personal life, the more they were found to use digital technologies in parental e-nvolvement. In addition, the more teaching experience the teachers' gained, the more they tended to practice e-nvolvement. This might be a result of the more years spent in ECE, they also became more experienced with digital technology use, and as a result, become more comfortable implementing parental e-nvolvement.

Bruniges (2003) defines the purpose of digital technology use in education as a means *"To improve and increase the quality, accessibility and cost-efficiency of the delivery of education, while taking advantage of the benefits of networking learning communities together to equip them to face the challenges of global competition"* (p. 3). According to this perspective, digital

technologies can be utilized to support parental involvement by strengthening the communication and collaboration between home and school. Also, use of digital technologies can help diminish barriers to successful and strong parental involvement, and as a result, may lead to parents becoming more active in their children's educational process. However, based on teachers' self-reported reasons for insufficient parental e-nvolvement practices, it was shown in this current study that the connection was severed between the teachers and parents. Although teachers do share information about their students' with the parents, they often prefer one-way communication (Hakyemez-Paul, Lähteenmäki & Pihlaja, in press) or in other cases parents tend not to provide a response (Hagel & Brown, 2008). So, it appears parental e-nvolvement can provide bilateral communication which leads to a strong relationship between home and school. Importantly, active parents play key roles in their children's education and digital technologies can improve this activation (Ho, Hung & Chen, 2013), provided that the Turkish kindergarten teachers' conception of parents is refined.

CONCLUSION

In conclusion, this current study determined that even though digital technology was a part of Turkish kindergarten teachers' personal life and they considered their digital technology use as a positive aspect in their educational activities, use of digital technologies for parental e-nvolvement was considerably low. Importantly, participants stated the importance of digital technology in their parental involvement practices, and also believed e-nvolvement practices were insufficient. This finding shows that Turkish kindergarten teachers are aware of their limitations when it comes to parental e-nvolvement practices. Participants mostly stated that parents' financial status and lack of knowledge were the reasons for the insufficient parental e-nvolvement.

This study revealed that although the kindergarten teachers are well-accustomed with the technology use in their personal and professional life, they did not adopt these technologies to involve parents. In order to overcome this barrier, the communication between home and school should be strengthen. In this way kindergarten teachers can evaluate the resources available to the parents and decide on a suitable technologic device. Additionally, considering the fact that the more technology kindergarten teachers use in their personal life, the more they use e-nvolvement.

Aside from practical implications, this study also presents some opportunities for further research. With more participants a more in-depth understanding of digital technology use for parental involvement practices in the Turkish ECE setting could be achieved. Nonetheless, based on the results of this study, it can be concluded that kindergarten teachers may benefit from trainings on adopting digital technologies in parental involvement. Considering that parental involvement also requires parents' efforts, such trainings/workshops would be beneficial for them as well.

This research was conducted in early childhood education settings that were affiliated with the Turkish Ministry of National Education. Since the governance of ECE in Turkey is shared between the Ministry of National Education and the Ministry of Family and Social Policies, there may be differences between institutions that are affiliated with these differing governmental ministries. As a result, further research is necessary that includes ECE institutions not governed by TMoE. Similarly, studies that are targeted towards private institutions could benefit this research in terms of providing more detailed and generalizable results.

Finally, as recognized in the results of this current research, teachers' views as well as their e-nvolvement practices were the primary focus, and it was revealed that educators considered parents' financial and educational background as barriers for e-nvolvement. Thus, in further research the views and attitudes of parents should also be investigated. Considering the latest

report from the Turkish Statistical Institute (2019), it is recognized that digital technologies are widespread among Turkish families, therefore, investigations should be carried out into how families perceive and utilize digital technologies for educational purposes.

There were some limitations in this current study due to the number of kindergarten teachers who participated. the research was only conducted within the central parts of these municipalities. As the number of participants of this study is limited the results might not reflect the e-nvolvement practices for the whole country. Besides there were still a variety of tests that could not be carried out because of assumptions that were not fully met with a number of the participants.

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ASSESSING NEEDS OF PARENTS WITH CHILDREN WITH DISABILITIES IN TURKEY

Abstract: The universal experience of parents with a child with disabilities are added responsibilities and needs in supporting the child's development. This study assessed the nature and extent of needs identified by parents of children with disabilities in Turkey using a Turkish translation of the Family Needs Survey (Bailey, Blasco & Simeonsson, 1992). The survey of 35 items and two open-ended questions was translated to reflect Turkish culture and linguistic equivalency. The psychometric properties of the Family Needs Survey were examined by administering it to 377 mothers and 297 fathers of children with disabilities, served in special education schools or rehabilitation centres. Factor analysis of data for mothers and fathers yielded a six-factor model explaining 56% and 61% of the variance, respectively. Alpha values for the factors of the survey ranged from .63 to .90 for the mother data set, and .80 to .91 for the father data set. Analyses of endorsed needs in the Family Needs Survey revealed an overall similar profile for both parents, with greater needs expressed for the factors of obtaining information, family and social support and community services than for factors pertaining to financial topics, explaining to others and child care. Mothers and fathers identified 35 additional needs reflecting themes of personal and societal concern related to parenting a child with disabilities in Turkey.

Keywords: Family Needs Survey, Turkish families, validity, reliability, children with special needs

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INTRODUCTION

The universal experience of parents with a child with disabilities is the increase of responsibilities and needs in supporting the child's health and development. In order to meet these responsibilities families, need information, resources, support, and services for their child and themselves. The social welfare state and the community plays a role in the provision of services and education for the child, though families assume major responsibility for the child, with mothers usually taking on the primary caregiver role (Bailey, Blasco & Simeonsson, 1992; Burton-Smith, Mcvilly, Yazbeck, Parmenter & Tsutsui, 2009). In this regard, a survey on problems and expectations of individuals with disabilities in Turkey revealed that 49.6% of the care and responsibility of individuals with disabilities are undertaken by their mothers and 18.2% by their spouses (TSI, 2010). The reality that mothers being the primary caregivers for children with disabilities in Turkey improved paid leave and wage policies as well as increasing child cash assistance and kindergarten benefits for mothers. With the mother having primary responsibilities for the child with disabilities it is essential to identify not only her needs for information and services but also those of the father in his supporting role. Within a family-centered approach in the delivery of services to families in Turkey, the added needs of children and adults with disabilities have been the basis for legal regulations and development planning related to health, education, and social benefits (disability pension, the same and cash assistance) (Decree Law No. 573; Özyaydın & Gallagher, 2012).

In Turkey, all public and private special education services are under the responsibility of the Ministry of National Education. To benefit from these services, children with special needs are required to get a medical diagnosis from a health institution that is also free for everybody. Based on a medical diagnosis, children are assigned to general education or Special Education Schools in accordance with special education practices. An element of the placement decision is that the children with special needs can receive educational support during out-of-school hours from Special Education and Rehabilitation Centers. Special education services are provided also to children between the ages of 0-3 with special needs and developmental disabilities by Special Education and Rehabilitation Centers. Children with special needs between the ages of 0-3 in Turkey are provided special education services even though not enforced and these services do not focus on their families (Ertem, 2005; Özyaydın & Gallagher, 2012). The adoption of an approach based on inadequacies in the national education system that focuses on the individual leads to the provision of services for children, however, leaves families one step behind their children. There are other countries in similar situation where priorities of the families are considered as secondary importance (Ertem, 2017; McWilliam, 2010; Ueda et al., 2013). Families' involvement in their children's education and social services is supported in Turkey. In this context, many institutions providing social services and assistance are grouped under a single roof by the Ministry of Family, Labor, and Social Services. Thus, education, health, social services for individuals with special needs and their families are guaranteed by the official system in Turkey.

EI programs based on the developmental and environmentalist approach have adopted the principle of supporting parents to enable them as effective actors in the development of special needs children (Bronfenbrenner & Ceci, 1994; Guralnick, 2008; Sameroff & Rosenblum, 2006). The main philosophy of EI programs is to focus on the family as the primary caregiver and protector of the child, to strengthen the parent-child interaction, to provide guidance, and to direct them in the right directions about their children's health and safety (Guralnick, 2011; McWilliam, 2010). For this reason, in a family-centered approach to serve children with special needs and their families Bailey and Simeonsson (1988) emphasize the need to assess the strengths and weaknesses of the family, the parent-child interaction, the developmental characteristics of the child and the needs of the parents. Identifying the needs of families with

children with disabilities therefore becomes a priority to define and achieve program and service goals. A widely used tool to assess the needs of families of children with disabilities was the Family Needs Survey -1988 which had six subscales (Bailey & Simeonsson, 1988) and was adapted to investigate the services and needs of Australian family carers (Burton-Smith et al., 2009). The initial version of the Family Needs Survey (Bailey & Simeonsson, 1988) was adapted to Turkish by Sucuoğlu (Sucuoğlu, 1995). Turkish version of the Family Needs Survey was used to determine the needs of parents of children with intellectual disabilities (Evcimen, 1996), mothers with hearing-impaired children (Akçamete & Kargın, 1996), and of mothers with premature-low birth weight children (Sola & Diken, 2008) in Turkey. In addition, Mert (1997) examined its factor structure and used it to compare the needs of parents with children in different disability groups. An update of the validity and reliability of the survey adapted by Sucuoğlu was made by Cavkaytar, Ardiç, & Aksoy (2014).

The Family Needs Survey -1988 was revised by Bailey and Simeonsson in 1990 and was renewed with 7 sub-dimensions and 2 open-ended questions by adding 1 open-ended question (Bailey et al., 1992). The 35 items of the Family Needs Survey yielded subscales of; Obtaining Information (seven items), Family & Social Support (eight items), Financial Topics (six items), Explaining to Others (five items), Child Care (three items), Professional Support (three items), and Community Services (three items). The questionnaire format of the revised Family Needs Survey was well received by parents and also provided useful information for professionals (Bailey & Blasco, 1990). Findings with the revised Family Needs Survey revealed that the primary needs expressed by mothers and fathers were to have information about the services that their children may need in the current and future services, and how to teach them (Bailey et al., 1992).

The Family Needs Survey -1990 has been adapted for use in many countries (Bailey et al., 1999; Chen & Simeonsson, 1994; Granlund & Roll-Pettersson, 2001; Ueda et al., 2013). There is a need to adapt the Family Needs Survey -1990 considering changes in the globalizing world, technological developments, legal regulations, and the results of evidence-based research on adaptation of the Family Needs Survey to other cultures (Chen & Simeonsson, 1994; Ueda et al., 2013). The aim of this study was to examine the needs identified by Turkish mothers and fathers of children with special needs with a revised adaptation of the Family Needs Survey -1990 for Turkish culture and language. Using the revised Family Needs Survey, this study addressed four research questions: (1) What is the validity of the Turkish adaptation of the Family Needs Survey? (2) What is the nature and intensity of needs on the Family Needs Survey endorsed by mothers and fathers? (3) In addition to Family Needs Survey, what are additional needs expressed by parents beyond the items already in the Family Needs Survey? (4) What priorities do parents identify for professional support to meet the needs of their children with special needs? An important and distinctive feature of this study is that the final version of the survey will be published online for the first time within the scope of this article.

METHOD

PARTICIPANTS AND SETTING

The participants of the study were 644 parents (355 mothers and 289 fathers) of children with disabilities between 18 month-15 years of age who attended Special Education Schools or Special Education and Rehabilitation Centers in the six central districts of Ankara during the 2014-2015 academic year. The criterion sampling method was used in sample selection. The criteria used for the recruitment of the sample were the following: a) being parents of children between the age of 0 and 15 attending Special Education Schools or Special Education and Rehabilitation Centers in six districts in Ankara representing different socio-economic status b) being parents of children who had a medical diagnosis from a health institution and were placed

in Special Education Schools or Special Education and Rehabilitation Centers and c) being volunteered to participate in the study.

School administrators sent the questionnaires to 1114 parents who met the sampling criteria. These included two-parent families, one-parent families, or households in which only one parent chose to participate. Among them, 379 out of 557 mothers and 300 out of 557 fathers answered the questionnaire and returned the forms. Five forms were completed by individuals who were not parents of children (mother form, $n = 2$; father form, $n = 3$) and were excluded from the data set. The total number of participants in the analysis was 674 parents (377 mothers and 297 fathers). Of the parents who answered the Turkish version of the Family Needs Survey, 275 were mother-father couples, 95 of them were mothers only, and 29 of them were fathers only. The mean age of the mothers was 36.35 years, $SD = 6.94$ (range 21-41 +years) and that of fathers was 40.49, $SD = 6.85$ (range 26-41+). The demographic characteristics of the parents are presented in Table 1. The mean age of the participant children with special needs ($n=399$) represented by the parents was 11.9 and their characteristics were presented in Table 2 which was based on the classification system of the Special Education Services Regulation (2012).

Table 1. Demographics of Parent Participants

	Mothers (n=377)		Fathers (n=297)	
	n	%	n	%
Age				
21 & under	5	1.3	-	-
22-25	16	4.2	-	-
26-30	58	15.4	17	5.7
31-35	87	23.1	48	16.2
36-40	80	21.2	64	21.5
41 & above	81	21.5	107	36.0
No response	50	13.3	61	20.6
Educational Level				
Illiterate	6	1.6	2	0.7
Elementary&Middle School	188	50.0	106	35.7
High School	94	25.0	69	23.2
University	50	13.1	65	21.9
Masters Degree	9	2.3	13	4.3
No response	30	8.0	42	14.2
Occupation				
Housewife/No job	296	78.5	32	10.8
Has a job	40	10.6	213	71.7
No response	41	10.9	52	17.5

Table 2. Special Education Services Classification of Children

Conditions of the Children	N=399	
	n	%
Intellectual disability	118	28.02
Autism	76	19.04
CP	46	11.52
Chronic illness	44	11.02
Learning disorders	23	5.26
Cognitive developmental disability	22	5.51
Speech and language disorders	18	4.51
Visual impairment	16	4.01
Attention deficit hyperactivity disorder	10	2.50
Orthopedic disorders	10	2.50
Hearing impairment	9	2.25
Emotional / behavioral disorders	7	1.75

PROCEDURES

The process proposed for survey adaptation by Hambleton and Patsula (1999) was carried out in three stages; (1) Translation and back translation of the survey, (2) Pre-pilot study, (3) Pilot study, and psychometric analysis. These studies, respectively, are explained in the following. Initially, during the adaptation process, the Family Needs Survey -1990 was translated from English to Turkish by three field experts and two foreign language experts. In the process of translating the items into Turkish, field experts preferred the phrase “I need” used in the first version of the survey (Bailey & Simeonsson, 1988), as it was more appropriate for the Turkish language. The translated forms were arranged in a single form reflecting the consensus of researchers, and suggestions of a Turkish language expert. The final Turkish language version of the survey was sent to 10 professionals in the field of special education who were familiar with both languages and cultures for review. Based on the suggestions of the field professionals, item (# 4), which was not in the original survey, “I need convenient care services for my child during tasks such as shopping, personal medical checks, or going to hair-dresser” was added to the Child Care dimension. The reverse translation of the survey was finalized by the researchers in consultation with the author of the original survey. In this process, 36 items in Turkish form were re-reviewed. Parents responded to each item on a three-point rating scale similar to the original scale. In addition, the researchers added items about child and parent demographic information. The two open-ended questions (“Please list other topics or provide any other information that you would like to discuss” and “Is there a particular person with whom you would prefer to meet?”) were also included.

After the Turkish Family Needs Survey is finalized, permission was obtained from the Provincial Directorate of National Education in order to conduct the study in 12 Special Education Schools and 32 Special Education and Rehabilitation Centers in six districts of Ankara, Turkey. For the pilot study, the Turkish form of the Family Needs Survey was administered to 25 mother-father couples before administering it to larger groups. Based on the pilot study results, the Turkish version of the Family Needs Survey was considered satisfactory semantically, conceptually, and inapplicability. Researchers distributed the printed Turkish Family Needs Survey questionnaire to the administrators in the chosen schools after the pilot phase. The questionnaire was enveloped separately for mother and father of each child. The school administrators gave the instructions to parents who agreed to answer the questionnaires and parents returned filled forms to the administrators. Data sets were checked for missing data and incorrect input, outlier values before proceeding to psychometric analysis (Büyüköztürk, 2002; Kline, 2005; Steiger, 2007). Forms with missing data (22 mothers, 8 fathers) were excluded and analyzes were performed on the data obtained from a total of 644 participants. Thus, the pilot study and psychometric analyses were performed on data obtained from a total of 644 participants (355 mothers and 289 fathers).

DATA ANALYSIS

Data sets were analyzed to confirm the factor structure. Cronbach's Alpha internal consistency coefficient was calculated separately for the data set for mothers and fathers. Given the original seven-factor structure of the survey, Confirmatory Factor Analysis was used LISREL 8.71 version and applied to assess whether the same factor structure applied to data for responses for mothers and fathers in the Turkish culture. These findings indicate that the original 7-factor measurement model of the survey does not adequately fit the data collected in Turkish culture. In that case, Exploratory Factor Analysis was used SPSS 25 version applied to the data sets for both.

Parents answered the first open-ended question by identifying issues not included in the Family Needs Survey. The responses were evaluated by descriptive analysis (Yıldırım & Şimşek, 2018). All of the statements were reviewed by the researchers, and assigned to one of three codes based on the content: (a) covered the same topics as in the Family Needs Survey, (b)

described/exemplified existing items in the Family Needs Survey, or (c) reflected new topics (Bailey & Simeonsson, 1988). For the second open-ended question, parents identified the top five of 16 professionals who they felt could provide information and support about their needs: (Primary Care Physician, Pediatrician, Child Neurologist, Physical Therapist, Dentist, Nurse, Psychiatrist, Psychologist, Social Worker, School Principal, Special education teacher, Classroom teacher, School). These positions are defined by the State Personnel Presidency in Turkey (State Personnel Presidency, 2021).

RESULTS

WHAT IS THE EVIDENCE FOR THE RELIABILITY AND VALIDITY OF THE TURKISH ADAPTATION OF THE FAMILY NEEDS SURVEY?

As an initial step, Cronbach's Alpha internal consistency coefficient was calculated separately for the data set for mothers and fathers. Alpha values range from 0.63 to .90 for the mother data set, and .80 to .91 for the father data set. Given the original seven-factor structure of the survey, Confirmatory Factor Analysis was applied to assess whether the same factor structure applied to data for responses for mothers and fathers in the Turkish culture. The principal fit indices for the maternal data set of CMIN / df = 2.192, RMSEA = .058. - square / sd), were acceptable while GFI = .838, AGFI = .810, NFI = .804, CFI = .882, values were found to be outside the acceptable limits for model data compliance. Confirmatory Factor Analysis results based on the father data set yielded similar results (CMIN / df = 2.435, $p < 0.001$, GFI = .796, AGFI = .760, NFI = .784, CFI = .859, RMSEA = .071). These findings indicate that the original 7-factor measurement model of the survey does not adequately fit the data collected in Turkish culture. In that case, Exploratory Factor Analysis was applied to the data sets for both. Varimax rotation was the method of use in Exploratory Factor Analysis with the reliability of the survey scores calculated with Cronbach's alpha (Büyüköztürk, 2002).

Varimax vertical rotation of the data set for mothers yielded a 6-factor structure accounting for 56.43% of the total variance of the survey. Exploratory Factor Analysis of the data set for fathers with rotation also yielded a 6-factor structure accounting for 61.41% of the total variance of the survey. The variance explained by the factors for mothers after rotation is 11.99% (Financial Topics (FT), factor I); 10.58% (Obtaining Information (OI), factor II); 10.32% (Child Care (CC), factor III); 10.04% (Family and Social support (FS), factor IV); 7.62% (Explaining to Others (EO), factor V) and 5.88% (Community Services (CS), factor VI). The corresponding factors and variance explained for fathers after rotation are 12.83% (Financial Topics, factor I), 11.34% (Obtaining Information, factor II), 8.29% (Child Care, factor III), 11.69% (Family and Social support, factor IV), 8.05% (Explaining to Others, factor V) and 9.23% (Community Services, factor VI).

The Turkish version of the Family Needs Survey has six factors and the item factor loadings for the data set for mothers and fathers are presented in Table 3. An examination of Table 3 revealed item loadings for factors mother and father data sets on the factor of economic issues for items range from .57 to .84, for the factor of Financial Topics; .61 to .78, for Obtaining Information, .43 to .73 for Family and Social Support; .58 to .74 for Child Care; .57 to .70 for Explaining to Others and .44 to .58 for Community Services. The item factor load values for the data set for fathers are presented in Table 3 for comparison with the factor loadings for the data for the mothers. Examination of Table 3 for item loadings on the father's data set on the factor of economic issues for items range from .65 to .83 for Financial Topics; .58 to .79 for Obtaining Information; .58 and .71 for Family and Social Support; .66 to .71 for Child Care; .61 to .69 for Explaining to Others and .47 to .74 for Community Services. Cronbach alpha values for the six factors ranged from .63 to .90 for surveys completed by mothers and .82 to .91 for fathers.

Table 3. The Results of the Exploratory Factor Analysis: Item Factor Loadings for Mother and Father Data

	Mother n=377	Father n=297
Financial Topics		
FT1. I need financial support to cover the expenses such as food, housing, clothing, medical care, or transportation.	.84	.82
FT5. I need financial support to pay for therapy, daycare, and other services my child needs	.81	.83
FT3. I need financial support to pay for the caregiving of my child	.81	.79
FT6. I need financial support to pay for toys that my child needs	.77	.80
FT2. I need support for providing any special equipment my child needs.	.75	.79
FT4. I need counseling or help in getting a job	.57	.65
Obtaining information		
OI3. I feel the need to obtain information about what and how to teach my child	.78	.79
OI4. I feel the need to learn about how to handle my child's behavior	.73	.75
OI5. I feel the need to obtain information about any condition or disability my child might have	.72	.78
OI2. I feel the need to learn how to play and talk with my child	.69	.69
OI6. I feel the need to obtain information about services that are presently available for my child.	.64	.69
OI7. I feel the need to be informed about the services my child can receive in the future.	.63	.69
OI1. I feel the need to learn how children grow and develop	.61	.58
Family and Social Support		
FS2. I would like to have friends to talk to.	.73	.67
FS1. I feel the need to talk with someone in my family about my concerns.	.67	.63
FS5. Our family needs help in order to discuss our problems and reach solutions.	.64	.60
FS6. I need help supporting each other during difficult times in our family.	.64	.66
FS3. I would like to have more time for myself	.60	.71
FS4. I would like to help my spouse accept any condition or disability our child might have	.58	.58
FS8. I need help planning and doing family recreational times	.47	.66
FS7. I need help deciding who will do household chores, childcare, and other family tasks.	.43	.63
Child Care		
CC1. I need support locating care providers who are willing and able to care for my child.	.74	.71
CC4. I need convenient care services for my child during tasks such as shopping, personal medical checks, or going to hairdresser.	.71	.71
CC3. I need appropriate care services for my child in centers such as mosques, masjid, or Quran courses during religious services (prayers, fasting, going on a pilgrimage, religious conversations, etc.).	.62	.66
CS3. <i>I feel the need to locate a dentist who will be able to examine my child.</i>	.60	---
CC2. I need support locating a daycare program or preschool for my child.	.58	.70
Explaining to Others		
EO2. I need support to explain my child's condition to his or her siblings.	.70	.62
EO1. I need support to explain my child's condition to my parents or my spouse's parents.	.67	.61
EO3. I would like to know how to respond when friends, neighbors, or strangers ask questions about my child.	.66	.69
EO4. I would like to know how to explain my child's condition to other children	.57	.63
Community Services		
CS2. I feel the need to locate a doctor who understands me and my child's needs.	.58	.74
CS1. I feel the need to meet and talk with other parents who have a child like mine.	.55	.70
CS3. <i>I feel the need to locate a dentist who will be able to examine my child.</i>	---	.58
EO5. I would like to reach reading materials (books and magazines, etc.) about other families who have a child like mine.	.53	.47
PS 2. I feel the need to meet with a counselor (psychologist, social worker, psychiatrist.	.48	.66
PS 3. I feel the need to be able to talk to my child's teacher or therapist for longer periods of time.	.44	.67

WHAT IS THE NATURE AND INTENSITY OF FAMILY NEEDS IDENTIFIED BY MOTHERS AND FATHERS? For each item in the Turkish Family Needs Survey form, the percentages of the parents' "Yes" answers to the question for "Do you need information or support on this subject?" are presented in Figure 1. In the original survey, the CS3 (I feel the need to locate a dentist who will be able to examine my child) was found under the same factor in the father form, while it was in the Child Care dimension in the mother form. Two items with the highest percentage of endorsement by both parents are the 6th and 7th items of Obtaining Information dimension as seen in Figure 1. These items are "I feel the need to obtain information about services that are presently available for my child", and "I feel the need to be informed about the services my child can receive in the future". It is noteworthy that mothers and fathers responded "Yes" at the highest rate to the other items of the Obtaining Information suggesting that the most intensive needs of Turkish parents are in this dimension. The items that parents endorsed the least are the first two items of Explaining to Others (I need to explain my child's condition to his or her siblings, and I need support to explain my child's condition or my spouse's parents). While the rate of mothers who answered yes to these two items is 26%, the yes rate of fathers is 28% and 27%, respectively. This finding suggests that Turkish mothers and fathers do not have difficulty in explaining the situation of their children to others.

One of the items with the greatest difference between endorsed needs by Turkish parents is the 4th item of Child Care (I need convenient care services for my child during tasks such as shopping, personal medical checks, or going to a hair-dresser). While the percentage of mothers who endorsed this item was 50%, the percentage of fathers was 36%. The other item with the biggest difference between the parents is the second item of the Family and Social Support (I would like to have friends to talk to). The yes rate for mothers for this item was 60% and the rate of fathers was 48% suggesting that compared to fathers, mothers are more responsible for the care of their children, need convenient care services for their children, and need friends to take social support. The only item that both mothers and fathers endorsed at the same rate (32%) was the first item of Child Care (I need support locating care providers who are willing and able to care for my child).

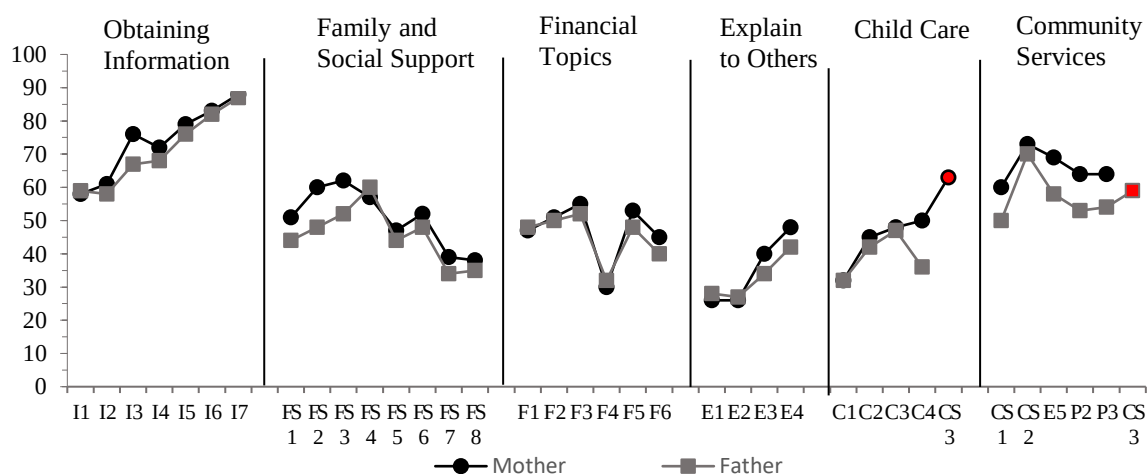


Figure 1. Percentage of Needs of Parents Answered Yes in Original Form of Family Needs Questionnaire

WHAT ARE THE ADDITIONAL NEEDS EXPRESSED BY PARENTS ABOVE EXISTING ITEMS IN THE FAMILY NEEDS SURVEY?

The first open-ended question in the Turkish Family Needs Survey was answered by 107 mothers and 85 fathers resulting in a total of 227 statements that the parents felt were not included in the survey. All of the statements were reviewed by the researchers, and assigned to one of three codes based on the content: (a) covered the same topics as in the Family Needs Survey, (b) described / exemplified existing items in the Family Needs Survey, or (c) reflected

new topics (Bailey & Simeonsson, 1988). Of the statements, 192 simply described/exemplified existing items in the Turkish Family Needs Survey form but 35 statements reflected new needs not included in the Turkish Family Needs Survey. As shown in Table 4, mothers, in general, considered new subjects as more of a need than fathers. The primary theme that 18% of the mothers need was what the situation of their children will be after the death of the parents and who will they be protected by. The same theme was expressed by 17% of fathers. The primary need of 19% of the fathers was to solve problems they face while obtaining their children's health reports. The same theme was expressed by 16% of mothers. In this situation in the Turkish family, it can be stated that fathers assume more responsibility than mothers for their children's health and education in official contexts. The theme that was endorsed equally by both parents was about increased access to parks, sports areas, and swimming pools in their vicinity that were free of charge for their children. Other needs of Turkish parents are social support, home regulations, community awareness, and a positive attitude expectation from health personnel.

Table 4. Topics that Parents Describe as Needs

	Topics of 35 new needs identified by mothers and fathers	Mother		Father	
		N=50	%	N=36	%
1.	Status of children after the death of parents	9	18	6	17
2.	Solving the difficulties parents face while getting their children's health reports	8	16	7	19
3.	Children having a pleasant time in educational environments	8	16	2	6
4.	Free parking, sports area, and swimming pool nearby	7	14	5	14
5.	Social support to mother and father	6	12	4	11
6.	Domestic and external needs (Elevator, garden, ground floor)	5	10	4	11
7.	Society's sensitiveness to children with special needs and their families	4	8	4	11
8.	Health personnel demonstrating understanding and positive attitude to parents	3	6	4	11

WHAT PRIORITIES DO PARENTS IDENTIFY FOR RESOURCES AND PROFESSIONAL SUPPORT TO MEET THE NEEDS OF THEIR CHILDREN WITH SPECIAL NEEDS?

The second open-ended question in the Turkish Family Needs Survey regarding parent preference for interaction and support with 16 professionals was answered by 318 mothers and 305 fathers. Both mothers and fathers identified members of the health profession (child neurologist, psychiatrist, primary care physician, pediatrician) as their top choices for information and support. Fathers (17%) preferred primary care physicians more than mothers (6%) whereas school principals, social workers, religion officers, nurses, and experienced parents were preferred in similar percentages.

DISCUSSION

Factor analytic studies of the Family Needs Survey with various item sets across countries have resulted in a range of different factor structures from three to seven (Burton-Smith et al., 2009; Chen & Simeonsson, 1994; Granlund & Roll-Pettersson, 2001; Ueda et al., 2013). Although the number of factors varies across cultures, the similarity of dimensions supports the findings of similar and continuing needs of families with children with disabilities.

This study examined the use of a Turkish translation of the Family Needs Survey to identify the nature and intensity of needs of mothers and fathers raising children with disabilities. Validity and reliability analyses of the final version with 36 items of the survey were performed on a data set of 674 participants. Application of Confirmatory Factor Analysis for a seven-factor structure showed that the model was not compatible with the mother and father data sets. Application of Exploratory Factor Analysis for six-factor structure yielded a KMO value of .911 indicating the suitability of the data for factor analysis. The fit indexes were within limits after testing this model, indicating the compatibility of the model (Büyüköztürk, 2002; Kline,

2005; Steiger, 2007). The values of the fit indices indicated that the mother data set was compatible with the factorial structure of the father data set. In the 6-factor structure of the Turkish

In the Family Needs Survey, the needs of mothers and fathers were distributed in the same factor structure. Of note is the fact that the item (I feel the need to meet with a religious commissary, mufti, or prayer leader), had a factor loading less than 0.40 and was removed from the Turkish Family Needs Survey mother and father forms. The low factor loading on this item suggests that Turkish parents meet their information and support needs for their children with special needs by the widespread and free health care system in Turkey. The system includes newborn screening, medical diagnostics, and treatment therefore, child health monitoring and follow-up may be the reason for parents' preference.

As in previous studies, Turkish parents' main need was reflected in the dimension of Obtaining Information. This finding was also evident in the initial Turkish Family Needs Survey adaptation (Sucuoğlu, 1995) and in Japanese (Ueda et al., 2013), Australian (Burton-Smith et al., 2009), Chinese (Chen & Simeonsson, 1994), Swedish (Granlund & Roll-Pettersson, 2001) and U.S. families (Bailey et al., 1992). These prove that parents' need for information continues depending on the diversity and intensity of each family's needs and with the growth and development of the child. For Turkish mothers and fathers the item "I feel the need to know about the services my child can receive in the future" in the factor Obtaining Information was the most endorsed information item. The same item is also the highest endorsed need by families in the United States (Bailey & Simeonsson, 1988; Bailey et al., 1992), Sweden, China, and Australia. The children of the parents who participated in this study are groups that benefit from Special Education Schools or Special Education and Rehabilitation Centers. Nevertheless, based on the focus of special education services on the disabilities of children with special needs, families fall outside of these services in Turkey. This situation relates to the lack of full participation of the family in special education services within the Turkish education system (Ertem, 2017; Özaydın & Gallagher, 2012) also mentioned in Japanese culture (Ueda et al., 2013). As with all disadvantaged groups in Turkey, social welfare services and social assistance create a degree of trust and prosperity for children with special needs and their families. The same is true for the health system. Although there is a comprehensive healthcare system, these services are mostly center-based and focus on the child's disability. Therefore, the families of children with special needs are also unable to reach sufficient information about their children's health and cannot find solutions to their needs outside of the institutions (McWilliam, 2010; Sucuoğlu, 1995; TSI, 2010; Ueda et al., 2013).

The items that parents endorsed the least are the first two items (E1, E2) of explaining their children's situation to others. Among all, 26% of mothers endorsed both items while 28% and 27% of fathers endorsed those items. This suggests that Turkish mothers and fathers do not experience difficulties in explaining the situation of their children to others. Although the difference between Turkish mothers and fathers is not high in this dimension, it was observed that in other cultures fathers had more "Yes" answers than mothers (Ueda et al., 2013).

One of the items in the Child Care (CC4) factor presented the difference between the needs of Turkish mothers and fathers. Among our participants, a significantly higher percentage of mothers (50%) endorsed this item than fathers (36%). This was similar to that in the Australian culture, where 85% of the participants are mothers. The majority of mothers in Turkey receive respite care services for their children with special needs, however, mothers would like alternative services that are easily accessible. The results suggest that mothers would like more respite care services such as after-school care, alternative support on holidays, short-term, and sometimes long-term services at home or in different institutions (Burton-Smith et al., 2009). Item 2 of the Family and Social Support factor which differentiates the needs of parents was endorsed by 60% of mothers and 48% of fathers. Mothers feel more responsible for the care of

their children. They need care services for their children that are also convenient and need friends to provide social support. Even though the warm interpersonal relations in Turkish society are common, mothers in this study may not be receiving social support in these environments. Thus, this item which is not in the original form of the Family Needs Survey reflects Turkish culture.

Child Neurologist, Psychiatrist, Primary Care Physician, and Pediatrician were parents' top four choices of staff to talk about their children and children's needs. As healthcare is the most widespread service received, parents may wish to acquire information and support from them. It can also be said that parents trust the opinions of health personnel about what kind of vital problems and needs their children may have in the future. It is similar in Chinese culture that medical doctors are their most preferred and needed staff (Chen & Simeonsson, 1994). The fact that the second most preferred and needed staff of the families to talk about their children is special education teachers, indicates that they can easily reach and trust them about their children's education.

An interesting finding of the study was the identification of an additional item "I need convenient care services for my child during shopping, personal medical checks, or going to hair-dresser". Parents proposed more than 200 items but only 35 of these were not a duplication of existing items. There was a limited number of new topics that Turkish parents would want to include in the survey. This suggests that Turkish parents consider the survey to include the majority of the needs of parents. The new topics that parents expressed are; anxiety about the future, difficulties in bureaucratic procedures, social acceptance, and social needs of their children. Parents worried about future prospects of their children in the future even though they do have access to health benefits, education, and social services. A reason for this concern may be that there is an age limit of 23 years for the maximum benefit of Special Education Schools for students with special needs and limitations on accessing educational services later on and the participants' children age ranged between 18 months to 15 years in this study.

Another important finding of this study is that parents care about the quality of life of children as well as access to health, education, and social assistance besides expressing the need for increased access to parks, sports areas, and swimming pools where social integration will be supported. It is also a distinctive finding that Turkish mothers expect their children to have a pleasant life with their peers, teachers, and educators in their educational settings. In Japanese culture issues such as being prudent were among the added items (Ueda et al., 2013), while in Turkish culture, parents expect tolerance from society and a positive attitude from healthcare. In Australian culture, participants, mostly mothers, stated that they received respite care services for family members with disabilities, but still needed after-school care and vacation care and more qualified daycare services. They stated that respite care services are vital for family relationships and wellbeing (Burton-Smith et al., 2009). Chinese families expressed more family concerns, such as stress and feelings (Chen & Simeonsson, 1994).

In summary, the need for information was the most expressed need by Turkish parents who have children with special needs related to their children's education, disability, and to their future living with a disability. The findings indicate that parents have a higher level of need for Family and Social Support and Community Services besides Obtaining Information. This shows that parents continue to need support in meeting their children's needs outside of school. In Turkey, as well as other countries using the Family Needs Survey, identification of such continuing needs can serve as the basis for insuring that needs unique to individual families or common to families caring for children with disabilities.

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PRESERVICE SOCIAL STUDIES TEACHERS' OPINIONS ABOUT MOBILE AUGMENTED REALITY APPLICATIONS *

Abstract: The aim of this study is to reveal the opinions of social studies preservice teachers about their experiences during an action research on mobile augmented reality. In line with the aim of the study, a total of 46 preservice teachers (25 female, 21 male) studying in the second year of a social studies education program of a state university in the spring semester of the 2018-2019 academic year were determined as the study group. In the data collection phase of the research; focus group interviews, researcher diaries, observation reports were used. During the interview data analysis, the content analysis method was used. The findings obtained from the interviews were also supported by the observation and researcher diaries. Finally, the data about the devices that the participants have and their level of using these devices were collected through the personal information form, and then tabulated and interpreted. The knowledge background of the participants required to perform Mobile Augmented Reality (MAR) activities was found to be inadequate. The participants reported that the use of AR on mobile devices increases accessibility, fosters interest, supports active participation, and improves perception. On the other hand, they reported that its use in education concretizes the abstract concepts, ensures learning retention, enhances success and encourages collaborative learning. The MAR was also found to be perception-changing, enjoyable, motivating, growth-enhancing, and facilitative from students' perspective. From educators' perspective, the findings indicate that MAR increases productivity, supports the resourcefulness of the teacher, and keeps the teacher social.

Keywords: Educational technologies, Augmented Reality, mobile augmented reality, social studies, teacher candidates

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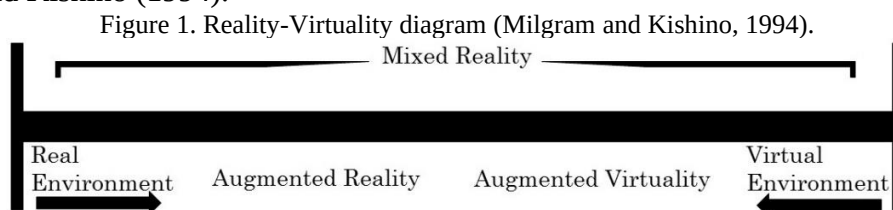
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INTRODUCTION

Technology involves putting the knowledge and experience of the humankind into practice, and the synthesis of awareness, comprehension and implementation. Thanks to technology, the individual and society more easily adapt to the changes in their environment and the world, yielding increased productivity. However, technology affects people and society not only physically but also socially and psychologically (Satchwell and Dugger Jr., 1996). Especially in recent years, with the advances made in the ICT, the interaction between individuals and societies has been very intense, which manifests itself in all fields and disciplines of humanities. Undoubtedly, one of the most important of these fields is education. It has been suggested that integrating technology into education will be the driving force behind the developments in the future of education (Bellamy, 1996). As the main purpose of educational technologies is facilitating learning and making it more permanent (Teo and Lee, 2010), it can be said that the use of technology in education is a means to achieve this purpose (Heidegger, 1998).

While initially chalkboards were used in Turkey, later the use of white boards and smart boards was adopted, with the educational technologies becoming increasingly diverse over time (Tarman, 2011). Therefore, using technology as a tool to make education and training more active and effective can be expected to offer some significant benefits (Dargut and Çelik, 2014), and it will play a vital role in increasing students' interest in the course, ensuring that they achieve the targeted outcomes and preventing time loss (Katrancı and Uygun, 2013). Furthermore, using technology as a tool in educational environments can help the educator access appropriate, well-organized, and advanced educational materials faster and achieve the targeted learning outcomes and skills in a more effective way (Kaya, 2006). Today, it is crucial for educators to follow the technological advances as closely as possible, to try to use the educational technologies that can yield the maximum benefit, and to view themselves as competent in using such technologies (Kurbanoğlu and Akkoyunlu, 2002). The training of teachers, who are the target audience of the current study, is also an important factor in the effective use of educational technologies.

Considering the technological developments in portable devices in the recent past, one of the technologies whose use and prevalence has increased, is Augmented Reality (AR) (Ramazanoğlu and Aker, 2019). AR is the enrichment of spaces or objects in the real world with virtual objects and environments (Altınpulluk and Kesim, 2014; Erbaş and Demirer, 2014). In this case, instead of completely isolating from the real world, an increased environment is provided by adding reality and virtuality on top of each other. The degree to which these two environments are integrated is the main difference between augmented and virtual reality, which is clearly demonstrated by The Reality-Virtuality diagram created by Milgram and Kishino (1994).



With the development of factors such as cameras and processors used in mobile devices, it is seen that AR technologies have become widely used in mobile environments. The fact that it can be used in mobile devices has also brought positive effects in the field of education, and thus, the AR has become usable at the level of university, high school, middle school, primary school and even kindergarten. A general one of the available communication technologies is digital inequality, which can converge at different levels and with those who are close.

However, for other people for this help, the cost, prevalence and information may be much easier than communication and educational technologies. It is designed by the people mentioned.

This technology is also expected to contribute to equal opportunity in education by its widespread impact and the mission it assumes in education. Furthermore, it makes lessons more enjoyable and learning more permanent (Wu, Lee, Chang, and Liang, 2013), increases interaction and communication between student groups, and helps to better understand cause-effect relationships (Ivanova and Ivanov, 2011), provides students with a large amount of information quickly and concisely (Kaleci, Tepe and Tüzün, 2017; Çoruh, 2011; Sırakaya, 2015) and makes the lesson easier to understand (Kerawalla, Luckin, Seljefot, and Woolard, 2006). It has also been shown that in cases where the subject is difficult or impossible to understand, it helps the learner to understand it by virtual demonstrations of it (Shelton and Hedley, 2002).

The review of the related literature reveals that there are various studies about the use of AR at different levels of education. Some studies about the AR by education level is given in Table 1.

Table 1. AR by education levels

Educational Level	Studies
University	<i>Baysal and Uluyol, 2016; Cabero-Almenara, Challenor and Ma, 2019; Chang and Liu, 2013; Fernandez-Batanero and Barroso-Osuna, 2019; Çakır, Solak and Tan, 2015; Gül and Şahin, 2017; Jamali, Shiraduttin and Wong, 2014; Koşan, 2014; Martin-Gutierrez, Fabiani, Benesova, Meneses and Mora, 2015; Önal, 2017; Pombo and Marque, 2018; Ramazanoğlu and Aker, 2019; Sünger, 2019; Yıldız-Durak, Sarıtepeci and Bağdatlı-Çam, 2020; Wang, Duh, Li, Lin and Tsai'nin, 2014.</i>
High School	<i>Cevahir, 2017; Çetin, 2019; Dunleavy, Dede and Mitchell, 2009; Ersoy, Duman and Öncü, 2016; Ibáñez, Di Serio, Villaran ve Kloos, 2014; Korucu, Yavuzaslan ve Usta, 2016; Lee and Wong, 2014; Şener, 2016; Tzima, Styliaras and Bassounas, 2019.</i>
Secondary School	<i>Atasoy, Gün-Tosik and Kocaman-Karaoğlu, 2017; Bursalı and Yılmaz, 2019; Di Serio, Ibanez and Kloos, 2012; Durak and Karaoğlu-Yılmaz, 2019; Küçük, Yılmaz and Gökaş, 2014; Gün, 2014; Lund-Nielsen, Brand and Swensen, 2016; Petrov and Atanasova, 2020; Sırakaya and Kılıç-Çakmak, 2016; Velazquez de Mendez, 2018.</i>
Primary School	<i>Alkhatabi, 2017; Bistaman, Idrus and Rashid, 2017; Büyükyugur and Güneş, 2018; Chiang, Yang and Hwang, 2014; İzgi-Onbaşılı, 2018; Kerawalla, Luckin, Seljefot and Woolard, 2006; Özbek, 2018; Persefoni and Tsikanos, 2016.</i>
Pre School	<i>Campos and Pessanha, 2011; Gaikwad, Bonde, Kolge and Mahajan, 2017; Huang, Li and Fong, 2015; Kuzgun, 2019; Lee, Chau, Chau and Ng, 2017; Safar, Al-Jafar and Al-Yousefi, 2017.</i>

When the studies about the use of AR in different education levels are examined, it can be seen that there are not enough studies to reveal the effects of AR in the Turkish education system. Regarding the use of AR in different disciplines; in science education, studies by Lund-Nielsen, Brandt and Swensen (2016); Tsihouridis, Bastila, Vavougius and Ioannidis (2011); Swensen (2016); Tekedere, Göker 2016; Cheng, (2018); Bonner and Reinders (2018), Akgül and Tanrıseven (2019), in mathematics and geometry education, Somyürek, 2014; Tobar-Munoz, Fabregat and Baldiris, 2015; Topraklıoğlu, 2018; Coimbra, Cardoso and Mateus, (2015); Akkuş and Özhan, (2017), Radu, McCarthy and Kao (2016), Yingprayoon, 2015, in history education, studies by Kysela and Storkova (2014); Challenor and Ma (2019); Coruh (2011); Di Martino and Longo (2019); Lim and Lim (2020), and in geography education, studies by Adedokun-Shittu, Agent, Nuhu and Shittu, 2019; Arslan and Elibol, 2015; Demir, Ağaçasapan, Sarı, Aksoy and Çabuk, 2019; İmamoğlu and İmamoğlu, 2018; Özel and Uluyol, 2016; Shelton and Hedley, 2002; Turan, Meral and Şahin (2018) have been found. Studies on AR in the field of social studies are very limited. Koçoğlu, Akkuş, and Özhan (2017) conducted a study examining how AR applications can contribute to social

knowledge. Another study in this field aimed to measure the effect of using AR in social studies by Gümbür (2019) on students' academic achievements, attitudes and motivations. Toledo-Morales and Sanchez-Garcia (2018) aimed to determine the effects of AR on Spanish students' academic performance and their perception of AR. The present study was conducted to contribute to the relevant literature, given the lack of any other studies in the field of social studies other than those mentioned above. In addition, there is no study in the social studies field focusing on training preservice teachers to design AR activities. Considering the benefits provided by AR, it is thought that it is very important in terms of education to teach pre-service teachers how to develop applications in this context. It is a very important issue in terms of teaching that teachers, who are the implementers of the curriculum, use this technology in their classrooms as a tool to implement and gain achievements. Based on the aforementioned importance of this study, it is thought that there is a significant threshold in transferring it to teacher candidates. On the other hand, teaching prospective teachers to design AR activities is the first in the field, which reveals the originality of this study and its difference from other studies. The fact that it is the first in the field to teach pre-service teachers how to design AR activities reveals the originality of the current study. The purpose of this study is to find out the opinions of preservice social studies teachers about the experiences they had during the MAR action research they carried out. Can a textbook be structured and made into an MAR application with social studies teacher candidates? What are the opinions of the participants on this issue? These questions constituted the problem statement of the study and the answers to the following questions were sought:

- 1) What are the opinions of the participants about the implementation process?
- 2) What are their views on its use in education?
- 3) What are their views on its use in fields other than social studies?
- 4) What are the participants' suggestions about improving the use of AR in education?

METHOD

RESEARCH DESIGN

In this study, a part of the MAR action research conducted with the teacher candidates was used. It was aimed to reveal the opinions of the participants about the MAR work they performed during their action research. Action research is a qualitative research method in which data is collected throughout the research process about the problem. By continuous evaluation throughout the process, the development, change and interactions of the study group can be understood in depth (Yıldırım and Şimşek, 2018).

STUDY GROUP

The participants of this study 46 preservice teachers (25 female and 21 male), studying in their second year (sophomore) in the Social Studies department of the Faculty of Education of a state university in the spring term of 2018-2019.

As seen in Table.2, the gender distribution of the participant group is balanced. Considering the technological tools that the participants have, almost all of them had mobile phones (f: 43, 95.5%). 17.7% of the participants owned a tablet (f: 8). As such, the participants were able to view their activities on their mobile devices. Further, they had a laptop computer (f: 30, 66.6%) and a desktop computer (f: 7, 15.5%) to perform the AR activities. Considering that the participants were divided into groups and carried out these activities, they had the necessary devices to perform the AR activities. The rate of internet availability in the place of residence (f: 41, 91.2%) shows that all the participants were able to perform the activities given as homework. The participants assessed their mobile phone use competency level as very good (f: 7, 15.5%), good (f: 18, 40%), moderate (f: 19, 42.2%) and very little (f: 4, 8.8%). Their competency in using a tablet were very good (f: 2, 4.3%), good (f: 5, 10.8%),

moderate (f: 24, 52.2%), very low (f: 12, 26.1%), and no competency at all (f: 2, 4.3%). Their competency level in using the Internet was very good (f: 5, 10.8%), good (f: 18, 40%), intermediate (f: 18, 40%), and very little (f: 4, 8.8%). Based on these data, it can be concluded that the participants had enough knowledge to carry out AR activities and that they were competent enough to perform these activities on their technological devices.

Table 2. Participant information

		f	%
Gender	Men	21	45,6
	Women	25	54,4
Owned technological tool	Mobile phone	43	95,5
	Tablet Pc	8	17,7
	Laptop	30	66,6
	Desktop Pc	7	15,5
Internet in the place of residence	Yes	41	91,2
	No	4	8,8
Cell phone usage level	Very good	7	15,5
	Good	18	40
	Moderate	19	42,2
	Very little	4	8,8
Laptop usage level	Very good	2	4,3
	Good	5	10,8
	Moderate	24	52,2
	Very little	12	26,1
	Not knowing at all	2	4,3
Internet usage level	Very good	5	10,8
	Good	18	40
	Moderate	18	40
	Very Little	4	8,8

STEPS OF IMPLEMENTATION

The UNITY, VUFORIA and ANDROID STUDIO applications were selected to design the MAR activities for the study. The UNITY was chosen because it is open source, free of charge, a program known by the researchers, compatible with VUFORIA, and supports a wide range of AR activities. VUFORIA was chosen because it is an application that helps turn the visuals in the textbook into a marker for the AR. ANDROID STUDIO was included because it contains the android versions necessary to make it a mobile application. After this stage, the lesson plan was prepared and submitted for expert review. With the final revisions made in line with the opinions and suggestions of the expert group consisting of a professor, an associate professor and a lecturer, the implementation phase was initiated. Throughout the process, pre-service teachers were given homework for each of the steps of the process shown in practice and they were asked to structure the social studies 7th grade textbook within the scope of what they learned. As a result of this process, which continues by adding new AR features to each application lesson, all of the participant groups have developed their own augmented reality mobile application when the application process is completed.

The research continued for 14 weeks. The work done during the implementation phase is summarized on a weekly basis in the Table 3.

Table 3. Practice

Weeks	Descriptions
1. Week	- Augmented Reality, mobile augmented reality concepts are introduced. - The necessity of using this technology for education and educators was mentioned. - The programs to be used (UNITY, VUFORIA,) were introduced.
2. Week	- The programs were installed on the computers and their usage was demonstrated practically. - Groups were created.
3. Week	- Integrating video into visuals in the 7th Grade Social Studies textbook was demonstrated. - The 1. Unit of the textbook was given homework to the participants to be restructured within the scope of the lessons taught.
4. Week	- The videos and educational games shot by the participants were integrated into the relevant visual. 3D object integration demonstrated with practice. - The 2. Unit of the textbook was given homework to the participants to be restructured within the scope of the lessons taught.
5. Week	- Video and 3D object integration have been repeated for consolidation purposes. - Shown adding sound, narration behind 3D object. - The 3. Unit of the textbook was given homework to the participants to be restructured within the scope of the lessons taught.
6. Week	- Adding more than one 3D object to a visual in unit 4 and adding sound and narration behind this multiple 3D object were shown. - The 4. Unit of the textbook was given homework to the participants to be restructured within the scope of the lessons taught.
7. Week	- The study was suspended due to the mid-term exams. - Homework done up to the 7. week were collected and evaluated using Rubric.
8. Week	Mid-term exams.
9. Week	- In the 5. unit, more than one scene was added on a visual, and the addition of different 3D objects and videos in each scene was shown. It was explained how to perform the transition between the scenes through the buttons. - It was demonstrated how to integrate multiple 3D objects by turning multiple images into a single trigger in the 5. unit. - The aforementioned unit was given to the participants as a homework to be restructured in the context of what was explained and demonstrated.
10. Week	- Integrating the educational games prepared by the participants and the structured videos. - Animated 3D objects were shown. - It has been shown to add features such as enlarging, shrinking, rotating 3D objects for use on mobile devices by touching or dragging. - The 6. Unit of the textbook was given homework to the participants to be restructured within the scope of the lessons taught.
11. Week	- Introducing historical sites and adding videos of interviews to the 7. unit. - It was demonstrated to increase the interaction between virtual and real by adding a virtual button on a real object. - The last unit was reconstructed in the context of what was shown and given to the participants as homework.
12. Week	- Post tests applied. - Focus group interviews and semantic differences scale were applied.
13. Week	Focus group interviews continued.
14. Week	- Final exams week. - The studies carried out after the midterm exams were collected and the assignments were evaluated using the Rubric.

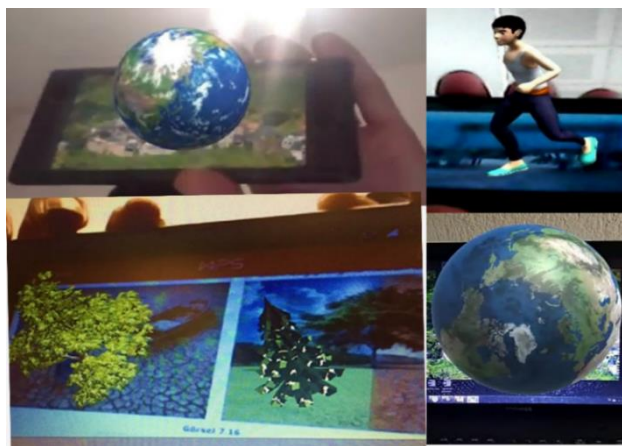


Image 1. Practice Examples

DATA COLLECTION

This study includes the data collected from the focus group interviews conducted by the first author as part of his master's thesis. The data were obtained through focus group interviews, researcher diaries and observation reports.

Focus Group Discussions focused on the semi-structured interview questions, which were prepared by the researcher and consisted of 12 questions revised and finalized based on the opinions of two researchers who were experts in their field. The participants' views were collected in about 20-40 minutes in an environment separate from the other groups. During this period, the participants were not intervened in any way, and permission was asked to use a tape recorder before starting the interviews. These focus group interviews were held with all the participants to reveal the effects of their experiences on the subject they worked on previously (Ryan, Gandha, Culbertson, and Carlson, 2013). Researcher diaries allow the researcher to keep a record of his/her own opinions and feelings on the flow of the research (Yıldırım and Şimşek, 2018). Further, the observation reports kept throughout the study enabled recording the reactions of the participants to the research process, situations that led to in-group solidarity or conflict, and the points that the participants improved or failed to show during the study.

DATA ANALYSIS

In analyzing the data, the qualitative data analysis procedures detailed by Miles and Huberman (1994) were followed. Accordingly, as the first step, the data obtained by the researcher through data collection tools were classified and reduced in line with the subject and scope of the research. In the second step, the data were made concrete and analyzable within the scope of the research. Thus, more general and meaningful wholes were obtained based on the data obtained. In the final step, reaching the result and verification is aimed. Thus, the findings were revealed during the interpretation of the data and what they meant was stated. The verification of these data was achieved by comparing the diaries kept by the researcher and the results of studies on similar subjects in the relevant literature.

The verbal data obtained in the analysis of the focus group interviews were transcribed and analyzed by using the content analysis method, which allowed identifying certain codes, categories and themes. Next, the documents were sent to an expert to obtain the confirmation of the identified holistic approaches. While the obtained data was turned into findings and interpreted, they were also supported by the researcher diaries. With the researcher diaries, the problems faced by the participants during the implementation, and their attitudes towards it were reported. The cooperation between the participants during the research and the conflicts arising during the implementation were also added to the report.

RESULTS

"What are the opinions of the participants about the implementation process?" is the first sub-problem of the study. The focus group interview data were descriptively analysed, and the findings are presented in the tables below.

Table 4. Categories related to the participants' opinions on the implementation process

Theme	Categories
Views On The Implementation Process	Infrastructure
	Program Oriented
	Mobile Usage

The theme "Views on the implementation process" consists of the categories "Infrastructure, Program Oriented and Mobile Use". The codes and interpretations that make up the categories are given below.

Table 5. Codes for the Infrastructure Category

Category	Codes
Infrastructure	Difficult (Hardware, Infrastructure And Language)
	Cost (Hardware)
	Difficult
	Difficult But Achievable
	Cost (Time)
	Complicated Structure And Heavy To Operate

Under the category of "infrastructure", there are "difficult (hardware, infrastructure and language), cost (hardware), difficult, difficult but achievable, cost (time), "complicated structure and slow to operate" codes. One of the most common codes under this category is the "difficult (hardware, infrastructure and language)" code. With regard to this, P1 (Participant 1) reported *"You know, it would be much better if the program were in Turkish rather than English. You find your mistakes more easily. You can be more creative. It can be done more easily. It may be faster. It also gets harder when we don't speak the language."* In addition, P2 stated that *"For example, we are generally not familiar with computers. We have a little difficulty with it because we do not have the necessary background knowledge."* Regarding the "Cost (Hardware)" code, P3 stated *"We had difficulties because we did not have a computer. It would be much easier if everybody had PCs. For example, we do not have internet in the dormitory."* P4 commented on the "Difficult" code by saying *"There is a lot of difference between what we did at the beginning and what we do now, and we have come to a very advanced level now we can do everything but we only had a little difficulty"*. Regarding the "difficult but achievable" code, P5 commented: *"Actually, it is not the direction we do not like, but because we never knew it before, so we have a little difficulty because we saw it for the first time. There is nothing difficult, we can actually do it when we learn."* The participants reported experiencing difficulties because they encountered Augmented Reality for the first time, but stated that these difficulties could be overcome as they gained experience. Regarding the "cost (time)" code, P6 said *"We can consider it a disadvantage that it takes too much time."* On the "heavy to operate" code, P8 commented: *"Handy but works a little bit too slow and turns on very slowly."* It is observed that the background of the participants is too limited to use the AR properly, and their devices are not at the most advanced level in terms of hardware, causing difficulties while developing activities. The limited knowledge of English is another important factor in the emergence of such a result. However, the participants stated that these limitations can be overcome by repeated use and more attention.

Table 6. Program-Based Codes

Category		Codes
Program Based	Positive Features	Clear
		Usable In Different Areas
		Attention Requiring
		Functional
		Facilitating
		Socializing
	Negative Features	Update
		Complicated (Program)

The "Program-based" category was grouped under two headings as the positive and negative qualities of the program. While the negative qualities consist of "clear, usable in different fields, attention-requiring, functional, facilitating and enabling socialization" codes, positive qualities include "updating, complicated (program), and program change".

The first code emerging from the opinions of the participants who have positive thoughts about the programs used while carrying out AR activities is "Clear". With regard to this, P2 stated: *"I think it is quite understandable that there are such things as getting code from VUFORIA. In my opinion, whether a serial application is in UNITY, getting a code from VUFORIA, these are serial operations."* About the code "Usable in different fields", P12 stated: *"Especially the program we use helps us to make games. In this respect, we can also earn money."* Regarding the "Attention-Requiring" code, P11 stressed that *"I wouldn't have paid much attention before, but I feel like my attention has increased."* Regarding the "functional" code, P13 stated *"What's the plus side? It serves its function and you can do something 3-dimensional."* Regarding the "facilitating" code, P6 stated *"An easy application in terms of functionality, the kind of application that a verbal (track) student can understand, whether it be writing the codes or something else."* Regarding the "Enabling socialization" code, P2 reported: *"I started to visit (my friends) for the augmented reality activities and topic posts helped us to socialize more."*

The first code obtained from the opinions of the participants who had negative thoughts or experiences about the programs is the "Update code". Related to this, P14 stated: *"We had a lot of trouble when there was an update notice because we couldn't figure it out. It has become a more comfortable practice now we do not have to update it anymore."* Regarding the "Complicated (Program)" code, P7 stated: *"Frankly, the program sounds a bit complicated."* Concerning the program-based category, the participants generally focused on the positive features of the applications used. The common opinions are expressed as "programs are sufficient for the actions, provide guide dance to facilitate the activities, intolerable to human errors thus requires more attention. The negative features comprise the lack of the necessary background or language skills, insufficiency of technological equipment or devices, and unfamiliarity with these programs due to using them for the first time.

Table 7. Codes related to the "Use on Mobile" category

Category		Codes
Use on mobile	Usage-oriented	Simplifying
		Facilitating the work of the educator
		Ease of access
		Usability
		Accessibility
		Wide applicability
	Educational effects	Academic achievement
		Reinforcement of what is learned
		Saving (time)

Effects of AR activities on the use of mobile devices, the codes that make up the "use on mobile" category are grouped under two headings as use-oriented and educational effects. While effects on use consisted of codes of "simplifying, facilitating the work of the educator, ease of access, user-friendliness, accessibility, widerange of applicability", the educational effects category includes the codes of "academic achievement, reinforcement of what has been learned and saving (time)".

Regarding the "Simplifier" code, which emerged from the opinions about the usage of AR activities on mobile devices, P22 commented: *"In a school where there is no projector, we cannot do anything without projecting so it is simpler for me to show Augmented Reality by using a computer or a tablet or a phone."* In relation to the code "facilitates the work of the educator", P21 stated that *"The teacher has to prepare materials for the lesson, but it is enough to have a phone only, so he does not need to do anything extra."* Regarding the "ease of access" code, P15 stated: *"Not everyone can buy or use a computer, but I think it would be very useful since anyone can use the phone. At least we carry the phone with us and, whenever necessary, we turn it on and use it."* was commented. Regarding the "user-friendliness" code, P16 commented: *"As technology is everywhere now, I think using it on the phone is very handy and nice thing."* In relation to the "Accessibility" code P18; *"I think the access time is shorter than the books. It can be reached in a shorter time."* Regarding the "wide range of applicability" code, P19 stated: *"It is an application applicable down to, you know, PlayStation. I mean, something that can be put into life even outdoor, even in buses, that is, something that can be in every moment of daily life."*

Related to "Academic Success", which is one of the codes that emerged about the effects of using AR activities on mobile devices, P18 drew attention to the fact that the use of AG on mobile devices increased success by stating *"It directly enhances the success in the course."* Regarding the code "reinforcing what has been learned", P20 commented: *"When the student doesn't understand (a subject) at school, having it on the tablet or phone in the same way helps him reinforce it at home, too. It offers ease of learning."* Regarding the "Saving (Time)" code, P17 stated: *"It makes learning easier. It helps in terms of time."* The participants agreed that using AR activities on mobile can make accessing and using information very easy for students and teachers. They stated that because of the widespread use of mobile devices, they will save time and effort when using AR on mobile devices. They also think that this will increase academic success and will be beneficial in reinforcing the learned subject and ensuring retention. The question "What are the opinions of the participants about the use of the research in education?" was the second sub-problem. The data obtained through the content analysis of the data collected through focus group interviews are given below in tables and direct quotations.

Table 8. Themes and categories for use in education

Themes	Categories
Contribution to Education	Contribution to Teaching
	Contribution to The Student
	Contribution to The Educator

The theme of "Contribution to education" consists of the categories of "Contribution to teaching, contribution to the student, contribution to the educator". Each category consists of codes determined through the analysis. The categories and the codes that make up these categories are given in separate tables below.

Table 9. Codes for the "Contribution to Teaching" category

Category	Codes	
Contribution to Teaching	Cognitive Contribution	Benefit (Pragma)
		Collaborative Didactic Structure
		Persistence
		Facilitating
		Useful
		Instructive
		Concretive
		Technology Integration
	Affective Contribution	Improving Skills
		Appealing To The Senses
		Increasing Participation
		Motivation
		Multi-Support
		Increasing Focus
		Reinforcing

The category of "Contribution to Teaching" consists of the cognitive and affective development codes. The cognitive contributions comprise the "benefit (pragma), collaborative didactic structure, retention, facilitating, useful, instructive, concretizing, technology integration codes, while the affective contributions include the codes of "enhancing skills, appealing to the senses, increasing participation, motivation, multi-support, increasing focus, reinforcing".

Regarding the "Benefit (Pragma)" code, P37 stated: *"I think it is useful because we are studying teaching, we need to be intertwined with technology. We need to convey these to our students in the future, but it is useless when we cannot learn. So we need to learn."* Regarding the "Collaborative Tutorial Structure" code, P34 commented: *"When something happened to my computer, it did not open the application. We said that our friend has a computer, so let's build it from there. Then we gathered at his home. As 6 people, we worked rotationally. The videos were not boring anyway, I can say that our friendship has strengthened because of spending a long time together."* It can be said that performing the AR activities as a group strengthened the communication between the participating groups. Regarding the "retention" code, P25 said, *"It would be more permanent, if I do not forget this in life."* Regarding the "facilitating" code, P18 said, *"For example, instead of explaining a topic to the child on 2-page long explanation, you can make it easier for the child to learn the subject by uploading a single photo, a video, a game or something."* Regarding the "useful" code, P21 said, *"Although difficult, they are very useful to me. It provides both memorability and you do something different, how can I say, which is a very nice thing in my opinion."* He found the description. Regarding the "instructive" code, P43 said, *"We only go through the subject, the students do not understand, so things happened in our case. We get stuck in historical events. For example, I think that I can learn better when the augmented reality is included in the curriculum, illustrating what happened where, or something."* Regarding the "concretization" code, P24 said, *"We turn something abstract into concrete. For example, we say it rained or we say hailed, students do not know what the hail is, but when we show hails in 3D, they see what it is like. Therefore, because we turn something abstract into concrete, something becomes more understandable."* Regarding the "Technology Integration" code, P23 said: *"In other lessons, you only learn about the subject, but you learn something by doing it with a computer, that is, by doing it yourself."* P35 commented: *"You use technology more effectively, I can say that is very different in that way."*

Regarding the "Enhancing Skills" code, which is one of the codes obtained on affective contributions to teaching, P29 said: *"It encourages students to think differently. It improves*

your creativity. They gain the ability to make different programs. They have more control of the computer. I think it has benefits in this way and I think it brings in a different learning style." Regarding the "Appealing to the senses" code, P22 commented: "I think it might be a plus for students. As I said, because it appeals to their visual intelligence and auditory intelligence, it is a plus for students who can understand better by hearing." Regarding the "Increasing participation" code, P7 stated: "This will be more of an interest when it comes to primary school students. They will be more engaged in the lessons and they have more time than we do." Regarding the "Motivation" code, P28 commented: "It attracts the student's attention. You know, they become more motivated for the next lesson, they will think that they have fun during the lesson." Regarding the "Multi Support" code, P18 stated: "For example, because some learn by seeing and some by hearing, in the augmented reality applications we do there is sound, there is a picture. This only leaves written text, which is in the textbooks. P28 commented: "All the senses are involved: hearing, seeing, all involved. Besides teacher support is given, anyway." Regarding the "Increasing Focus", P30 said: "We started with the blackboard, for example, then the whiteboard came along, and then the smart board. Whether it was the slides or presentations, the smart board focused the students so much on the lesson. Now, with the arrival of this application and that it is applicable to all kinds of devices, the students will focus more on the lessons. Seeing a moving object interests even me much more than usual."

Regarding the "Reinforcing" code, P29 said: "A picture, an official Turkish flag, for example. We also do it and even shoot our own video there in the application and integrate it into it. In this way, the student can both understand the subject aloud and reinforce it." On the other hand, P5 commented: "It further reinforces the subject that the student has learned. So, we presented the subject as usual, but we made the subject more interesting with augmented reality." The participants reported that using AR activities in education can play an important role in reinforcing what has been taught. They agreed that AR applications will contribute significantly to learning. It can be said that AR activities support cognitive and affective characteristics in particular and offer remarkable benefits in terms of continuity and effect of teaching inside and outside the classroom.

Table 10. Codes for the "Contributions to the Student" category

Category	Codes	
Student Contributions	For cognitive development	Infrastructure impact
		Early education
		Effective participation
		Enhancing effect
		Facilitating
		Complementary
	For affective development	Perception-changing and developing
		Unifying
		Motivating
		Interesting-remarkable
		Increasing interest
		Enjoyable (pleasurable)

"Student contributions" category is grouped under two headings as cognitive development and affective development. The aspect of cognitive development includes the "Effect on the background knowledge, early childhood education, effective participation, enhancing effect, facilitating studying, complementary" codes, while affective development comprises the "perception-changing and developing, unifying, motivating, interesting-remarkable, increasing interest, enjoyable (pleasurable)" codes.

Regarding the "Effect on the Background Knowledge" code, which is one of the codes found for the contribution of AR to the cognitive development of the student, P15 commented: *"I think that students will have an idea in their mind because they will see it beforehand, and they will not approach the program with prejudice."* Regarding the "Early Childhood Education" code, P37 stated: *"It would be more appropriate to use it in primary and secondary schools because it may not be of interest in high school. You know, when the student reaches a certain age, he or she may find this practice childish, but it attracts much more attention from younger people and they become more interested in the lesson. He wants to attend the class. That's why it has to be put into lessons. Let the teachers do it."* Regarding the code of "Effective Participation", P16 said: *"The lesson can become more fun, but the teacher should know this very well and reflect this to the students. I think a student can participate in the lesson more effectively."* Regarding the "Enhancing Effect" code, P27 said: *"I think it has a positive effect because it opens up your horizons. It adds a colorful style. It is a little different from a monotonous life of always reading, memorizing and writing. This brought a different perspective, I think."* Regarding the "Facilitating Studying" code, P20 commented: *"It makes it easier for the student to learn more quickly. In addition, since social studies and history are based on memorization, I think better learning can be facilitated with the help of the program."* Regarding the "complementary" code, P34 stated: *"For example, when a lesson has to be skipped, when it is incomplete, for example, when April 23 (national holiday) coincides with a school day, we can deal with that issue with augmented reality. There is no need to waste time for the student."*

Regarding the "Perception Changing and Developing" code, one of the codes for the contributions of AR to the affective development of the student, P21 commented: *"It would be more fun, they would be more willing. In this lesson, we would address a terrible judgment. You know, we change the point of view of the lesson."* Regarding the "Unifying" code, P19 stated: *"Having just a few people was more enjoyable. At least we spent time together. Normally, we sit somewhere and play computer games all day, but this way (by using MAR) we at least did some homework until the evening, so we did homework together. I can say that it was definitely more unifying."* Regarding the "Motivating" code, P21 said: *"Now they talk at recess, saying we will have fun activities in the lesson, and even among themselves."* Regarding the "Interesting (Remarkable)" code, P32 commented: *"With mobile augmented reality, really productive lessons can be taught while fully keeping up with the modern technology and the era, and our lessons were geared towards adapting to improving them. The old tactics do not attract the attention of their children anymore, but being able to teach with technology can be a great advantage since they are dealing with the current technology in the current mobile augmented reality."* Regarding the "Increasing Interest" code, P7 commented: *"First of all, students' interest in the lesson increases. Our motivation also increased during the times we used it. We liked that this will increase the interest of the students."* Regarding the "Enjoyable" code, P2 stated: *"They enjoy it. It makes us entertained even at this age, for example, I remember adding music or something to the CDs, and having a lot of fun with them. When we showed them as a picture and so on, the videos were very entertaining for us. I think that because it appeals to us, it will affect our students who are younger than us."* The participants agreed that lessons taught using AR applications generally supported students cognitively and affectively. In particular, they agreed on the permanence of teaching, increasing the interest in the lesson, simplifying abstract and difficult-to-grasp concepts, completing the missing subjects anytime and anywhere, and breaking biases, and thus having positive contributions to the student.

Table 11. Codes for the "Contributions to the Educator" category

Category	Codes	
Contributions to the Educator	Cognitive contributions	Keep up with the age
		Support equipment
		Benefit (vocational)
		Keep them social
		Productivity-enhancing
	Affective contributions	Awareness effect
		Motivation
		Pleasure
		Responsibility
		Creativity development

The category of "Contributions to the Educator" is grouped under two headings as cognitive and affective contributions. The cognitive contributions of the AR include the codes of "keeping up with the age, supporting ICT knowledge, utility (vocational), keeping social, and enhancing productivity, while the affective contributions consist of the awareness effect, motivating, pleasurable, responsibility, fostering creativity, and enhancing productivity.

Among the codes regarding the cognitive contributions of AR to the educator, regarding the "Keeping Up with the Age" code, P2 commented: *"At least we keep pace with the times, with augmented reality, that's why. There is a big difference between classical lecture and this one, for the future."* It can be said that the participants learn and use the AR technologies in their lessons as an important tool in adapting to the technology-oriented era we are in, fulfilling the requirements and supporting education with this technology and keeping up-to-date. Regarding the "Supporting ICT Knowledge" code, P7 said *"We will not at least hesitate or be frustrated when something like this comes up. We will know what is what. It's a nice thing in terms of our own knowledge. Since we have seen this before, we will be able to convey this to the student in a smooth and efficient manner. It's a beautiful thing in that way."* It can be said that the participants foresee that teaching this technology will reflect positively on their ICT knowledge and that they will be able to teach students efficiently. Regarding the utility (Vocational) code, P2 stated: *"It may have an effect on professional development as follows: If I am going to be a teacher and they will be used in the next 20-30 years, it is a plus for me to know them now. In other words, in the future technology age, this will be my biggest strength. I will have a leg up compared to other teachers. I'll always be one step ahead."* Regarding the code "Keeping Social", P32 stated: *"As a social studies teacher, we need to know all the social factors. It is something that will keep us social, that is, keep us vigorous and keep us up to date. Also, what we are learning now is a forward-looking investment. This also encourages curiosity, leading to other curiosities and all these pieces of curiosities will lead to a whole. I think this augmented reality will keep us social and vigorous all the time."* Regarding the "Enhancing Productivity" code, P35 stated that being able to do AR activities by using will foster teachers' productivity by enabling them to design educational games: *"With this program, you can be more productive, for example, you can create games."*

Among the codes emerging related to the affective contributions of AR to the educator, regarding the "Awareness Effect" code, P19 said: *"No matter how much we are in the age of technology, none of us clearly know how to use technology. Everything is a game. It's Instagram, it's Facebook, we know that style. As we do these things, I think we learn the actual technology. Actually, this (MAR) is the real technology, so what we (usually) do is just wasting time."* Regarding the "Motivating" code, P4 said *"At first I was doing a lot of things if I made a mistake or something, but now I realized that I can do it. It happens when you really go on something, when you try and make an effort. I noticed it. The advantage of this lesson to me is that it made me embrace technology, and most importantly, I realized that I could do some things."* Regarding the "Pleasurable" code, P6 commented: *"At first, I was*

more biased against this augmented reality. As I practiced, made mistakes and corrected those mistakes, the more it became enjoyable for me.” Regarding the “Responsibility” code, the P19 stated: “I think there is more agreement rather than conflict because there is nothing to be in conflict. When everyone knows their own responsibilities, nobody is disturbed by each other, and no problem arises.” Regarding the “Fostering Creativity” code, P15 commented: “We do something ourselves. We prepare projects ourselves. Our creativity is enhanced in this way. Because the more different things we do, the more kids will remember them.” Thus, the educators agreed that doing AR activities and applying them in the lessons would turn them into educators who can keep up with today's technology and can follow social variables. The reported that they developed their affective and cognitive skills, increased their awareness about using technology, and became educators who enjoy doing and applying. The codes and categories obtained for the third research question, “What are the views of the research on the use of the research in areas other than Social Studies?” are given below.

Table 12. Codes Regarding the Theme of "Different Disciplines"

Theme	Categories	Codes
Different disciplines	Numerical fields	Biology
		Science and technology
		Physics
		Geometry
		Chemistry
		Mathematics
		Medical education
	Verbal fields	Geography
		Pre-school education
		History
		Multi-course

As seen in Table 12, this theme consists of the categories of numerical and verbal fields. The numerical fields category consists of biology, science and technology, physics, geometry, chemistry, mathematics and medical education. The verbal fields category is consists of geography, pre-school education, and history. The multi-course code was also included under the theme of different disciplines.

Regarding the use of AR in the biology course under the category of numerical fields, for the "Biology" lesson, P23 stated: "For example, animals in biology do not know the development stages of a living thing, we can show it." Regarding the “science and technology” code, P4 said: “For example, the science and technology lesson is not liked by the students. For example, the digestive system, the excretory system have many issues, and they can see them in 3D.” Regarding the "Physics" code, P2 commented: "MAR can also be applied in numerical lessons. For example, it may be useful to show the electric wave in 3D in Physics class." Regarding the "Geometry" code, P32 stated: “It can be used in Geometry especially to show shapes. In order to explain the figures, it may be a little more difficult for students with low achievement levels to understand, especially since they are abstract concepts. I think using 3D to show the pyramids or something can definitely help them understand the subject.” Regarding the "Chemistry" code, P28 said: "I think it will be pretty good in chemistry class." Regarding the "Mathematics" code, P11 stated: "For example, children do not understand the problems. Problem questions. With this, for example, it can be shown in 3D, that is, by converting the problem into 3 dimensional shape, it can be ensured that children understand better." Regarding the "Medical Education" code, P41 commented "It may be used in medicine. In medical faculties, internal organs can be shown to the students for educational purposes. It can be shown how the surgery will be performed, so it can be effective in this respect.”

Regarding the use of AR in the geography subject under the verbal fields category, P37 said: *"There are mountains, valleys in the geography lesson. (Using MAR) would be more interesting, too. In augmented reality, for example, the valley will come in 3D. Like the shape of a V, we memorized them. It would be very convenient in geography. I wish it could be done right now."* Regarding the "Preschool Education" code, P9 stated: *"I think it can be useful for preschool teachers. For example, they can play games. Like I said they can use it for the game. It can be interesting for children. Frankly, it caught my attention."* Regarding the "History" code, P7 said: *"If a history book is structured as MAR in history lessons, if it is integrated into the book and the student sees this, it will be very interesting. History is an interesting lesson. I think that such a thing in history lessons would double this interest."* Regarding the "Multi Course" code, which is not included in any category under the theme of different disciplines, P36 said: *"I think it can be used in anything that can be learned visually. So this is not just limited to science, social studies, and mathematics. For example, if you want to show the inside angles of the triangle. It can also be used in math class. If you want to show the crescent tactic by the Ottoman Empire during a war, it can be used there."* AR's concretizing abstract concepts or presenting them from different perspectives under the control of the user is the main reason for finding this technology as useful in many subjects in the field of education. This feature was also prioritized in the opinions of the participants. Although it was stressed that MAR can be applied to concretize abstract concepts in numerical lessons, many participants agreed that MAR can be actively used in verbal lessons as well.

The codes obtained regarding the fourth question of the study, "What are the suggestions of the participants about improving the effect of AR in education?" are given below.

Table 13. Categories and Codes for the Theme of "Suggestions"

Theme	Categories	Codes
Suggestions	Instructional	Feedback
		Generalizability
		Necessity
		Vitality principle
		Readiness
		Permanence (hologram)
		Controlled usage
		Relative to the student
		Continuity
		Compulsory course Table continues...
	Hardware	Hardware support
		Developability
		Necessary infrastructure

As can be seen in Table 13, the suggestions theme consists of two categories, instructional and equipment. The instructional category consists of "Feedback generalizability, necessity, vitality principle, readiness, permanence (hologram), and controlled use, relative to the student, continuity, and compulsory course" codes. The professional knowledge category consists of the "equipment support, developability, necessary infrastructure" codes. Furthermore, the codes are observed to concentrate mainly on instructional suggestions.

One of the suggestions made by the participants under the instructional category in terms of increasing the effect of AR in education was coded as "Feedback". Regarding this code, P34 stated: *"We have to wait another 5 years. Or, for example, if it becomes widespread, its deficiencies will be revealed, and everyone will have an idea. Which happens to us too. So we can convey our thoughts then. But looks like it is enough for now."* Regarding the "Generalizability" code, P43 commented: *"It can be used in other courses. We can use it not*

only in geography and social studies, but also in biology, that is, in physical education." Regarding the "Necessity" code, P24 said: "I think it is something that should be integrated into education because we, as the Turkish society, missed a train while we were in the industrial revolution. We are already pulling a little bit of that train in the current difficulties. You know, we are talking about a new future trend and we are talking about trains like industry 4.0 - 5.0. The things that are necessary for us to catch them already need to be integrated, because we are going to miss a bigger train and a wider train, so it really needs to be integrated so we don't miss it." Regarding the "Vitality Principle" code, P44 stated: "In my opinion, it needs to be integrated into daily life a little. Because education does not attract people's attention in daily life. When I say I teach you, one does not want to take it, but it would be easier if you teach the student without him or her noticing that he or she has been taught something." With these statements, the participants thought that training should be carried out using MAR not only in schools but in all areas of daily life. For the "Readiness" code, P40 commented: "It can also be inbuilt inside the smart board. The file on each unit can be stored there. It is already open during breaks. So the students watch movies and they play music. I think it might be better to use them if we look at it from a positive side. Maybe they can work from there during the exam times." Regarding the "Permanence (Hologram)" code, P25 said: "Maybe it will be very utopian and difficult to do, but I think learning will be more permanent if the 3D object is more like a hologram."

Regarding the "Controlled Use" code, P37 stated, "It should be used, I think it's a good thing, but there is also something like this. Since the device constantly emits radiation, its use must take place in a certain period of time. I think it should be under control for health. And children say that it is the future of society. So I think it should be only allowed for a certain time, it should be under control." Regarding the "Relativity to the Student" code, P13 stated: "For example, we are teaching a subject and we can make a small game that covers all of the subjects related to that subject. Everything all together, all in one. As a mobile application." Regarding the "Continuity" code, P41 commented: "Having it used (by the students) continuously. Giving feedback in every lesson. For example, it may be effective if the teacher identifies and shows the mistakes." Regarding the "Compulsory Course" code, P15 said: "It must be a compulsory course. If it happens, the number of teachers who use it will increase in schools as well, as they will graduate as teachers who have been taught already this, so it will be more common."

One of the codes under the "Equipment" category is "Equipment Support." Regarding this code, P11 said: "For example, something like this could be done. If we try to apply this in the village schools, the children there may not be able to afford it after a certain period of time. Such applications can be supported by a project such as FATİH project. Thus, even the poorest children can be reached more easily." Regarding the "Developability" code, P19 stated: "I think it is a good application that needs to be focused on. There must be enthusiasm. We need to learn, but I think we need to learn something. Let me say that at least this is the case for me." Regarding the "Necessary Infrastructure" code, P35 commented: "First and foremost, a student needs to know how to use the computer, for this application to work." Regarding the same code, P42 said: "Computer training should be intensified." The participants made a significant number of suggestions to increase the effect of MAR on teaching in their suggestions for using MAR more effectively. The participants agreed that this technology is one of the important educational technologies of today and the future, that it can benefit from different technologies such as hologram to offer more concretization in teaching, and it can be used in many lessons, but its healthy use should be monitored and ensured by the educator. On the other hand, they stated that in order for educators and students to use this technology actively, IT infrastructure and equipment should be strengthened and teachers and teacher candidates should be trained on this subject.

CONCLUSION AND DISCUSSION

The aim of this study is to determine the opinions of preservice social studies teachers about their experiences in an action research conducted on mobile augmented reality (MAR). The research lasted for an academic semester. During this period, pre-service teachers integrated video and 3D models, added educational games they prepared, added multiple 3D models and used multiple visuals as a marker, added sounds and expressions to the 3D models, added multiple scenes to the visual prepared as a marker and AR features such as connecting with button, added animation to the 3D model, and taught by virtual object guidance, increasing interaction between real-virtual by adding virtual button on real object. The 7 units in the social studies textbook were given to the participants throughout the study as homework to be structured within the scope of what was taught. Focus group discussions were held to reveal their experiences and opinions on the MAR during this process, and the data supported by researcher diaries and observation reports were analyzed by content analysis.

The analysis showed that the readiness levels of the participants before the applications were similar. However, it was found out that their background IT knowledge was insufficient to design MAR activities. It is thought that the main reason why they see the studies as difficult and complicated is this lack of background. The language problem is compatible with this limitation. However, the slow running of the program depending on the processors and graphics of the technological devices they have is a phenomenon that puts some of the participants in a difficult situation. While evaluating the trainings encountered, the fact that they do not have sufficient education and experience in technology at the beginning can be shown with certainty about technology, this competence has not received sufficient education and an adequate education.

These results clearly support the finding by Yıldız-Durak, Sarıtepeci and Bağdatlı-Çam (2020) which revealed that designing AR activities are time-consuming and require high-level technical knowledge, which similar to the findings of Akçayır, Akçayır, Pektaş and Ocak (2016), concluding that designing AR materials requires technical knowledge.

The participants interpreted the UNITY and VUFORIA programs used to carry out Mobile AR activities as complex, demanding, facilitating, understandable, functional and usable in different fields. They also thought that the use of AR on mobile devices would offer ease of access, increase interest, facilitate, provide active participation, complement and improve and change the perception towards the lesson. Participants generally mentioned the benefits of the programs used to develop AR. As it can be understood from the interview data, it was determined that the majority of the participants had problems because the language used in the programs was English. However, as a result of the experiences they have gained during the implementation process, they have overcome this problem and the positive comments they have made on this subject show.

These findings support the conclusion by Durak and Karaoğlu Yılmaz (2019) that MARs positively affect students' attitudes towards the course, make the course more attractive and effective, and contribute positively to academic success; and those by Sırakaya and Seferoğlu (2016), who reached the conclusion that AR activities made students more active in the lesson and increased participation. It also coincides with the findings of Küçük, Kapakin and Göktaş (2015) who concluded that using MAR in education provides ease of use. It is in line with the findings of Di Serio, Ibanez, and Kloos (2012) who concluded that the use of augmented reality in education will increase students' interest in the lesson.

The results obtained from the findings about the use of MAR in education are classified into three parts: 1) Contribution to teaching 2) Contribution to students 3) Contributions to teachers. Regarding their contribution to teaching, it was found that MAR means technology integration into education, it can concretize abstract concepts, supports teaching and ensures

permanence in teaching, increases motivation, keeps the focus on the course for a longer time, can be used to reinforce what has been learned, supports creative thinking, and fosters collaborative learning. In addition, it was stated that it is possible to show it in the classroom, in cases that are difficult to depict or go and see on the spot, dangerous and costly, and it is possible to display it in 3D and in the classroom environment with the closest to the reality, and this situation will make significant contributions to education. Considering the contributions to the student, it was found that it is interesting and it can make the lessons more enjoyable, it is a motivating element, it helps the student to grow, it encourages active participation, it is complementary to the subjects missed by the student, and it is an element that facilitates learning for students. Regarding its contribution to the teacher, it was viewed by the participants as the future educational technology, that designing MAR events will provide a significant professional benefit, increase the productivity of the trainer, contribute to the personal and professional knowledge, help educators keep up with the age, keep them social, create an awareness effect, and have a motivating effect on the educator. Ersoy, Duman and Öncü (2016) besides Ramazanoğlu and Aker (2019) reached the conclusion that AR significantly increases the motivation and success of students, offers ease of learning and positively affects motivation. Chen and Tsai (2012) found that MAR had a significant positive effect on the student interest and motivation towards the course, Özdemir (2017) concluded that AR plays an important role in concretizing abstract concepts, Aytekin, Yakın and Çelik (2019), who reached the finding that appeals to different sense organs, and Yılmaz (2012) found that it helped break the prejudices against the course and improved perception. Similar to Aker (2019) and Batdı, (2016) Yalçın Çelik (2019), found that AR materials are pleasurable, entertaining and will gain professional benefit by helping the educator to eliminate the problem of preparing material. Ramazanoğlu (2019) found that AR can be used in daily life as well as to improve the creativity of teachers.

As can be understood from the findings based on the group interviews, the MAR technology can be used not only in the field of social studies but also in many educational fields. However, a particular emphasis should be placed on the subjects of geography and history. On the other hand, MAR can be used effectively in medical education as well as courses such as geometry, physics, biology, chemistry, mathematics, science, and technology. This conclusion is also supported by İmamoğlu and İmamoğlu (2018), who found that it would be beneficial to use AR in the field of Geography, and Koçoğlu, Akkuş and Özhan (2017), who reached the conclusion that it positively contributed to the academic achievement and spatial intelligence of students in Mathematics and Geometry. It is also in line with the findings of Avcı and Taşdemir (2019), who found that AR has increases academic success in Chemistry and the Technology courses.

It is thought that it is important for the participants to make suggestions on the more effective use of AR in education based on the experience they have gained during the study, since they are pre-service teachers. The participants in the current study generally made suggestions on increasing the impact of this technology on education. They agree that it will foster learning retention when supported by technologies such as holograms, it should be a required course for preservicer teachers in education faculties, and that AR-supported mini-games can be added to the subjects at the end of the units in textbooks. However, they emphasized that since this technology will be installed in mobile devices, some health problems may occur, so it should be used in a regulated and supervised manner. In addition, the participants emphasized that the MAR should not be limited to the field of education only, but can be used effectively for the education of the general society.

Considering the results of this research, it is thought that it will be useful to consider the following suggestions: In order to minimize the problems that arise while developing AR applications, applications with a simpler and Turkish interface can be developed. On the other

hand, academic studies that compare AR studies in Turkey with AR studies abroad and show how we are in this regard can be carried out. Finally, AR studies, which are very rare in the field of social studies, can be carried out with much larger audiences at different levels of education.

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IMPACT OF MOTHERS' AND TEACHERS' TESTIMONIES AND SCIENTIFIC EXPLANATIONS ON CHILDREN'S JUDGMENTS

Abstract: The purpose of this study is to examine the impact of mothers' and teachers' testimonies that conflict with scientific facts and scientific explanations on kindergartners' judgments. The participants consisted of 104 young children in Şanlıurfa province in Turkey. Their ages ranged from 48 to 79 months, with a mean age of 61.48 months (SD = 5.58). The participants were randomly assigned to the following four groups: 1) Scientific explanation followed by teacher's testimony, 2) teacher's testimony; 3) scientific explanation followed by mother's testimony, 4) mother's testimony. The children responded to a question about a scientific fact. After the response, they watched their mothers' or teachers' testimonies which contradict the scientific fact. Findings revealed that when a scientific explanation was not provided, the children tended to show deference to their teachers' and especially mothers' testimony. A week later, a follow-up measurement revealed that this impact did not last a week.

Keywords: Mothers' testimony, teachers' testimony, children's judgment, scientific explanation, early childhood

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INTRODUCTION

It is not practically possible to learn everything through first-hand experiences. Therefore, other people's testimonies are a necessary source of much of the new information (Jaswal, 2010). However, other people's testimonies are not always right. Therefore, it is critical to know to what extent and under what conditions people rely on others' testimonies. Young children are dependent on outside information (Corriveau & Harris, 2009a). For kindergartners, their mothers and teachers are very important sources of information (Alpaslan, Ulubey & Ata, 2021; Kiuru et al., 2012; Thornberg, 2008; 2007). Therefore, it seems reasonable to question what would happen to kindergartners' judgments if their mothers or teachers provide them with testimonies containing wrong information. This study aims to examine whether a teacher's or a mother's contradicting testimony to a child's response would change the child's judgment. Also, how would providing a scientific explanation before the exposure of teachers' or mothers' contradicting testimonies would affect children's judgments?

IMPACT OF OTHERS' TESTIMONY ON CHILDREN'S JUDGMENTS

A plethora of studies have revealed that young children, especially those older than 3.5 years, are sensitive to a speaker's reliability (Luu, De Rosnay & Harris, 2013; Corriveau & Harris, 2009a; Clement, Koenig & Harris, 2004; Nurmsoo & Roinson 2009; Kim, Kalish & Harris, 2012) and level of knowledge (informedness) (Lopez-Mobilia & Woolley, 2016; Robinson & Whitcombe 2003; Sabbagh & Baldwin, 2001). For example, Kim, Kalish and Harris (2012) conducted a study where two puppets, one reliable and one unreliable, labeled things for children between the ages of 3 and 5. The reliable puppet gave the correct labels to objects and the unreliable puppet provided wrong labels. In test trials, both puppets provided labels for novel objects which were not familiar to the children. Their findings revealed that children in the reliable puppet group used the information they had received from the puppet to make an inductive inference about the unknown subject significantly more than the children in the unreliable puppet group. In another study, Lee et al. (2013) found that all age groups preferred to accept the accurate tester's testimony over that of the inaccurate tester. Preference for accuracy in 4- to 5-year-olds were stronger than 3-year-olds because the former preferred the accurate tester over the novel one in accuracy versus novel tester conditions. These studies emphasized the sensitivity of young children to informants' reliability in several domains.

Beside the reliability of an informant, children are also sensitive to an informant's level of knowledge (Lopez-Mobilia & Woolley, 2016; Robinson & Whitcombe 2003; Sabbagh & Baldwin, 2001). For example, in Robinson and Whitcombe (2003)'s study, researchers and children (between 3 and 5 years) played a guessing game where they had to guess what was inside a tunnel with two choices. In one condition, the children were more informed than the researchers because they could look inside the tunnel and the researchers just felt with their hands. The researchers contradicted the children's responses and a puppet asked the children "what is inside the tunnel?" again. They found that the children changed their responses if a researcher was more informed than they were. They have concluded that children are sensitive to the informedness of a speaker.

In summary, all the above-mentioned studies have revealed that young children are sensitive to the reliability and expertise of an informant. Mothers (Kiuru et al., 2012) and teachers (Cote et al., 2013; Croninger et al., 2007) are dominant figures in kindergartners' lives. Mothers and teachers are reliable figures for young children. For kindergartners, teachers are trusted experts (Thornberg, 2008; 2007). Therefore, their testimonies on a subject may be effective on children's judgments.

EXPLANATION

When a child encounters a new problem, he or she will accept the testimony of someone he or she considers knowledgeable on the subject or will just trust the testimony of someone he or she knows. In this case, the child just accepts the information, he or she does not process it in order to learn it. Providing an explanation facilitates the learning process (Crowley, & Siegler, 1999). The explanation provides an input to be considered and finally judged (Brem, & Rips, 2000). Crowley and Siegler (1999) have pointed out that “the current findings suggest that knowing the right explanation is what makes learning powerful, regardless of where the explanation came from (314).” To be effective, explanations should be explicit, rational and loyal to facts rather than personal ideas or ideological beliefs that are accepted without evidence. Otherwise, an explanation can be harmful because it can lead to overconfidence and fixation, especially in lack of evidence (Brem, & Rips, 2000). Therefore, scientific explanations may be effective in the process of judgment formation in children.

Several studies have shown that young children (3- to 4-year-olds) benefit from scientific explanations. Thus, even 3-year-olds are capable of providing scientific explanations for scientific concepts (Bascandziey & Harris, 2010; Legare, 2012; Legare, Wellman & Gelman, 2009). For example, Legare, Wellman and Gelman, (2009) provided 3- to 5-year-olds with vignettes where they had to explain why one child became sick and the other did not. They found that even 3-year-olds were able to provide explanations that contained biological terminology. Of course, in order to provide these explanations, children had to hear these explanations from someone else. Therefore, the study has revealed that young children are able to understand and make use of scientific explanations. Lombrozo (2006) has pointed out that, by guiding reasoning, explanations facilitate judgment process because knowing an underlying process for a phenomenon such as flying makes it easier to understand why human beings cannot fly like birds. This study tested how children would respond when they faced a scientific explanation that supported their judgments but their mothers’ or teachers’ testimonies conflicted with them.

In summary, people are dependent on information coming from other people. Young children mostly trust their mothers and accept their teachers as trusted experts. What would happen if mothers and teachers provided contradicting information for children prior to knowledge and scientific facts? Would children show deference to their teachers’ and mothers’ testimonies? What would happen if children’s responses were backed with scientific explanations which revealed underlying principles of the facts children uttered with his/her first response? Would scientific explanation prevent children from accepting scientifically untenable acts and deeds even if they came from the most trusted people they knew?

IMPORTANCE OF STUDY

Several studies examined children’s trust to their mothers’ (Corriveau, Harris, Meins et al. 2009; Corriveau & Harris, 2009b) and teachers’ (Enesco, Rodríguez, Lago, Dopico, & Escudero, 2016; Guerrero, Sebastián-Enesco, Pérez, & Enesco, 2019; Chan & Tafdif, 2013) testimonies. In their longitudinal study Corriveau et al. (2009) investigated impact of perceptual cues and secure attachment young children’s epistemic trust for informant. They have found that although children considered perceptual cues their pattern of responding varied by attachment status. Securely attached children evaluated perceptual cues better than their unsecurely attached peers. In another study, Guerrero et al. (2019) examined impact of contradicting testimony of teachers for non-conventional uses of common objects and labelling new objects on pre-schoolers’ judgments. In their first study they have compared impact of testimonies of a stranger and children’s teacher. In their second study they examined impact of majority. They have found that 3-year-old children were not influenced neither by their teacher nor by the context. On the other hand 5-year-olds stucked with conventional explanations in both situations. They inferenced that children’s previous beliefs

have more strength than their compliance with the authority. These studies revealed mothers and teachers impact on young children's decision about information. Studies usually recruited mothers and teachers separately. Similarly, to the authors' knowledge, no former studies compared the impact of teachers' and mothers' testimonies on children's judgments about a scientific fact. Most of the time mothers and teachers are most effective and trusted adults in young children's lives (Kiuru et al., 2012; Thornberg, 2008; 2007). Therefore, misleading information that are provided by these adult may negatively affect young children's factuality judgments.

The study also examines the role of strengthening children's prior knowledge with scientific explanations on children's judgments when they hear scientific explanations and their mothers' or teachers' testimonies conflict with the explanations. Examining the impact of scientific explanations is especially important because, in some cases of a religious context, trusted experts like teachers may present children scientifically untenable acts and deeds as facts. Kotaman (2016) has found that of the 108 teachers, 61 (57%) stated that if their students asked about a scientifically untenable act or deed in a religious story, they would provide a religious explanation for them. Thus, the study provides a hint for thinking and learning processes of young children to find out whether or not they are influenced by testimonies or scientific explanations. To the authors' knowledge, the impact of strengthening children's prior knowledge with scientific explanations and contradicting testimonies of a loved and/or expert one on children's factuality judgment has not been studied before. Finally, the study aims to test how testimonies and explanations affect children's judgments about a familiar fact that children are confident of and an unfamiliar fact that children are not confident of. Sum of familiar and unfamiliar questions also tested because in reality children may encounter both situations. Thus, we wanted to whole picture. The purpose of the study is to examine the impact of mothers' and teachers' testimonies that conflict with scientific facts on children's judgments with and without scientific explanations.

- 1) Will children in teacher testimony with scientific explanation change their judgments after they hear a scientific explanation of their responses and then watch their teachers' testimonies conflicting with their responses?
- 2) Will children in teacher testimony change their judgments after they watch their teachers' testimonies conflicting with their responses?
- 3) Will children in mother testimony with scientific explanation change their judgments after they hear a scientific explanation of their responses and then watch their teachers' testimonies conflicting with their responses?
- 4) Will children in mother testimony change their judgments after they watch their teachers' testimonies conflicting with their responses?

METHOD

A pretest, post-test and follow-up test design was deployed in this study. A pilot study was conducted to test whether or not children were knowledgeable about test questions.

PILOT STUDY

In order to test whether or not mothers' or teachers' testimonies will change children's judgments on an issue, mothers' and teachers' testimonies should conflict with children's responses. The purpose of the pilot study was to see children's responses to the test questions. Two questions were selected for testing change in children's judgments. Questions were: 1) Can people fly like birds? 2) Can birds live without air? Our assumption was almost all the children would know that people cannot fly like birds and respond accordingly. On the other

hand, while responding to the second question, they would not be as confident as the first question.

For the pilot study, two schools with similar parent and child profiles to the four schools in the actual study in terms of socio-economic levels were selected. The parents and the teachers of six classes in these two schools were informed about the study. Eighty three parents signed the informed consent letter. Among the eighty three children whose parents had signed the informed consent letter, fifty were randomly selected to participate in the pilot study. One child did not want to participate. Finally, the pilot study was conducted with forty nine children. Among the forty nine children, forty seven (96%) provided the right answer for the first question. For the second question, 39 children (79%) provided the right answer. One-way ANOVA revealed that a statistically significant difference between means of two questions in favor of first question [mean for first question=0.96 SD=0.20 versus mean for second question=0.79 SD=0.41 ($F=6.35$; $df=1$; $p<.05$)]. The results were as expected. While almost all the children were certain about the fact that people cannot fly like birds, they were not that certain about whether birds can live without air or not. Therefore, two questions were regarded as appropriate for the purposes of the actual study.

PARTICIPANTS

The population of this study consisted of 4 to 6 years old young children. This group was targeted for two reasons: 4 to 6 years old children are able to differentiate the factual from the nonfactual. Therefore, they are able to give correct answers to test questions. In Turkey, schooling before 4 years is very rare. Therefore, testing the impact of teachers would be practically impossible.

The participants were accessed through the administrations of four schools who were informed and agreed to participate in the study. Participation for the study was voluntary. The children whose parents submitted the consent form and approved of their participation were included in this study. Initially, 127 mother submitted the consent form. Three Syrian children were discarded because they were not competent in Turkish. The remaining 124 children were randomly assigned to the following four groups: 1) Scientific explanation followed by teacher's testimony videos (teacher scientific TS), 2) teacher's testimony video (teacher T); 3) scientific explanation followed by mother's testimony videos (mother scientific MS), 4) mother's testimony video (mother M). Then, the children were assigned to the groups some mothers did not want to record a video. Therefore, eight children were withdrawn from the study. One child from the mother testimony group and two children from each of the other three groups failed to provide the right answer for at least one of the test questions before watching the videos. Therefore, seven children were discarded from the study. Finally, four groups contained 29, 28, 23, 24 children respectively.

Table 1. Demographic comparison

Groups	Male	Female	Mean Age	Std. Age	Mean Mother Education	Mean Income (\$)
1	18	11	62	6.85	6.86	665.43
2	21	7	61	4.67	6.92	682.43
3	17	6	60	5.35	8.39	685.07
4	16	8	61	5.25	5.42	644.05

Table 1 presents the demographic characteristics of the final participant sample of 104 young children. The final participants consisted of 104 young children enrolled in four public kindergartens. Their ages ranged from 48 to 79 months, with a mean age of 61.48 months ($SD=5.58$). Of the 104 children, 32 (30.7%) were female and 74 (69.3%) were male. Of the 104 children, 73 (70.2%) were in their first year in school and 31 (29.8%) were in their second year in school. Among the participants, only nine (8.7%) knew their teachers for two

years and the rest met their teachers at the beginning of the semester. Therefore, they had known their teachers for less than three months.

Years of education among mothers ranged from 0-17, with a mean of 6.9 years ($SD=4.8$). Monthly income level ranged between 400 (approximately 110\$) and 10000 (approximately 2500\$), with a mean of 2452.4 (approximately 640\$) ($SD=2068.2$). According to the Turkish Statistical Institute (an official government organization), the monthly per capita in Turkey is approximately 771\$ (www.tuik.gov.tr/PreIstatistikTablo.do?istab_id=2218). However, because Turkish currency has lost value against US dollar currently, this average is around 650\$. Average time of schooling in Turkey is 6.5 years (<http://www.hurriyet.com.tr/bu-haritanin-rengi-degismedikce-turkiye-21-yuzyila-zor-girer-25177632>). Accordingly, descriptive statistics revealed that participants came from a variety of socio-economic groups. This strengthens the generalizability of the study.

MATERIALS

Mothers' and teachers' contradicting testimonies to the test questions, which included "..... (child's name) listen to me carefully, I am sure that people can fly just like birds" "..... (child's name) again listen to me very carefully, I am sure that birds can live without air", were recorded with camera. All of them were recorded in an available room in the kindergartens by the investigator. The mothers and the teachers memorized their words and the investigator recorded them. The investigator assured that all the mothers and the teachers used same words in the video. Therefore, in some cases, repeated records for the mothers and the teachers who made mistakes were taken out. Other than two test questions, six more questions were prepared for warming up and testing whether or not children were able to differentiate the real from the unreal. These questions are explained in the procedure section.

PROCEDURE

The investigator informed the kindergarten administrations and teachers about the study. After the administrators and the teachers agreed to participate in the study, the teachers informed parents about the study and asked them to sign a consent letter and fill in a demographic questionnaire. After the consent letters were received, the investigator and a research assistant who was unaware of the purpose of the study began to visit the kindergartens to gather data.

The study was conducted in a play room in each kindergarten. The classroom teachers introduced the research assistant to children as a university student who would ask them a few questions. The research assistant received each child one by one and tested each child individually. The research assistant and the child sat by a child-size table on which a smiley face and a sad face were placed. The research assistant gave the following instructions to children: "Now I will ask you some questions. If your answer is yes, point to smiley face. If your answer is no, point to sad face." After the instructions, the research assistant asked six warm-up questions. Beside warming up and establishing rapport between the participant and the research assistant, the warm-up questions served the following purposes. Through warm-up questions, it was possible to see whether the participant understood how to respond to the questions or not. Moreover, the fifth and the sixth questions tested the participants' ability to differentiate between the real and the unreal. This was done to guarantee that the children were able to understand the basic scientific facts. Following were the warm-up questions: 1) If the participant was a boy, the question was "Are you a girl?" 2) The assistant pointed to a pencil and asked: "Is this a pencil?" 3) The assistant pointed to an eraser and asked: "Is this an eraser?" 4) The assistant pointed to a pencil sharpener and asked: "Is this a school bag?" 5) Can dogs speak just like people do? 6) Can trees speak just like people do?

After the warm-up questions, the assistant asked the test questions without any interval: 1) Can people fly just like birds? 2) Can birds live without air? In the scientific explanation groups, the assistant provided the following explanation after the participant's response to the question seven: Birds have strong wings. Their wings are bigger than their bodies. When birds clap their wings, they make wind. This wind helps them to fly. People's arms cannot produce wind. Therefore, they cannot fly like birds. For the question eight, the assistant provided the following explanation: In our bodies we have very tiny things that cannot be seen with eye called cells. Cells need oxygen to live. If there is not air, that means there is no oxygen. Without oxygen, birds' cells cannot live. If their cells cannot live, birds cannot live, either. Therefore, birds cannot live without air.

After the participants responded to the test questions (questions 7 "familiar" and 8 "unfamiliar"), the participants in the mother groups watched their mothers' contradicting testimonies and the participants in the teacher groups watched their teachers' contradicting testimonies. After the participants watched the testimonies for both questions, they were asked the same questions again. A follow-up measurement was conducted a week after the first measurement. This time, the assistant just asked two warm-up questions (are you a boy? Is this a pencil?) and the test question (questions 7 and 8). After each test question, the assistant demanded an explanation from the participants for their answers. At the end of the session, the assistant made the following explanation to the participants: "Your mother (or teacher) and I made you a joke by showing you joke videos" and then the assistant provided the scientific explanation for each test question.

SCORING

For right answers children received one point and for wrong answers they could not get any point. For example in question 7 "Can people fly just like birds?" if child said "no people cannot fly like birds" than child received one point. As it was mentioned above only children who provided at least one right answer to questions 7 and 8 remained in the study. Providing right answer is sign of higher comprehension thus it was possible rank children's judgment capacity and consistency in their judgment. Therefore we did not consider data as categorical data. That was why we used one way ANOVA and regression analysis to analyze the data.

FINDINGS

A preliminary analysis of one way ANOVA and a regression analysis were conducted for several variables such as gender, age, mother's education, child's schooling experience, child's experience with teacher. Among these analyses, only gender appeared as a significant variable for pre-measurement of the question 7. ANOVA showed that for the question 7 of pre-measurement, boys scored significantly higher than girls. Although Taylor (2013) found that "children displayed significant preference to learn new information from a same-sex adult when both adults are equally reliable/unreliable (680)", because further analysis did not reveal any impacts of gender on children's judgment change, gender wasn't included as another variable. The preliminary analysis of one way ANOVA did not reveal any difference among four groups' mean scores for questions 7 and 8. This finding revealed that at the beginning of the study groups were similar in terms of their answers. Of the 624 responses provided for the warm-up questions, 607 (97%) were right. Therefore, it is reasonable to claim that children were ready for testing.

Table 2. Frequencies and Percentages for Correct and Wrong Answers

		Pretest7	Posttest7	Followup7	Pretest8	Posttest8	Followup8
Teacher Scientific Exp.	Correct	28(96.6%)	25(86.2%)	28(96.6%)	23(70.3%)	16(55.2%)	23(79.3%)
	Wrong	1 (3.4%)	4(13.8%)	1(3.4%)	6(20.7%)	13(44.8%)	6 (20.7%)
Teacher without Exp.	Correct	28(100%)	23(82.1%)	25(89.3%)	22(78.6%)	12(42.9%)	22(78.6%)
	Wrong	0	5(17.9%)	3(10.7%)	6(21.4%)	16(57.1%)	6(21.4%)
Mother Scientific Exp.	Correct	23(100%)	19(82.6%)	22(95.7%)	16(69.6%)	13(56.5%)	17(26.1%)
	Wrong	0	4(17.4%)	1(4.3%)	7(30.4%)	10(43.5%)	6(73.9%)
Mother without Exp.	Correct	23(95.8%)	16(66.7%)	24(100%)	15(62.5%)	6(25%)	15(62.5%)
	Wrong	1(4.2%)	8(33.3%)	0	9(37.5%)	18(75%)	9 (37.5%)

Table 2 presents frequencies and percentiles for correct and wrong answers for pretest, posttest and follow up tests of questions seven and eight. Similar to pilot test one-way ANOVA revealed a statistically significant difference between the pretest mean scores of questions 7 and 8 at 0.01 level in favor of question 7 [mean for question 7=0.98 SD=0.14 versus mean for question 8=0.73 SD=0.45 ($F=29.86$; $df=1$; $p<.01$)]. This finding provided evidence for difference in familiarity of two questions for children.

Table 3. One-way ANOVA comparison of Group Teacher Scientific Explanation (TS), Mother Scientific Explanation (MS) and Mother without Explanation (M) Groups

Groups	Posttest Question 8					Posttest Sum of Questions				
	Mean	Std.	F	Sig	η^2	Mean	Std.	F	Sig	η^2
TS	0.55	0.50	5.22	0.026	0.093	1.41	0.68	6.66	0.013	0.12
MS	0.56	0.50	5.17	0.028	0.103	1.39	0.78	4.70	0.035	0.095
M	0.24	0.44				0.91	0.71			

Series of one way ANOVAs and post hoc were conducted to compare the four groups' pre, post and follow-up responses for the questions 7 and 8 and sum of the questions. Table 3 showed that one way ANOVA did not reveal a significant difference among the groups. Mean averages of the four groups for the pre, post and follow-up tests did not differ significantly. Table 3 presented significant differences calculated in post hoc comparisons using LSD. Post hoc LSD indicated that group in which teacher provided scientific explanation (TS) mean score ($M=0.55$, $SD=0.50$) for the post measurement of the question 8 was significantly higher than mother group that did not get scientific explanation coded as group M ($M=0.25$, $SD=0.44$) mean score for post measurement of the question 8 at 0.05 level. For this comparison, Partial Eta Square results showed that watching teachers' testimony with a scientific explanation explained 9.3% of the whole variance.

Another significant difference for post measurement of the question 8 appeared between group in which mothers provided scientific explanation group MS ($M=0.56$, $SD=0.50$) and group M ($M=0.25$, $SD=0.44$) at 0.05 level. For this comparison, Partial Eta Square results showed that watching mother's testimony with a scientific explanation explained 10.3% of the whole variance. Similar findings occurred when the sum of the questions were compared. Again, there were significant differences between group TS ($M=1.41$, $SD=0.68$) and group M ($M=0.91$, $SD=0.71$); also between group MS ($M=1.39$, $SD=0.78$) and group M ($M=0.91$, $SD=0.71$) post measurement of the sum of the questions at 0.05 level. Partial Eta Square results for comparison of group TS and group M showed that watching teachers' testimony with a scientific explanation explained 12% of whole variance. Partial Eta Square results for group MS and group M showed that watching mothers' testimony with a scientific explanation explained 9.5% of whole variance. The results showed that for the question 8 and the sum of the questions, the scientific explanation helped children not to change their testimonies.

DISCUSSION AND CONCLUSION

The purpose of this study was to examine the impact of mothers' and teachers' testimonies and scientific explanations on children's judgments about scientific facts when they were confident of their knowledge and when they were not too confident of their knowledge. For all the groups, the findings revealed a decrease from the pre to post measurements and an increase from the post to follow-up measurements. When the groups were compared with each other, it appeared that group TS and group MS obtained significantly higher scores than group M in the unfamiliar question and the total of questions.

These findings showed that when a scientific explanation was not provided, the children tended to show deference to their teachers', as in group T, and especially mother's testimony, as in group M. When the children were not confident of their answers, they were more inclined to adapt their responses to their teacher's and mother's testimonies. These findings were partially in accordance with several studies which showed that children younger than 4 years old showed a tendency to change their initial responses and tended to show deference to an adult's testimony when they were not completely confident of their answers (Jaswal; 2010; Jaswal, 2004; Jaswal, & Markman, 2007). As it was mentioned above, Jaswal (2004) found that when children encountered a hybrid picture, they tended to change their initial decisions about the picture when they heard the label for the hybrid. The author mentioned that this was especially true for 3-year-olds rather than 4-year-olds. The current study extended these findings by adding that 4-5-years-olds also showed deference to a testimony when the testimony was told by their mothers and teachers.

Many studies have shown that children are sensitive to speakers' reliability (Luu, De Rosnay & Harris, 2013; Corriveau, & Harris, 2009; Clement, Koenig, & Harris, 2004; Nurmsoo, & Roinson 2009; Kim, Kalish, & Harris, 2012). One of the main strategies that children used to select whom to trust as an informant depend on children's evaluation of the informant's former reliability and consistency (Tong, Wang & Danovitch 2019). In this case, the speakers' reliability worked against the children. The children even replaced their right answers with wrong ones. The good news is that the negative impact of mother's and teacher's testimonies which contradict scientific facts did not last a week. These findings yielded that when the exposure to a scientifically wrong testimony was not permanent, its effects diminished even if it was provided by a very trusted source such as a mother and a teacher.

Young children prefer to learn from competent informants (Kuzyk, Grossman & Poulin-Dubois, 2019). Young children usually consider their mothers and teachers competent people (Cote et al. 2013). In line with the literature, these findings emphasize the importance of mothers and teachers as sources of information for kindergartners (Croninger et al. 2007; Kiuru et al. 2012; Thornberg, 2008; 2007). Signs of the positive impact of the scientific explanation appeared in the findings. Post hoc comparison among the groups showed that the scores of the scientific groups for the unfamiliar and the total questions in the post measurement were significantly higher than the score of the mother without explanation groups. This finding was consistent with former studies (Bascandziew & Harris, 2010; Legare, 2012; Legare, Wellman, & Gelman, 2009). Corriveau et al. (2009) showed that young children could consider perceptual cues while they were making decisions about facts. Our findings also in line with these findings because the current study revealed that young children could consider scientific explanations while they were deciding to trust or not to trust to a new information. Even a single scientific explanation protects children from being misled outside the information provided by a trusted individual such as a mother or a teacher.

Children learn a lot of things from their families until they come to school (Kiuru et al. 2012). Among those things that they have learned from their parents, there may be misconceptions,

wrong information and scientifically untenable acts and deeds accepted as facts (Corriveau, Chen, & Harris, 2015; Kotaman, & Tekin 2015). Sometimes, a teacher might provide information contradicting what children have learned at home (Kotaman, 2014). In such cases, scientific explanations can help the teacher to reach children. Chinn and Brewer (1993) emphasized the critical function of scientific explanations in changing rooted assumptions of elementary school age children. They mentioned that school children even resisted first-hand physical evidences that they directly experienced when they encountered a scientific fact contradicting their previous assumptions. Children started to leave their misconceptions after a teacher provided scientific explanations which uncovered why and how the physical fact actually occurred. Therefore, we suggest that early childhood teachers should provide scientific explanations of the phenomenon that they are teaching to protect their children from being misled and from decisive testimonies that contradict with scientific facts.

In summary, the study provided some evidence for the immediate impact of a teacher's and mother's testimony contradicting scientific facts on children's judgments. The children tended to show deference to their teacher's and especially their mother's testimony, especially when they were not confident of their knowledge. The impact of unscientific testimonies did not last a week. Therefore, we have concluded that hearing correct information once does not affect children's long-term knowledge. The scientific explanations provided for the responses of the questions protected the children from showing deference to their mothers' unscientific testimonies, especially when the children were not confident of their answers. Therefore, we suggest that early childhood teachers should provide scientific explanations which answer why and how questions about the subjects that are taught. Thus, children would be more equipped against the decisive information coming from outside.

LIMITATIONS

The teacher without explanation group displayed a significant decrease from the pre to post measurements for the question 8 and the total of questions. However, among the groups, comparison did not show a significant difference from other groups at any measurements. Although teachers are trusted experts for kindergartners (Thornberg, 2008; 2007), the findings have shown that their testimonies are not as effective as those of mothers in changing children's judgments. This may be because the vast majority of children (91.3%) have known their teachers for less than three months. Future studies would target children who have more acquaintance and deeper relations. Thus, it would be easier to compare with mothers.

In the pilot study we have found that 79% of the children answered the second question correction although this was significantly lower than the first question 79% right answer may be considered as relatively high for unknown question. Therefore, future studies should select questions that young children are less familiar with.

Finally, the reasons underlying the children's responses weren't examined in this study. For example, we did not ask children "why do you think people cannot fly just like birds?" Future studies can focus on the reasoning process. Thus, the impact of self-explanation on children's judgments compared to contradicting testimonies provided by trusted adults can be examined.

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IS HAVING A HELICOPTER MOTHER A TRAUMATIC EXPERIENCE? THE RELATIONSHIP BETWEEN HELICOPTER MOTHER ATTITUDE AND TRAUMATIC EXPERIENCES AND LEARNED HELPLESSNESS

Abstract: The aim of the study is to determine whether the attitude of the helicopter mother is within the scope of the traumatic experience. For this purpose, the rates of explaining the traumatic experiences and learned helplessness of helicopter parental attitude were tested. 539 secondary school students between the ages of 16-18 participated in the study. Helicopter Parental Attitude (mother form), Traumatic Experiences and Learned Helplessness Scales were used to analyze the data using structural equation modeling. At the end of the study, 36% of the traumatic experiences of helicopter mothers' attitudes) predicted 35% of learned helplessness. It was observed that mostly helicopter attitudes in the field of basic life skills and learned helplessness were the predictors for the helicopter mothers. The highest correlation with helicopter mothers' attitude was observed in the emotional abuse dimension of traumatic experiences. As a result, it was concluded that the being raised up by a mother with helicopter attitude should be accepted within the scope of traumatic experience. The results of the research are expected to be useful in the fields of parenting and family counseling.

Keywords: Helicopter motherhood, Traumatic experiences, Learned helplessness

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INTRODUCTION

Childhood experiences are considered to be the most important predictors of self-control, adjustment and problem behaviours of individuals at later ages (Scaramella and Leve, 2004, p.89; Tahirović and Jusić, 2016, p.149). Among these experiences, parental attitudes and child-parent relationships are of particular importance. Parenting styles, which are defined as psychological structures representing the standards and strategies used by parents in raising children, are related to how and to what extent the parents respond to the physiological and psychosocial needs of children (Skinner, et al., 2005, p. 175).

Helicopter parenting, first described by Cline and Fay (1990), is a concept used to describe the attitudes of parents who are concerned with their children's education, safety and all kinds of activities, in short, with all aspects of their children's lives, in an obsessed manner; who are overly protective and programmatic and who have aimed to make their children perfect (Lee and Kang, 2018). This concept has entered the scientific literature after 2010 and its relationship with many variables has been tested. The concept of helicopter parenting is also seen to be called as parenting mower (Locke et al., 2012, p. 249), bulldozing parenting (Sharma and Sarna, 2018, p. 13) and over-parenting (Hesse et al., 2018, p. 457). No matter what concept is used; extremely anxious, overly controlling, perfectionist and interventionist behaviour for their children; expectation of high success and excessive effort that constantly revolves around their children (Padilla-Walker and Nelson, 2012, p. 1177) are the common characteristics of the parents who have this attitude. There are numerous studies on the permanent, negative results of this parenting style on children's psycho-social development which is not yet sufficiently researched in the scientific environment in Turkey. Self-efficacy weakness (Reed, et al., 2016 p. 3136; Van Ingen et al., 2015, p. 7), narcissistic personality traits (Findley and Ojanen, 2013, p. 504), anxiety and depression problems (Garner, 2017, p. 6), problems with self and identity development (Schiffrin et al., 2014, p. 548), social adjustment problems (Ungar, 2009, p. 258), negative effects on subjective happiness and psychological well-being (Segrin et al., 2012, p. 237; Schiffrin, et al., 2014, p. 54; Redd et al., 2016; Kouros et al., 2017, p. 939) were revealed with the findings of these researches.

This parental attitude, which starts at the age when children start to walk, increases during school age and adolescence and often lasts until the adult's age. (Stafford et al., 2016, p. 329). Helicopter parenting is thought to have four main causes. Extreme anxiety and fear of possible poor consequences for the child's physical, academic, social and emotional life are among the most important reasons (Luebbe et al., 2016, p. 841). Mistrust of the outside world, the economy, the labour market and world-wide concerns are another important reason for families to have more control over their lives to protect their children (Hesse et al., 2018, p. 457). The desire of adults who think that they are not liked, neglected or ignored in their childhood lives (Rousseau and Scharf, 2018, p. 919) and finally environmental pressure from other parents (Odenweller et al., 2014, p. 407) are considered as the reasons that lead parents to helicopter attitudes.

The number of studies on the various dimensions and results of helicopter parental attitudes is increasing. In contrast, there has not been a study yet neither in Turkey nor abroad regarding whether having a helicopter parent possesses the quality of direct traumatic experiences. The research was carried out in order to find answers to this question. While the relationship between childhood traumatic experiences and helicopter parental attitudes was sought, learned helplessness was included in the variables in terms of providing evidence.

Learned helplessness is a concept put forward as a result of a series of experiments with dogs after implementing shocks against the animals which were observed to stay inactive although there existed the possibility of avoiding shocks (Overmier, 2002, p. 4). In subsequent studies, it was found that the same effect exists for people and that the person shows motivation and

cognitive deficits as a result of the expectation of uncontrollability (Seligman and Maier, 1967, p. 1). As a result of the findings of these studies; learned helplessness is defined as the failure of an organism to take action or fail to perform the necessary behaviours even if it can control the process or the result after having an experience in which it cannot control the negative events or outcome (Maier and Watkins, 2000, p. 505). Research has shown that one's subsequent attempts to believe that undesirable events or consequences occur independently of his or her behaviour prevent them from learning (Sorrenti et al., 2016, p. 1; Nuvvula, 2016, p. 426). The common emphasis of all the models put forward is that learned helplessness is an indifferent attitude resulting from the belief that one's behaviour and efforts are not enough to change the situation or outcome (Derek, 2016). Research has shown that people who cannot control the outcome with their behaviour remain inactive at the beginning, become passive as trials progress, and at the next stage feel complete helplessness/inability in terms of behaviour-outcome relationship, and choose to remain indifferent to events or situations (Sorrenti et al., 2016, p. 1).

Many studies show that learned helplessness is based on childhood experiences (Filippello et al., 2017, p. 298). In this regard, it is stated that the environment in which the child is in, family experiences and parental attitudes are the most important factors (Palker-Corell and Marcus, 2004, p. 445). Especially early childhood and primary school age are known to affect the negative experiences of children more and faster (Barber and Harmon, 2002, p. 15). During these developmental periods, children internalize the messages they receive from their environment (Barber et al., 2005, p. 1), high expectations and negative feedback leave permanent traces on their perception of success (Sorrenti et al., 2016, p. 1). In the child who constantly relies on the causes of his failure and perceives this as a condition that will never change, the learned helplessness becomes settled and is carried to later ages (Filippello et al., 2017, p. 113; Perrone et al., 2016, p. 3387). However, there are findings of research on the lack of self-efficacy perceptions due to insufficient self-efficacy perceptions in children who are over-pampered, whose needs are met more than necessary, who are raised up without being given responsibility even in the works they can do, and who are not allowed to differentiate from parents (Lythcott-Haims, 2015). (Filippello et al., 2015, p. 298). Although many studies have been conducted on the effect of parental attitudes on learned helplessness, no study has been found specifically looking for a relationship between helicopter parental attitude and learned helplessness. It is hoped that the research will meet the information need on this subject to some extent.

The other variable of the study is the traumatic experiences; It is defined as physical, sexual or psychological abuse of children by a parent or caregiver (Bottiroli et al., 2018). Although the concepts of abuse and ill-treatment are often used interchangeably; traumatic experiences are accepted as an umbrella term covering all kinds of child abuse and neglect (Herrenkohl, 2005, p. 413). Although neglect as a general point of view is less important than abuse, both express intentional abuse (Toth and Manly, 2019, p. 59). Researchers see neglect as part of the definition of abuse in terms of the problems it raises (Herrenkohl, 2005, p. 413). The unintentional harm or lack of awareness of the caregivers' inaccuracy does not change the consequences for the child. Neglect and abuse can also arise as a result of cultural beliefs about how to raise a child (Friedman and Billick, 2015, p. 253; Mehnaz, 2013, p. 101). From this perspective, helicopter parental attitude may be considered unintentional or well-intentioned, but can be considered within the scope of child neglect and abuse. In this research, this idea was tested.

Helicopter parental attitudes might be observed in only one of the parents, or both can have this attitude. On the other hand, it is observed in the literature that helicopter attitude is mostly observed in mothers (Nelson et al., 2015, p. 282; Sciffrin and Liss, 2017, p. 548) and that mothers' helicopter attitude has more effect on children (Wall and Arnold 2007, p. 508; Nelson

et al., 2015, p. 282; Sciffrin and Liss, 2017, p. 548). In this study, fathers were excluded from the scope and the relationship between mothers' helicopter attitudes and traumatic experiences and learned helplessness was tested. The Perceived Helicopter Parental Attitude Scale used in the study also allows the mother and father attitudes to be scored separately. There are other reasons for limiting the study to perceived helicopter attitudes in mothers. The fact that the person responsible for the care of the child is the source of trauma is more effective on developmental problems (Schore, 2001, p. 201; Rudy and Grusec, 2006, p. 68; Herrenkohl et al., 2013, p. 191; van der Kolk, 2017, p. 401). Research findings suggest that insecure attachment-related developmental problems are also observed more frequently in children who have been mistreated by their mothers (van der Kolk, 2017, p. 401; Mikulincer and Shaver 2007, p. 139). In the studies conducted on the traumatic experiences, it was pointed out that the rate of physical and emotional neglect and abuse caused by the mother was significantly higher than other sources (Bilir et al., 1991; Güler et al., 2002, p. Rudy, & Grusec, 2006, p. 68; Muzik, et al., 2015, p. 507; Pierce et al., 2017, p. 673).

The scope of child neglect and abuse is an extremely broad matter. The research aims to determine whether the attitude of the helicopter mother can be considered as neglect and abuse. The World Health Organization (WHO, 2016) defines child abuse and child maltreatment as “any physical and / or emotional maltreatment, sexual abuse, neglect or negligent treatment, or commercial or other exploitation”. In the same definition, it is emphasized that any behavior that causes actual or potential harm to children's health, survival, development and self-realization is considered as neglect and abuse. From this perspective, it was found important to answer the question whether the attitudes of the helicopters are included in the scope of child neglect and abuse. However, sexual abuse was excluded from the scope of the study since it could not be considered as a traumatic experience related to helicopter maternal attitude. In this study, traumatic experiences were handled with physical and emotional neglect and abuse dimensions. If it is revealed that the helicopter mother's attitude significantly explains the physical and emotional traumatic experiences and learned helplessness, the need for reviewing the scope of neglect and abuse will be emphasized. When it is considered that most helicopter parents believe that their attitudes are correct (Schiffrin et al., 2014, p. 548; Segrin et al., 2015, p. 237; Schiffrin and Liss, 2017, p. 1472) and helicopter parenting is becoming increasingly common in the world (Locke et al., 2012, pp. 249; Schiffrin et al., 2014, pp. 548; Schiffrin and Liss, 2017, pp. 1472; Rousseau and Scharf, 2018, pp. 919), the research results are expected to provide a new perspective and important contributions to the field. Within the framework of this general purpose, the following questions were sought:

- i. To what extent does helicopter maternal attitude predict physical and emotional traumatic experiences in general?
- ii. To what extent do each dimension of helicopter maternal attitude (basic life skills, academic subjects-school life, emotional and private life, moral-ethical issues) predict physical and emotional traumatic experiences?
- iii. To what extent does helicopter maternal attitude predict learned helplessness?
- iv. To what extent does each dimension of helicopter maternal attitude (basic confidence-life skills, academic issues-school life, emotional private life, moral-ethical issues) predict the learned helplessness?

METHOD

STUDY GROUP

The study was carried out on secondary school students aged 16 to 18 years. Demographic characteristics of the study group are shown in Table 1.

Table 1. Working Group's Demographic Characteristics

<i>Gender</i>	<i>N</i>	<i>%</i>	<i>Birthplace</i>	<i>N</i>	<i>%</i>	<i>Birth Order</i>	<i>N</i>	<i>%</i>
Female	333	61.8	Metropolis	304	56.4	First	109	20.2
Male	206	38.2	District	159	29.5	Median	218	40.5
Total	539	100.0	Village	76	14.1	Last Child	212	39.3
<i>Age</i>	<i>N</i>	<i>%</i>	<i>Education Level of Mothers</i>	<i>N</i>	<i>%</i>	<i>Number of Siblings</i>	<i>N</i>	<i>%</i>
16	270	50.1	Primary Education	83	15.4	Only Child	107	19.9
17	208	38.6	Secondary Education	291	54.0	Two - Three.	376	69.8
18	61	11.3	University	165	30.6	Four and +	56	10.4
Total	539	100.0	Total	539	100.0	Total	539	100.0

61.8% of the study group consisted of female students and 38.2% of them were male students. The proportion of participants aged 16 years was 50.1%, 38.6% of seventeen years old and 11.3% of eighteen years old. 19.9% of the study group were only child, 69.8% had two and three siblings and 10.4% had four or more siblings. 15.44% of the mothers of the participants were primary and 54.0% were secondary and 30.6% were higher education graduates.

DATA COLLECTION TOOLS AND APPLICATIONS

To determine the perceived helicopter parenting attitudes of the parents in the participants, "Perceived Parenting Style Scale" developed by Yilmaz (2019) was utilised. The scale in which the mother and father form can be applied together and separately, has four sub-dimensions including helicopter attitude in basic life skills, helicopter attitude in academic life, helicopter attitude in emotional and private life and helicopter attitude in ethical and moral issues. The high scores obtained from the scale, which can also be considered as total points, indicate the excess helicopter attitude perceived by the participants in their parents. The internal consistency coefficient of the scale was reported for the mother form as.85 for the father form as.83. The mother form of the scale was used in the study and helicopter father attitudes were excluded from the scope of the study. In the study, first level DFA of the scale was performed and internal consistency coefficients were calculated.

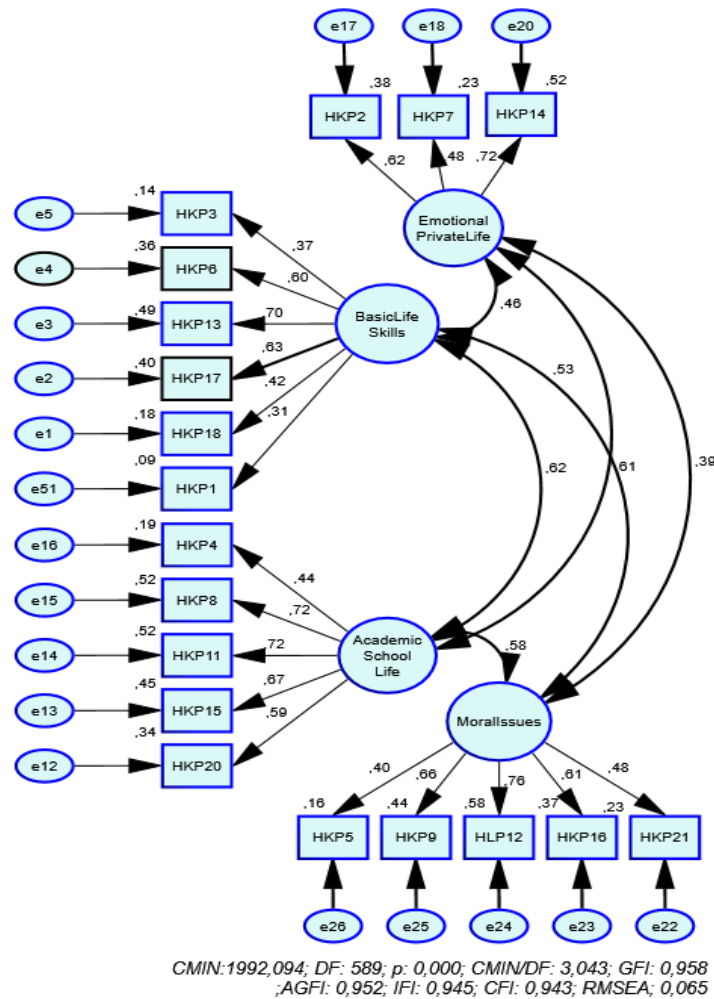
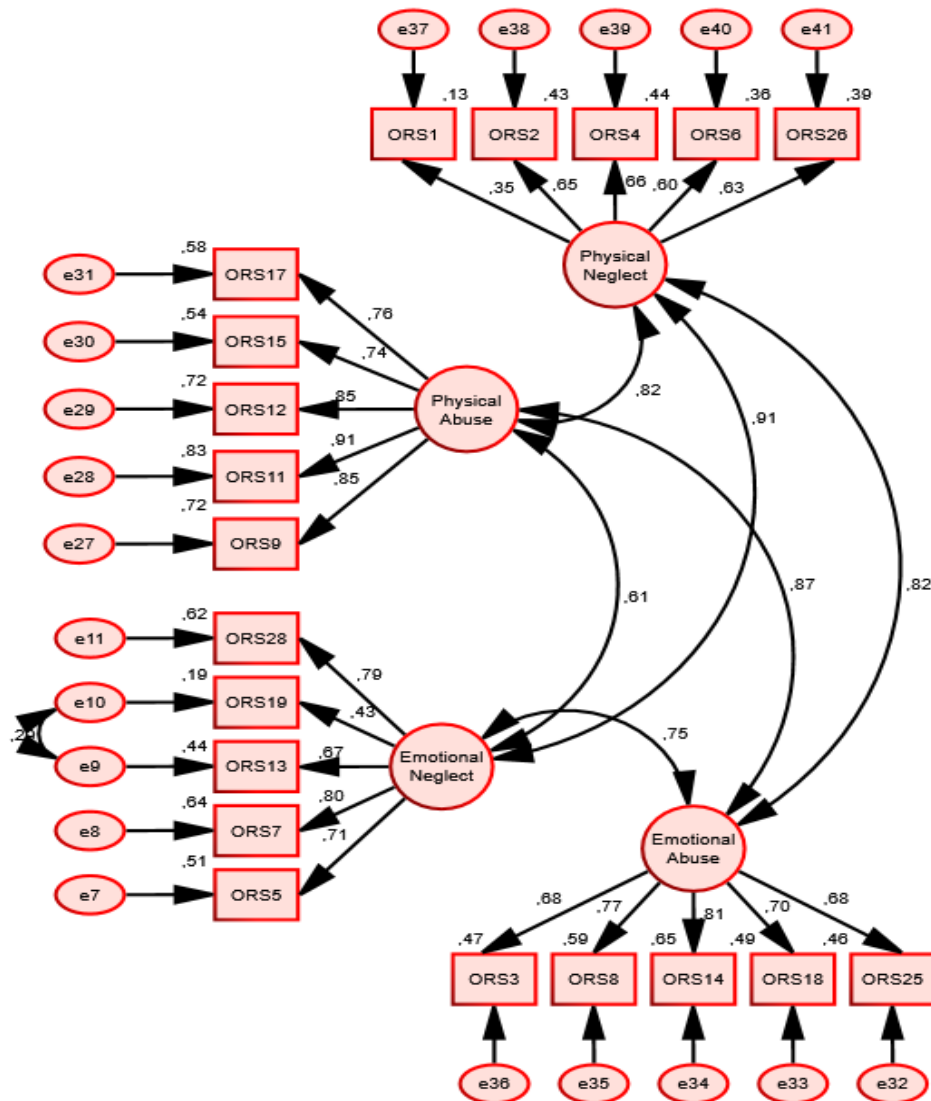


Figure 1. Perceived Helicopter Maternal Attitude Scale First Level Confirmatory Factor Analysis

As a result of DFA, items 10 and 19 in the original scale were removed from the scale because they did not have sufficient factor load. The factor loadings of the basic life skills dimension of the Perceived Helicopter Maternal Attitude Scale is observed to be between .31-.70; academic life and school life dimension .44-.72; Emotional private life dimension is between .48-.72 and helicopter dimension on moral issues is between .40-.76. Goodness of fit values of the scale; $\chi^2 / Sd = 3.043$, GFI =.958, AGFI=.952, IFI=.945, CFI=.943 and RMSEA=.065. Internal consistency coefficients are for the basic life skills dimension .784 academic life school life .762, emotional-private life .729, helicopter on moral issues .707 and for the overall of the scale were found as .893. First level DFA results and internal consistency values indicate that Perceived Helicopter Maternal Attitude Scale will provide reliable and valid results.

The second data collection tool used in the study was the Short Form of Childhood Trauma Experiences Scale developed by Bernstein et al. (2003, p. 169) and adapted to Turkish culture by Kaya (2014, p. 68-78). The scale, which is a retrospective measurement tool for reviewing childhood abuse history, consists of 28 items and five sub-dimensions. The scale is suitable to be evaluated both at the total score and at the subscale level, and the increase in the scores means that the traumatic experiences experienced during childhood are intensified. Internal consistency coefficients .84-. The sexual abuse dimension of the study was not included in the analysis because it was not found to be related to the research. Before testing the hypothesis-related models in the study, the first-level confirmatory factor analysis of the Traumatic Experiences Scale was conducted and internal consistency coefficients were calculated. The results obtained in this regard are shown in Figure 2.

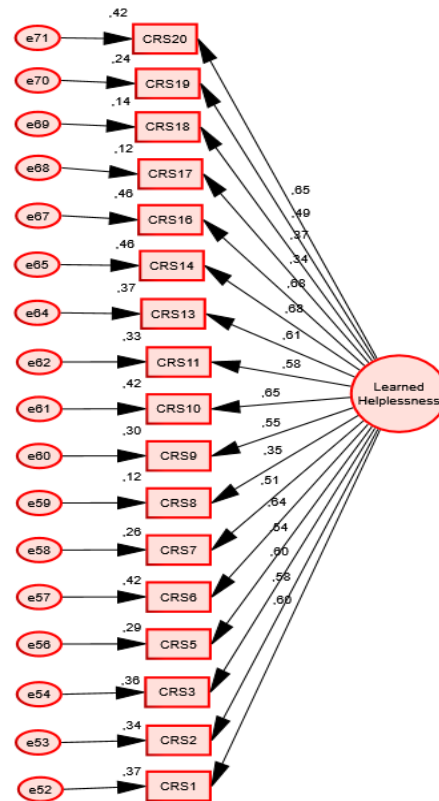


CMIN:2087,339; DF: 692; p : 0,000; CMIN/DF: 3,016; GFI: 0,919; AGFI: 0,896; IFI: 0,947; CFI: 0,946; RMSEA: 0,061

Figure 2. Results of First Level Confirmatory Factor Analysis of Trauma Experiences Scale

As a result of the DFA, the four-factor structure of the 20-item Trauma Experiences Scale was confirmed. The physical neglect dimension of the Trauma Experiences Scale was found to be 35-66; physical abuse dimension 74-91; emotional neglect dimension was between 43-80 and emotional abuse dimension was between 68-81. Goodness of fit values of the scale were found as; $X^2/Sd=3.016$, $GFI=.919$, $AGFI=.896$, $IFI=.947$, $CFI=.946$ and $RMSEA=.061$. Internal consistency coefficients for physical neglect size.693, physical abuse .909, emotional neglect.829, and emotional abuse.847 and for the overall of the scale .were found as 927. The first level DFA results and internal consistency values indicate that the Trauma Experiences Scale gives reliable and valid results.

The third data collection tool used in the study is the Learned Helplessness Scale adapted by Turkish culture by Boysan (2006, pp. 70-80) developed by Quinless and McDermott (1988, pp. 225-256). Quinless and McDermott (1988, pp. 225- 256) report the internal consistency of the scale as.85, Boysan (2006) .73. As the total scores obtained from the scale increase, the level of learned helplessness also increases. The DFA results of the Learned Helplessness Scale for this study are shown in Figure 3.



CMIN:1992,094; DF: 589; p: 0,000; CMIN/DF: 3,043; GFI: 0,958; AGFI: 0,952; IFI: 0,945; CFI: 0,943; RMSEA: 0,065

Figure 3. Learned Helplessness Scale First Level Confirmatory Factor Analysis Results

As a result of DFA, items 4, 12 and 15 in the Learned Helplessness Scale were excluded from the scale because they did not have sufficient factor loadings. Factor load values of the scale items were observed to vary between .34 and .68. Internal consistency coefficient was calculated as .884.

Descriptive statistical values were also calculated in order to check whether the data collected in the study conformed to the normal distribution. The results obtained from this analysis are shown in Table 2.

Table 2. Descriptive Statistical Values of Measurement Tools Used in Research

Scales and Sub-Dimensions	N	Loss Value	Avg.	Median	Top Value	Std. S	Skewness	Std. E	Kurtosis	Std. E
Basic Life B.	539	0	2.83	2.80	3.20	.58	.67	.11	-.26	.21
Academic Life	539	0	2.17	2.20	2.23	.74	.25	.11	-.83	.21
Emotional Life	539	0	2.52	2.33	2.53	.76	.12	.11	-.64	.21
Moral Issues	539	0	1.75	1.67	1.83	.70	-.15	.11	-.87	.21
Helicopter Total.	539	0	2.27	2.21	2.24	.50	.23	.11	-.06	.21
Physical Neglect	539	0	1.92	1.80	1.85	.77	.66	.11	-.20	.21
Physical Abuse	539	0	1.54	1.34	1.66	.67	1.55	.11	1.82	.21
Emotional Neglect	539	0	2.28	2.20	2.90	.73	.49	.11	-.56	.21
Emotional Abuse	539	0	1.97	1.80	2.06	.44	.85	.11	-.25	.21
Trauma Total.	539	0	1.93	1.80	2.10	.51	.70	.11	-.33	.21
Learned Helplessness	539	0	2.22	2.24	2.59	.53	.03	.11	-.96	.21

When the values in Table 2 are examined, it is seen that the collected data show normal distribution.

ETHICAL DECLARATION

Necessary permission was obtained from the National Education Directorate of the province where the research was conducted and the scales were applied by the guidance counsellors of the schools under the control of the researchers on the same day in four schools. Before the implementation started, the purpose of the study was explained to the participants and a volunteer statement was requested. The participants were also informed that they may leave for any reason before, during and after the implementation.

ANALYSIS METHODS

The data obtained from the study were analysed by using SPSS (Statistical Package for Social Sciences) for Windows 22.0 and Amos 22.0. Descriptive statistical values, skewness and kurtosis values were used to test the suitability of the data for normal distribution and internal consistency coefficients were calculated to test the reliability of the scales. First level confirmatory factor analyses of all three scales were carried out before the actual analysis. After these analyses, the effect of perceived helicopter mother attitude on childhood traumatic experiences and learned helplessness was tested using structural equation modelling. In order to determine how well the models established for this purpose explain the data, goodness of fit was measured; then calculated beta, standard error and R^2 values were interpreted.

FINDINGS

Correlation values between variables were calculated before testing the research models. The result obtained is shown in Table 3.

Table 3. Correlation values between the variables of the research

N= 539	Helicopter Mother Attitude Dimensions				Helicopter Attitude Total
	Basic Approach	Academic	Emotional Approach	Moral	
Physical Neglect	.49**	.26**	.06	.24**	.38**
Physical Abuse	.49**	.31**	.10*	.36**	.46**
Emotional Neglect	.27**	.05	.16**	.084	.11**
Emotional Abuse	.54**	.37**	.18**	.37**	.51**
Trauma Total	.52**	.28**	.04	.30**	.42**
Learned Helplessness	.54**	.42**	.24**	.41**	.56**
Table Continues...					
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

The highest correlation was found between helicopter mother attitude and learned helplessness ($r=.56$, $p<.000$). This was followed respectively by emotional abuse ($r=.51$, $p<.000$) and physical abuse ($r=.46$, $p<.000$). Between helicopter mother attitude and traumatic experiences.418 correlations were found ($p<.000$). In terms of sub-dimensions of helicopter mother attitude; it was found that helicopter attitude with regard to basic life skills was related to highest with emotional abuse ($r=.54$ $p<.000$), Helicopter on academic and school life ($R=.42$, $p<.000$) and learned helplessness of helicopter attitude in the field of emotional life ($r=.24$, $p<.000$) and helicopter attitude on moral issues, learned helplessness ($r=.41$, $p<.000$) and emotional abuse ($r=.37$).

In the research, the first model was established between the general attitude of the helicopter mother and traumatic experiences. The results for this model are shown in Figure 4.

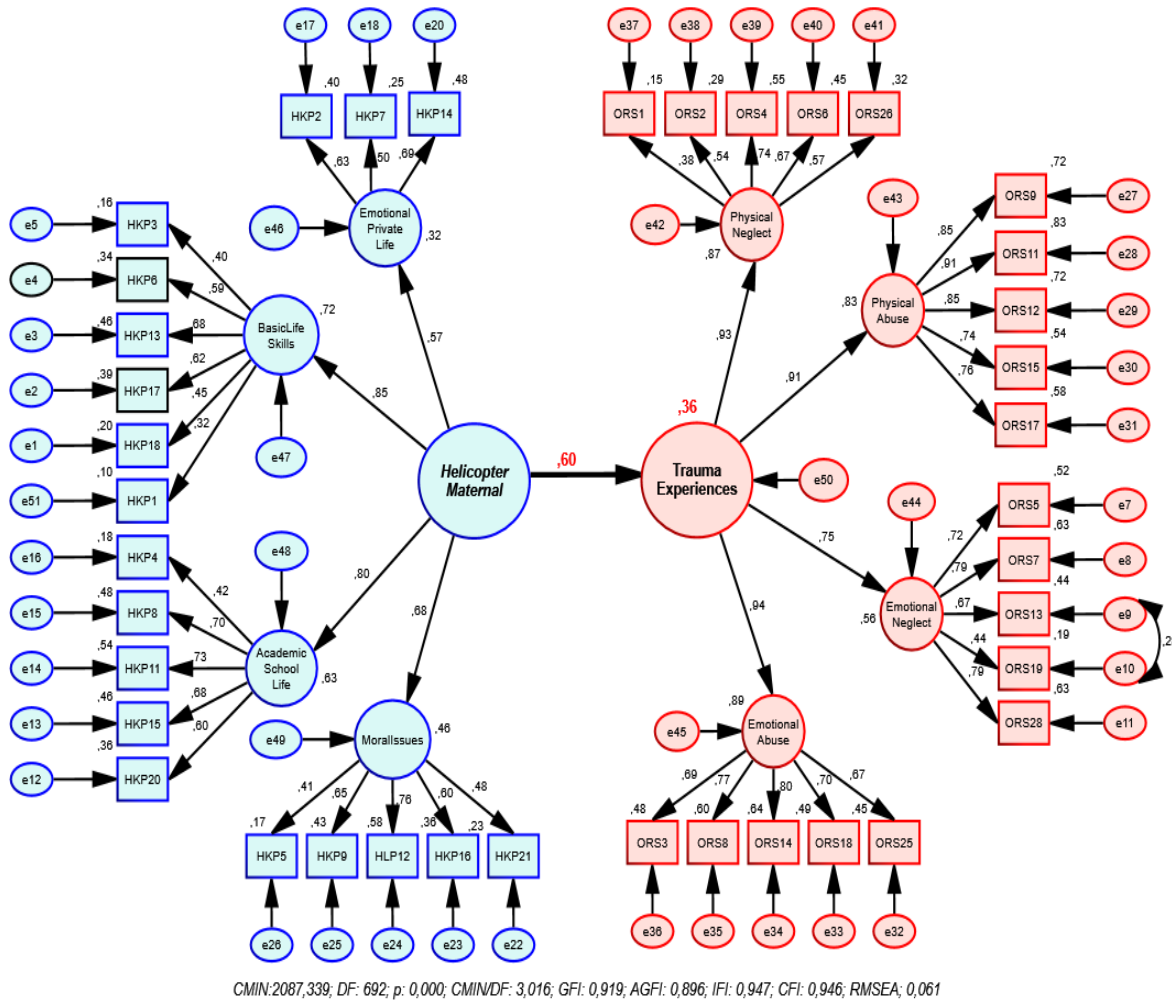


Figure 4. The Effect of Helicopter Mother Attitude on (General) Trauma Experiences (General)

Goodness of fit values of the model established; $X^2/df=3.016$, $GFI=.919$, $AGFI=.896$, $IFI=.947$, $CFI=.946$ and $RMSEA=.061$. According to these values, it can be said that the model is compatible with the data and the validity of the results will be high. The results of the analysis of the relationship between helicopter maternal attitude and traumatic experiences are shown in Table 4.

Table 4. Results of the Relationship Between Helicopter Mother Attitude and Traumatic Experiences

Hypothesis Relations	R ²	Standard β	Standard Error	p	Acceptance / Rejection
Helicopter Mother Attitude (General) → Abuse Y.	.36	.60	.15	.00	Accepted

As shown in Table 4, there is a positive significant relationship between helicopter maternal attitude and traumatic experiences ($\beta = .60$, $p < .05$). One point increase in helicopter maternal attitude causes 0.6 point increase in traumatic experiences. Helicopter maternal attitude explains 36% of the change in trauma experiences scores ($R^2 = .36$).

The second model of the study was established between sub-dimensions of helicopter mother attitude (helicopter attitude in basic life skills, helicopter attitude in academic and school life, helicopter attitude in emotional-private life, and helicopter attitude in moral issues) and traumatic experiences. The results for this model are shown in Figure 5.

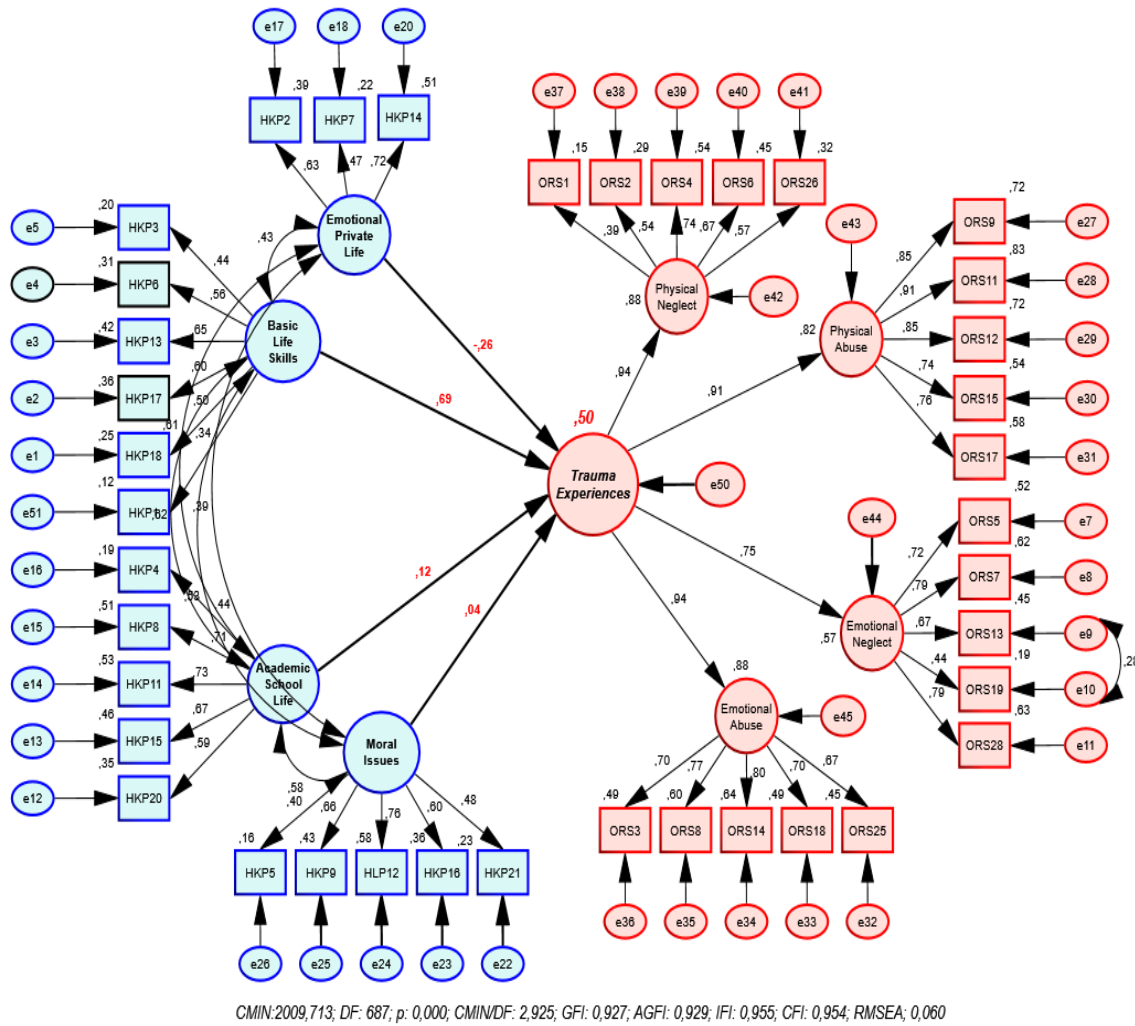


Figure 5. The Effect of Helicopter Attitudes on Trauma Experiences on Basic Life Skills, Academic Life, Emotional Life and Moral Issues

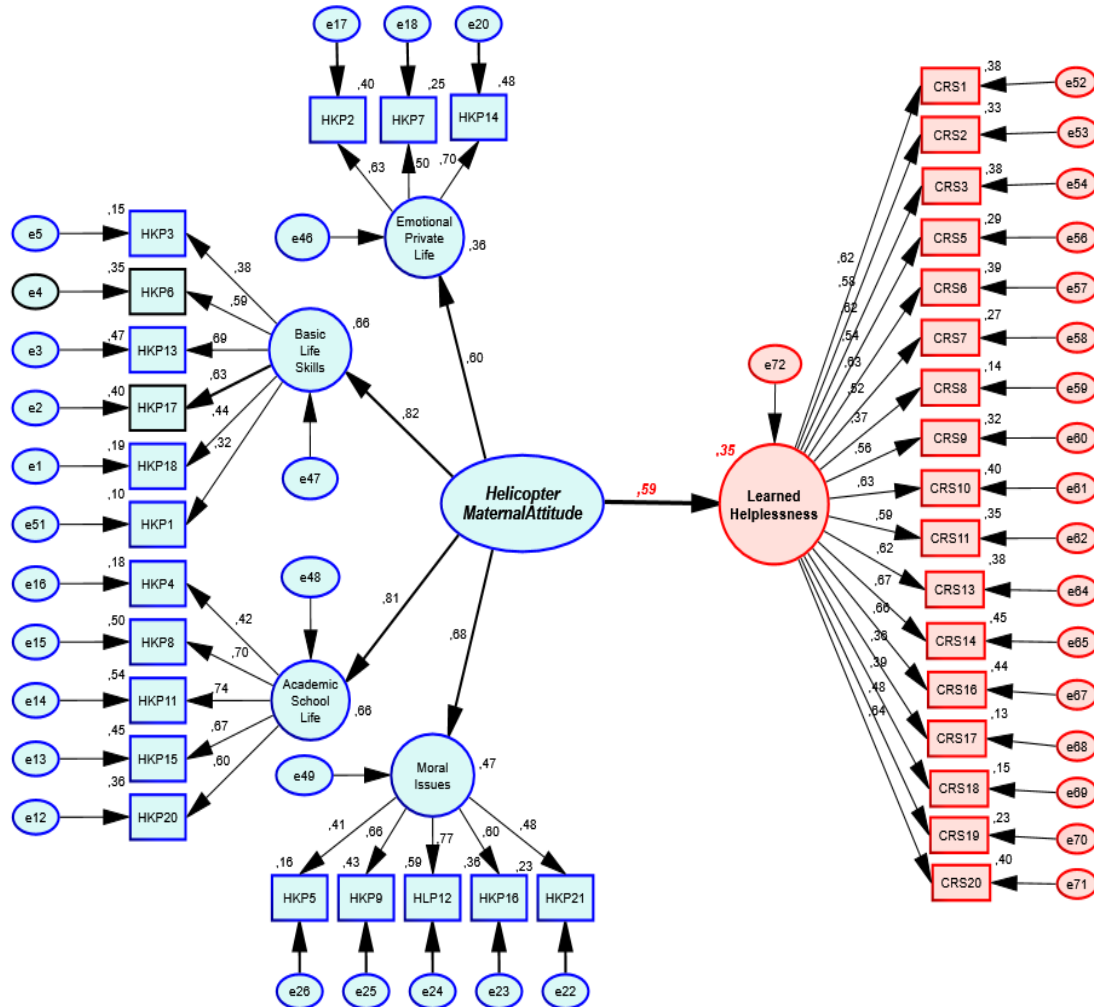
Goodness of fit values of the model established; $X^2/df = 2.925$, $GFI = .929$, $AGFI = .929$, $IFI = .955$, $CFI = .954$ and $RMSEA = .060$. According to these values, it can be said that the model is compatible with the data and the validity of the results will be high. The results of the analysis of the relationship between helicopter maternal attitude and traumatic experiences are shown in Table 5.

Table 5. Results of the Relationship Between Helicopter Mother Attitude and Traumatic Experiences

Hypothesis Relations	Standard β	Standard Error	p	Acceptance / Rejection
Basic Life Skills $\rightarrow$ Abuse Y.	.69	.12	.00	Accepted
Academic Life-School Life $\rightarrow$ Trauma Y.	.12	.07	.15	Rejection
Emotional-Private Life $\rightarrow$ Trauma Y.	.26	.06	.00	Accepted
Ethical-Moral Issues $\rightarrow$ Trauma Y.	.04	.06	.54	Rejection

As shown in Table 5, there is a positive significant relationship between basic life skills of helicopter mother attitude ($\beta = .69$, $p < .05$, $R^2 = .48$) with emotional-private life ($\beta = .26$, $p < .05$, $R^2 = .066$) and traumatic experiences. This shows that helicopter attitude is a significant predictor of traumatic experiences in basic life skills and emotional-private life. It was observed that one point increase in basic life skills was 0.7 points in traumatic experiences; one-point increase in emotional-private life helicopters caused an increase of 0.26 points. The four helicopter attitude dimensions together account for 50% of the traumatic experiences.

Academic life-school life ($\beta=.072, p>.05$) and helicopter attitude on moral issues ($\beta=.06, p>.05$) and the relationship between the traumatic experiences was not found statistically significant. The sixth model of the study was established to test the relationship between the general attitude of helicopter mother and learned helplessness. The results for this model are shown in Figure 6.



CMIN:1992,094; DF: 589; p: 0,000; CMINDF: 3,043; GFI: 0,958; AGFI: 0,952; IFI: 0,945; CFI: 0,943; RMSEA: 0,065

Figure 6. The Effect of Helicopter Mother Attitude on (General) Learned Helplessness

Table 6. Analysis Results of the Relationship Between Helicopter Mother Attitude and Learned Helplessness

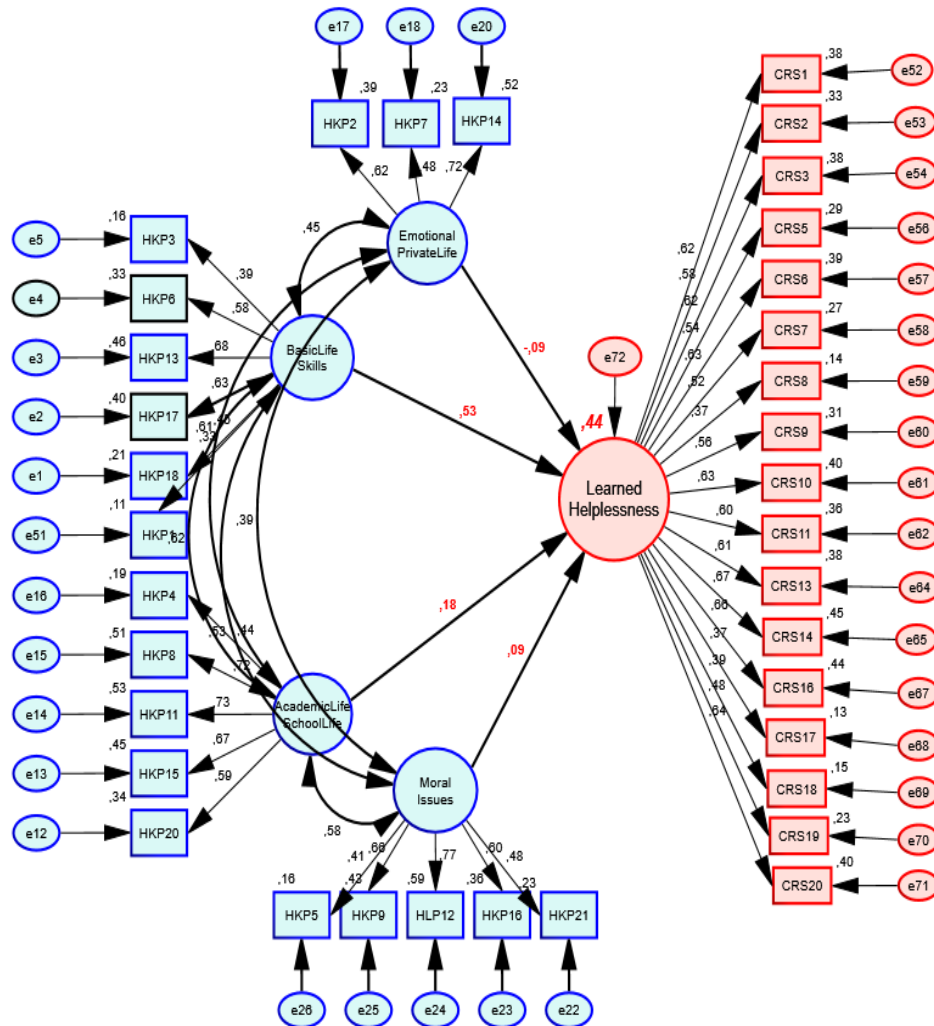
Hypothesis Relations	R ²	Standard β	Standard Error	p	Acceptance / Rejection
Helicopter Mother Attitude (General) → Learned H.	.35	.59	.15	.00	Accepted

Sixth model goodness of fit values; $X^2/df= 3.043$, $GFI=.958$, $AGFI=.952$, $IFI=.945$, $CFI=.943$ and $RMSEA=.065$ were found. According to these values, it can be said that the model is compatible with the data and the validity of the results will be high. The results of the analysis of the model of the relationship between the overall helicopter mother attitude and learned helplessness are shown in Table 6.

As shown in Table 6, there is a positive significant relationship between helicopter maternal attitude and learned helplessness ($\beta=.59, p<.05$). One point increase in helicopter maternal

attitude causes 0.59 point increase in traumatic experiences. Helicopter mother attitude explains 35% of the change in learned helplessness scores ($R^2=.35$).

The last model of the study was established to test the relationship between the general attitude of helicopter mother and learned helplessness. The results for this model are shown in Figure 7.



CMIN:1763,547; DF: 584; p: 0,000; CMIN/DF: 3,020; GFI: 0,964; AGFI: 0,954; IFI: 0,950; CFI: 0,948; RMSEA: 0,064

Figure 7. The Effect of Helicopter Attitudes of Mothers on Learned Helplessness in Basic Life Skills, Academic Life, Emotional Life and Moral Issues

Table 7. Analysis Results of the Relationship Between Helicopter Mother Attitude Sub-Dimensions and Learned Helplessness

Hypothesis Relations	Standard β	Standard Error	p	Acceptance / Rejection
Basic Life Skills $\rightarrow$ Learned H.	.53	.18	.00	Accepted
Academic Life-School Life $\rightarrow$ Learned H.	.18	.09	.02	Accepted
Emotional-Private Life $\rightarrow$ Learned H.	-.09	.07	.20	Rejection
Ethical-Ethical Issues $\rightarrow$ Learned H.	.09	.07	.21	Rejection

Goodness of fit values of the model established; $\chi^2/df= 3.020$, GFI=.964, AGFI=.954, IFI=.950, CFI=.948 and RMSEA= .were found as 064. According to these values, the model is compatible with the data and it can be stated that the results to be obtained will be high validity.

The analysis results of the model of the relationship between helicopter mother attitude sub-dimensions and learned helplessness are shown in Table 7.

When the standard beta values of the roads leading to learned helplessness were examined in the sub-dimensions of helicopter mother attitude; it was observed that there was a positive significant relationship between helicopter attitude in basic life skills ($\beta=.53$, $p<.05$, $R^2=.220$) and helicopter attitude on academic-school life ($\beta=.18$, $p<.05$, $R^2=.037$) and learned helplessness. These values indicate that helicopter attitudes about basic life skills and academic-school life are significant predictors of learned helplessness; whereas emotional-private life ($\beta=-.09$, $p>.05$) and the helicopter attitude on moral issues ($\beta=.09$, $p>.05$) did not explain learned helplessness significantly. A one-point increase in helicopter attitude about mothers' basic life skills was found to increase the learned helplessness as 0.53; one-point increase in helicopter attitude in academic life-school life increases 0.18 points.

All the results obtained in the research are summarized in the Figure 8.

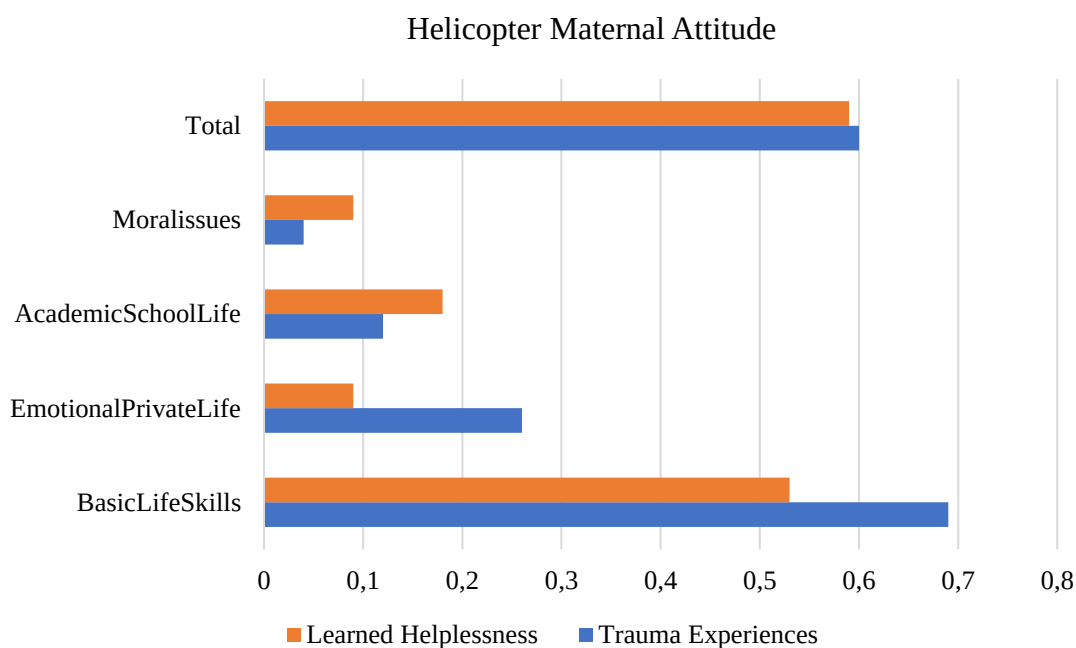


Figure 8. Graphical Expression of Research Results

As can be seen from the graph above, mothers' helicopter attitudes explain the totality of traumatic experiences and learned helplessness in close proportions. On the other hand, it is seen that helicopter attitude in basic life skills predicts traumatic experiences twice as much as learned helplessness. Helicopter attitudes in emotional and private life have more impact on learned helplessness than traumatic experiences. Similarly, the helicopter attitude of mothers on moral issues is particularly effective on learned helplessness.

DISCUSSION

The findings of the study showed that helicopter mother attitudes were strong predictors of perceived trauma and learned inability. Helicopter maternal attitude was found to be related to basic life skills. Relatively, this was followed by an emotional-private living space. Helicopter attitude was found to be less effective on trauma in academic and school life and moral issues. These findings show that mothers' over-parenting is mostly related to subjects related to children's basic life skills and emotional-private life. Basic life skills include all kinds of behaviors related to fulfilling their age-appropriate responsibilities as an individual (Filippello,

Sorrenti, Buzzai and Costa, 2015, p. 298; Filippello et al., 2017, p. 113). Excessive, exaggerated and unnecessary interventions in this field result in the failure to meet the needs of autonomy and competence (Schiffrin et al., 2014, pp. 548-557; Sciffrin and Liss, 2017, p. 1472-1480). Children who fail to develop autonomy and competence as a result of their inability to perform a task on their own cannot differentiate from their parents and have difficulty in assuming the responsibilities of their lives as an independent individual (Sciffrin et al., 2014, p. 548; Filippello et al., 2017, p. 54). 113; Sciffrin and Liss, 2017, p. Considering the definition of neglect and abuse of the world health organization "*any kind of behavior that is potentially harmful to children's health, survival, development and self-realization is neglect and abuse*" (WHO, 2016), the helicopter attitude of mothers towards children's basic life skills can be considered as a traumatic experience.

The most important feature of helicopter parenting is that parents believe that this attitude will benefit their children. This belief makes the helicopter parenting a hidden traumatic experience covered with goodwill. Although it is becoming more widespread due to this feature, it leads to under-awareness of its negative consequences. It is hoped that the research will draw some attention to this issue. There are research findings regarding that a better academic achievement of parental attitudes supporting the autonomy and competence of their children (Fan and Chen, 2001, p. 1; Pomerantz et al., 2007) reveal emotional (Cicchetti and Toth, 1998, p. 221) and socially healthier development (Grolnick and Ryan, 1989, pp. 143), and less behavioral and adaptation problems (Grolnick and Ryan, 1989, pp. 143-144). However, the fact that parental involvement becomes over-controlling, exceeding the child's current standards and obstructing the child's own experiences causes excessive anxiety, depression and inability perceptions to develop in children (Gibbs, 2009; Levine, 2006; Marano, 2008). Because of this feature of helicopter parenting, it is considered that there is no less risky experience than other traumatic experiences. Despite the large number of studies on the negative consequences of over-parenting (Kim et al., 2013, p. 7; Padilla-Walker and Nelson 2012; Nelson et al., 2015, p. 282; van Ingen, et al., 2015, p.7; Murray et al., 2009; Garner, 2017, p. 3; Eberly-Lewis, et al., 2018, p. 207; Sharma and Sarna, 2018, p. 15) there is no study that correlates this parental attitude with traumatic experiences. In this respect, the research is expected to provide a different perspective and contribute to the subject.

An important feature of helicopter mothers is that they are extremely perfectionist (Schiffrin et al., 2014, p. 548; Segrin et al., 2015, p. 237; Rousseau and Scharf, 2018, p. 919). Excessive perfectionism, on the other hand, causes fear of mistakes in children and deprives them to take advantage of their mistakes as an opportunity to learn (Gibbs, 2009; Levine, 2006; Marano, 2008; Sciffrin and Liss, 2017, p. 1472). Learned helplessness is a natural consequence of this situation. The result of this study suggesting that helicopter maternal attitude explains more than one third of learned helplessness is important from this point of view. The observation that helicopter maternal attitude is a stronger predictor of learned helplessness compared to other dimensions in the field of basic life skills indicates the consistency of the research findings. Both traumatic experiences and learned helplessness were higher predicted by the same helicopter attitude dimension.

When the correlation values among the research findings are examined, it is seen that the highest relationship is between the helicopter mother attitude and the emotional abuse dimension of the trauma experiences. Emotional neglect and abuse; gives the child the message that he is worthless, imperfect, unpopular, unwanted, and only important enough to meet the expectations of others (Polat, 2007, p. 182). The behaviours of helicopter mothers can be perceived by the child as similar messages. It is possible that the children who see that their mothers do not comply with the standards and do not respond adequately to expectations have a belief in guilt (Rice and Slaney 2002, p. 35; Aunola and Nurmi 2005, p. 1144; Barber et al., 1994, p. 1120; De Kemp et al., 2006, p. 488; Soenens et al., 2005, p. 358; Schiffrin et al., 2014,

p. 548; Segrin et al., 2015, p. 237). From this perspective, it can be said that helicopter mother attitude should be seen within the scope of emotional abuse. Schifffrin and Liss (2017, pp. 1472-1480); stated that the perfectionism observed in helicopter mothers increased the perception of inadequacy, reduced the ability to set goals, and decreased academic achievement and motivation. It was also emphasized in the same study that the fear of not being able to meet the expectation of the mother caused avoidance of performance and effort. Although Schifffrin and Liss (2017, pp. 1472-1480) did not use the concept of learned helplessness in their study, the characteristics they define point to this concept. In this study, it was found those mothers' basic life skills and helicopter attitudes in academic and school life areas were significant predictors of learned helplessness. In contrast, learned helplessness was found related to the emotional and private life and helicopter attitude in moral issues. These findings are consistent with the results of Schifffrin and Liss (2017, p. 1472).

The finding that learned helplessness is a result of the individual's perception of inability to determine his / her own destiny, which is the result of 35% helicopter motherhood, confirms the hypothesis that having a helicopter mother should be considered a type of traumatic experience. There are many studies that do not directly relate to the learned helplessness relationship with helicopter parenting but support this interpretation. There are research findings that helicopter parental attitudes cause high levels of depressive symptoms, less life satisfaction, and lower levels of autonomy and self-efficacy (Schifffrin et al., 2014, pp. 548-557; van Ingen et al., 2015, p. 7). In addition to these researches; individuals with helicopter parents find themselves inadequate in setting targets (Hong et al., 2015, p. 139), performs less school attendance (Padilla-Walker & Nelson 2012; Nelson et al., 2015, p. 282; Kim et al., 2013, p. 7), they feel powerless to cope with stress (Schifffrin et al. 2014, pp. 548-557) which can be said to support the results of the research. When the results of the research in the literature and the findings of the research are evaluated together, it is concluded that having a helicopter mother is an important reason of learned helplessness and as a result of this it should be seen as neglect and abuse.

Many helicopter parents have good intentions. They believe that this attitude with increasing parenting anxiety (Segrin et al., 2013, p. 238) will lead to correct and beneficial results for their children. It is seen that studies conducted in recent years have focused on the negative consequences of helicopter parental attitude. However, a very limited number of studies argue that this approach may have positive results (Cutright, 2008). In particular, it can be said that the helicopter parenting attitude to be displayed by the fathers is welcomed more positively by the children and less associated with helicopter. In the study conducted by Zienty and Nordling (2018), it was found that the helicopter parenting degrees and results of mothers and fathers were different. They explained that this situation might have resulted from the fact that the mothers' helicopter attitude was perceived as interventionism by the children, but the same attitude of the fathers was perceived as protection and support. In another study, it was reported that fathers' interest in their children and taking a participatory role in their upbringing provide psychological benefits, especially on self-esteem (Roberts & Bengtson, 1993; Kouros et al. (2017), it has been stated that the positive consequences of helicopter parenting on children that can be carried to advanced ages cannot be denied. Yoo, Liu, and Cho (2016) found that helicopter parenting had a positive effect on subjective well-being in their study on university students. However, the findings of our the study showed that helicopter mothers attitudes had traumatic effects to the extent of psychological neglect and abuse and increased the feelings of learned helplessness which made it difficult for individuals to become strong and competent.

LIMITATIONS AND SUGGESTIONS

Although the research is a study that looks for a relationship between helicopter maternal attitude and traumatic experiences and learned helplessness, it has some important limitations. The first limitation of the study was related to the characteristics of the study group. The research was carried out on secondary school students. It is not known to what extent the data obtained are affected by the developmental characteristics of this age group. However, it is thought that new studies on helicopter parental attitudes will be conducted on various risk groups and individuals who have received psychological support in terms of autonomy, self-efficacy, self-esteem, psychological resilience will provide more detailed and deep information about the negative consequences of these parental attitudes. An important limitation of the study is that various demographic variables were excluded. It can be thought that the characteristics of the participants such as gender, age, parent association and number of siblings may change the effect of helicopter mother attitude to a certain extent. Findings on this subject can be obtained with new studies including demographic variables. The inclusion of helicopter attitudes observed only in mothers is another limitation. Therefore, if both parents have helicopter attitude, the outcome is not known. The majority of the studies conducted on helicopter parents, including the research, are descriptive which aim to determine the situation. The findings with high internal consistency can be found with the experimental or half-experimental modelled researches on the sample consisted of parents thought to have helicopter attitudes. It is suggested that more research on helicopter parents needs to be done in Turkey. In addition to this, it is recommended that helicopter parental attitudes and results should be included in parent education and family counselling studies. Gaining sufficient awareness is thought to be effective in reducing helicopter parental trauma and learned helplessness on children.

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VIEWS AND ATTITUDES OF PRIMARY SCHOOL TEACHERS TOWARDS LIFE STUDIES TEACHING

Abstract: This study aimed to determine the primary school teachers' attitudes towards life studies teaching and their views about the teaching process. The study was conducted using the convergent parallel mixed design. The participants were 209 primary school teachers working in the central district of Uşak. In the study, the quantitative data were collected via the Life Studies Teaching Attitude Scale developed by Sarıkaya, Özgöl and Yılar (2017). The scale was administered online (Google forms). The qualitative data were collected through face-to-face semi-structured interviews. The findings obtained via the scale showed that the primary school teachers had high levels of attitudes towards the life studies course. Similarly, the qualitative findings demonstrated that the teachers expressed positive opinions about life studies teaching. From the gender perspective, the male teachers' attitudes towards life studies teaching were higher than those of the female teachers. The teachers working in schools with low socio-economic level had lower attitudes towards life studies teaching than those working in schools with medium and high socio-economic levels. The interviews revealed that the scope of the course was very wide, which caused the teachers to have difficulty in presenting the subject. Lastly, the study highlighted problems arising from parents such as being a wrong role-model, ignoring the course, and not paying attention to values or education at home.

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INTRODUCTION

Life studies aims to equip children with good attitudes and behaviours (Deveci, 2008) and gives them the characteristics of being a good person and a world citizen (Tay, 2017). It has an important place in primary school curricula. Life studies teaches natural and social environment in a holistic manner (Baymur, 1937). The course is designed using a collective teaching approach and aims to provide basic skills and habits (Gültekin, 2015) to have happy individuals (Ministry of National Education, 2009). In this context, the foundations for students to develop a certain value system and participate in social life in society are laid in life studies courses. (Belet, 1999). Life studies teaches the necessary knowledge, skills and values to help students adapt themselves to the society.

The foundations of life studies are based on Plato and Aristotle (Brückl, 1932). Comenius is known as the founder of the life studies course, and the ideas of Rousseau, Pestalozzi, Herbart and Dewey about education and children are effective in shaping and developing the core principles of the course (Baymur, 1937; Bektaş, 2009; Brückl, 1932; Karabağ, 2009). In Turkey, life studies was first included in the primary school curriculum in 1926. The related curricula developed after the Republic aimed to integrate all other primary school courses into the life studies course. Therefore, the course has a pivotal role today (Ministry of National Education, 1936; Arslan, 2000; Salı and Arslan, 2000). Since the 1926 Primary School Curriculum, the life studies course, which is regarded as the pivot lesson, has been given greater weight than the other lessons. It is because it serves as the foundation for the second semester courses (Sabancı & Şahin, 2005). It has a unique value and role in shaping children's life and is thus distinguished from other courses in a curriculum.

The attitudes and behaviors of teachers in the classroom have a significant impact on student achievement

(Çengelci-Köse, 2015). What the teacher does and does not do in the classroom has a direct impact on the students' learning levels. The majority of the topics covered in the life studies course are relevant to daily life and help children develop in a variety of ways. The social-emotional and moral development of children is influenced by teacher behavior. The character, personality, daily life, routines, and behaviors of the teacher have an impact on all levels of student development. The following are the roles of the teacher in a life studies course (Ministry of National Education, 2009):

- Cooperates with the family.
- Helps students to acquire skills and personal qualities.
- Facilitates personal, social and cultural education.
- Measures and evaluates the development of children in the learning process.
- Takes individual differences into consideration while organizing in-class activities.
- Plans the instruction.
- Ensures that students are health and safe.
- Guides students to work in a collaboration.
- Collaborates with colleagues.
- Guides student when they study.

The teacher's roles and responsibilities in life studies courses allow for the creation of effective learning environments. It assists students in getting the most out of the course. The issues that teachers should pay attention to during their teaching are explained in detail in the 2018 Life Studies Course Curriculum. The curriculum emphasized the importance of teachers engaging in in-school and out-of-school practices, taking into account students individual differences, and establishing a link between school and life. Furthermore, it was stated that values and basic life skills should be linked to accomplishments (Ministry of National Education, 2018). As a result, teachers have a wide range of duties and responsibilities when it comes to teaching a life

studies course. One of the primary responsibilities of teachers is to fulfill these requirements. As a result, they contribute to the course's effective teaching.

Primary school teachers have a key role in pursuing the mission of the life studies course and achieving the related learning outcomes. As a matter of fact, teachers' views about a course are very important in the context of the teaching-learning process (Özkal, Güngör & Çetingöz, 2004). What teachers like and appreciate or what they feel about teaching course has an important effect on students (Mensah & Kurancie, 2013). Teachers affects students behavior negatively or positively by their behaviors, by their attitudes towards their occupation and by their personalities (Morina & Kervan, 2018). Considering the fact that primary school students learn mostly through observation and modelling, the behavioral tendencies and attitudes of primary school teachers in the course are the primary source of learning for students. Teachers' attitudes and behaviours shape students' individual and personality development, and home environment is influenced by family background, socio-economic level, beliefs and education environments (Bhargava & Pathy, 2014). There is a consensus in the literature that teachers' attitudes towards teaching are highly correlated with their achievement in teaching (Latchanna & Dagnew, 2009). Studies on teacher attitudes towards life studies teaching demonstrate that teacher attitudes are at a high level (Yurtbakan & Altun, 2019; Çetin, 2020). Accordingly, the positive attitude of the primary school teacher towards life studies teaching increases the academic success of the students and enables them to enjoy the lesson. Determining teachers' attitudes and opinions regarding life studies teaching is important in terms of drawing attention to the importance of the course identifying and eliminating the problems in the teaching-learning process, determining the needs of primary school teachers and students in relation to the life studies course. The attitudes of primary school teachers towards the life studies course are directly related to students' being effective and equipped citizens in their society. Therefore, this study aimed to determine the primary school teachers' attitudes towards life studies teaching and their opinions about the teaching process. This study tried to find answers to the following questions.

- What are the attitudes of primary school teachers towards life studies teaching?
 - Do the primary school teachers' attitudes towards life studies teaching differ according to gender and socio-economic level of the school?
- What are primary school teachers' views about teaching the life studies course?

METHOD

This study aimed to determine teachers' attitudes towards life studies teaching and their views about the teaching process. The study was carried out using the convergent parallel mixed design. Mixed method uses qualitative and quantitative data collection and analysis together (Creswell, 2005). Convergent parallel mixed design necessitates that qualitative and quantitative data are collected and combined at the same time (Creswell & Plano Clark, 2007). Therefore, in order to determine the teachers' attitudes towards life studies teaching and their views about the teaching process, qualitative and quantitative data were collected at the same time, and the findings were presented by merging them.

PARTICIPANTS

The participants in the study were 209 primary school teachers working in the central district of Uşak. Table 1 presents the characteristics of the participants.

Table 1. Characteristics of the Participants

		Frequency	Percentage
Gender	Female	117	56%
	Male	92	44%
Work experience	One year to 10 years	20	9.5%
	Between 11 and 20 years	66	31.5%
	Between 21 and 30 years	100	47.8%
	More than 31 years	23	11.2%
Socio-economic level of schools	Low-income schools	74	35.4%
	Middle-income schools	113	54.1%
	High-income schools	22	10.5%
Grade	1 st grade	49	23.4%
	2 nd grade	54	25.8%
	3 rd grade	54	25.8%
	4 th grade	52	24.9%
TOTAL		209	100%

According to Table 1, 117 (56%) participants were female, and 92 (44%) of them were male. Of all the participants, 20 (9.5%) of them had work experience ranging from 1 year to 10 years, while 66 (31.5%) of them had between 11 and 20 years of experience. Likewise, 100 (47.8%) participants had between 21 and 30 years of experience, and 23 (11.2%) had more than 31 years of experience. Among the teachers, 74 (35.4%) were working at low-income schools; 113 of them (54.1%) were teaching at middle-income schools; and 22 (10.5%) were teachers at schools with high-income schools. Of all the participants, 49 of them (23.4%) were teaching first-grade students; 54 (25.8%) were teaching second-grade students; 54 (25.8%) were teaching third-grade students; and 52 (24.9%) were teaching fourth-grade students. For the qualitative part of the research, 10 teachers were interviewed, six of whom were women and four of whom were men. Of these teachers, four of them were teaching at low socio-economic level schools; four at middle-income schools; and 2 at schools with high socio-economic level.

DATA COLLECTION TOOLS

In the study, the Life Studies Teaching Attitude Scale developed by Sarıkaya, Özgöl, and Yılar (2017) was used for the quantitative part of the study. The scale consists of 24 items and 3 subscales (loving, appreciation, caring). The validity and reliability studies of the scales were conducted to measure attitudes towards life studies teaching (Sarıkaya, Özgöl, & Yılar, 2017). Cronbach's Alpha coefficients were calculated to determine whether the scale was reliable for this study. Cronbach's Alpha (α) values of the scale were .89 for the "loving" subscale, .88 for the "appreciation" subscale, .85 for the "caring" subscale and .93 for the whole scale. Examples of the scale items were as follows; *"I find life studies teaching very important"* (loving); *"I take great pleasure in reading the resources on life studies teaching"* (appreciation), and *"I regard the time spent on life studies teaching as waste of time"* (caring).

In the qualitative part of the study, a semi-structured interview form was used. The interview protocol included 10 questions, and the form was sent to two experts from the department of Primary School Teaching and to an expert from the department of Turkish Language Teaching. In addition, two primary school teachers were consulted. The form was finalized in line with the feedback received. A pilot study was conducted with a teacher to test the questions. The pilot study data were not included in the analysis. In order to determine the reliability of the interview form, the data were coded by the researcher and an expert together. For the purpose of calculating the consistency of the coding, the consensus formula of Miles and Huberman (1994) [$P = \text{consensus} / (\text{consensus} + \text{disagreement}) \times 100$] was used. Accordingly, the agreement ratio was .94.

DATA COLLECTION AND ANALYSIS

The quantitative data in the study were collected using an online questionnaire (Google forms). Before starting the analysis, extreme and missing value analyses were conducted to determine whether the data were normally distributed. Distribution graphs showed that the coefficients of kurtosis and skewness demonstrated normal distributions of the data. Descriptive statistics (mean and standard deviation) and t-test were used to analyze the data. The qualitative data were collected through face-to-face semi-structured interviews. Descriptive analysis was used for the analysis of the qualitative data. In this analysis, data are determined and interpreted according to predetermined themes (Yıldırım & Şimşek, 2011). Themes and sub-themes were created based on the interview questions. The findings were supported and interpreted by providing direct quotations from the interviews. The interviews lasted approximately 20-25 minutes, and the ethics committee approval was taken for the study. The participants were clearly informed about the purpose of the study. Oral consents of the participants were taken (and recorded), and the participants' identities were kept confidential. Ensuring the credibility of the qualitative data, the data were analyzed in depth, and expert opinions were used. In this process, interaction was established with the participants. The findings were supported with direct quotations from the participants. Based on these, it could be stated that credibility was achieved in the study.

FINDINGS

PRIMARY SCHOOL TEACHERS' ATTITUDES TOWARDS LIFE STUDIES TEACHING

Table 2 presents the teachers' attitudes towards life studies teaching. The table shows that the teachers' attitudes towards life studies teaching ($\bar{x} = 4.01$) were high. The sub-scales demonstrated that caring had the highest mean ($\bar{x} = 4.21$), which was followed by loving ($\bar{x} = 4.20$) and appreciation ($\bar{x} = 3.61$).

Table 2. Descriptive Statistics for the Variables

	n	Mean	Standard Deviation
Life Studies Teaching	209	4.01	.509
Loving	209	4.20	.500
Appreciation	209	3.61	.651
Caring	209	4.21	.663

In order to determine whether the attitudes towards life studies teaching differed according to gender, t-test was used. Table 3 shows the t-test results of the teachers' attitude scores regarding life studies teaching with respect to gender.

Table 3. t-Test Results Regarding Attitudes Towards Life Studies Teaching in Terms of Gender

	Gender	N	$\bar{x}$	ss	t	df	p
Attitudes Towards Life Studies Teaching	Female	117	3.94	.488	-2.202	207	.029
	Male	92	4.09	.524			

According to Table 3, the teachers' attitudes towards life studies teaching differed with respect to their gender ($t = -2.202$, $p < .05$). Accordingly, the male teachers had higher attitudes towards life studies teaching compared to the female teachers.

ANOVA was used to determine whether the teachers' attitudes towards life studies teaching differed according to the socio-economic level of the region where the school was located. In order to determine which group or groups caused the difference, Scheffe test was conducted, and the results can be seen in Table 4.

Table 4. Results of ANOVA Regarding the Attitudes Towards Life Studies Teaching with Respect to Socio-Economic Level of the School

	Socio-economic level of the School	N	$\bar{x}$	ss	Var.K.	KT	df	KO	F	p	Gap
Attitudes Towards Life Studies Teaching	Low	74	3,83	.581	Between G.	3.407	2	1.703	6.948	.001	1-2
	Middle	113	4,09	.417	Within G.	50.508	206	.245			1-3
	High	22	4.14	.547	Total	53.915	208				
	Total	209	4.01	.509							

Table 4 shows that the teachers' attitudes towards life studies teaching differed according to the socio-economic level of the school ($[F(2-206) = 6.948; p < 0.01]$). The teachers who worked at low-income schools had lower attitudes towards life studies teaching than those working in schools with medium and high socio-economic levels.

PRIMARY SCHOOL TEACHERS' VIEWS ABOUT THE TEACHING PROCESS OF THE LIFE STUDIES COURSE

The views of the primary school teachers about the teaching process of the life studies course are shown in Figure 1.

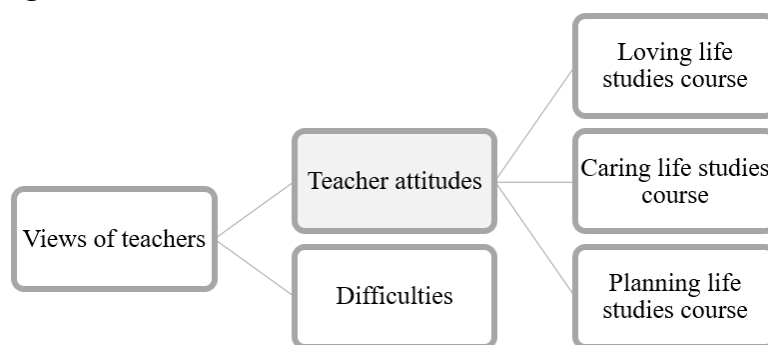


Figure 1. Primary school teachers' views about the teaching process of life studies course

As can be seen in Figure 1, the primary school teachers' views were examined under the categories of "teacher attitudes" and "difficulties". The teachers' attitudes were explained with the themes of loving life studies course, caring life studies course and planning life studies course. T4, who reported views about the theme of loving life studies course, said that *"the life studies course is very important, and it is very necessary for primary school students. I teach this lesson very enthusiastically. I like explaining the lesson topics and having the students talk about their own lives"*. T7 reported that *"I think this lesson is easy to teach, and I like teaching. As mentioned in the name of lesson 'life studies', it is about the life, and children can learn many of the topics we deal with. It is an important lesson"*. Another teacher (T9) added *"It's a lesson I like. I research the topics because they are interesting, and I learn together with the children. I'm improving myself"*. Lastly, T1 pointed out that *"I was showing videos. First, we were watching the subject on the video, then I was giving examples from their environment. The subjects were related to shopping, budget etc. We went to a grocery store and bazaar with the kids. I like this lesson, and I love trying doing different things"*.

In relation to the theme of caring life studies course, T7 said *"the subjects of the lesson are from real life; therefore, it shows the importance of the lesson. We are preparing children for life. We help them become decent citizens, so I attach great importance to this lesson"*. T11 stated that *"This lesson has never been ordinary for me. Only Mathematics and Turkish lessons can get ahead of this lesson not because life studies is unimportant, but because more time is*

allocated in the program for other courses". T3 said *"The time I devote to life studies is very important. Students need it. Therefore, all teachers including me also attach great importance to this lesson"*. These responses show that the teachers cared about the life studies course, and they thought that the lesson was important for the development of children.

With reference to planning the life studies course theme, T2 said *"Okay, it's a necessary lesson, but I do not spend hours to prepare for the course. I look at what I will teach before I enter the class. It is enough for me"*. T6 said *"I don't spend a lot of time for planning. It is easy for me to teach and to plan as well"*. Likewise, T7 noted *"I plan the module. I think about what I will teach the next day. But I can assure that I study more for a math class. I think it is easy to plan the life studies course"*. T5 said *"Yes, it is an important course for me, but I don't want to teach life studies for hours"*. These responses showed that the teachers appreciated life studies teaching yet did not spare much time for planning and preparing materials because they found it easy. The teachers' responses to the category of "difficulties" are shown in Figure 2.

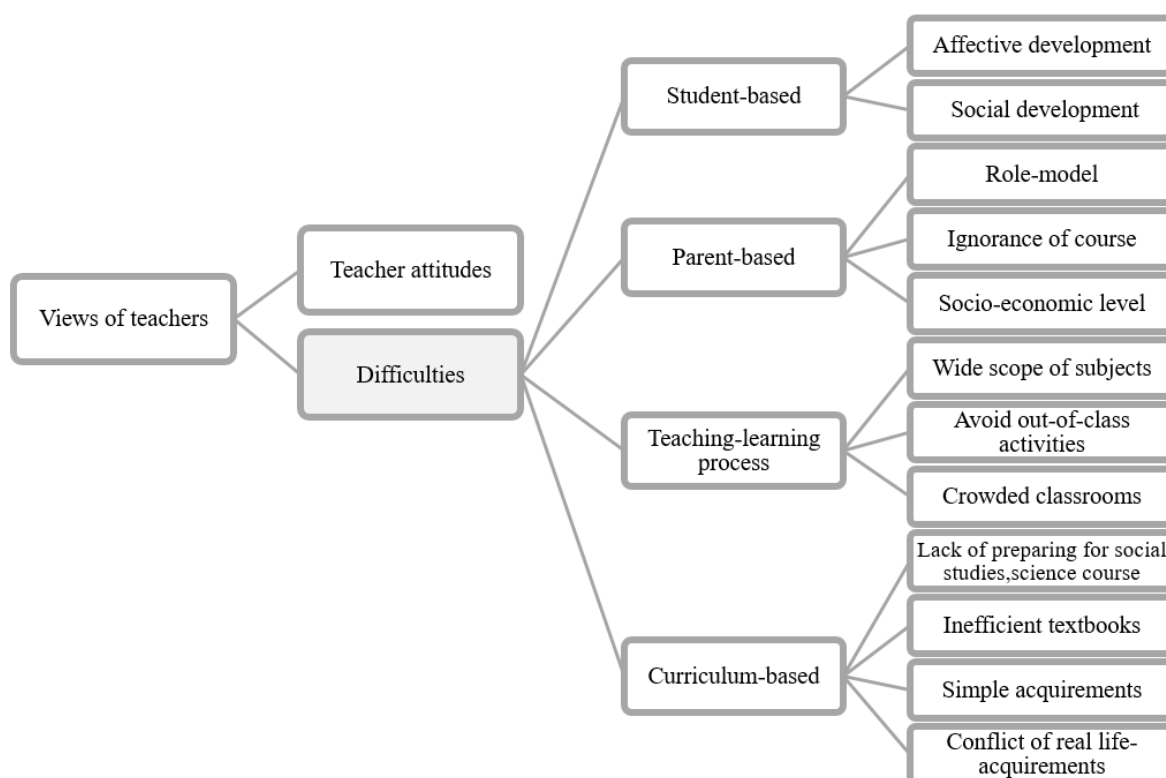


Figure 2. Teachers' responses to the category of difficulties

As can be seen in Figure 2, the teachers' responses to the category of "difficulties" were explained with the themes of student-based, parent-based, teaching-learning process and curriculum-based. There were two sub-themes in the student-based theme: *affective* and *social development*. In terms of the affective development sub-theme, T3 drew attention to the family topic: *"There are students coming from orphanages or those whose parents are separate. I have hard time teaching the topic in the family. I do not go into much detail because I am afraid to upset them"*. T5 expressed *"I am cautious when explaining the physical characteristics. There are overweight and disabled students in my class. One of my students even cried and left the classroom while talking about physical differences, and she did not want to come to school that week"*. In terms of social development, T10 said *"They have difficulty in expressing themselves especially in the first grade. Life studies is a course that requires dialogue, so I find it difficult to communicate with the child and make them speak"*. Similarly, T6 noted: *"If the child is confident and can express himself/herself, it is okay but when communication turns into a monologue, it becomes a problem. I struggle with encouraging the students to speak"*. This

indeed implies that the teachers faced problems with the students who had poor social and communication skills.

The parent-based theme included the sub-themes of *role-model*, *ignorance of the course* and *socio-economic level*. For role-model sub-theme, T1 said *"I try to teach third-grade children the habit of washing hands and face, but this should be the duty of their parents. The children did not learn it from their parents; therefore, they never had the habit of washing their hands and face. It is obvious that the child does not have a habit of washing his hands and face; however, his parents claim the otherwise"*. T6 said *"When I inform parents that their children do not have the habit of brushing their teeth, they do not care. If the habit of tooth-brushing does not have a place in the daily routines of parents, then the child does not give importance to brushing their teeth"*. T3 reported *"We have discussed the subjects of respecting the nature and protecting animals. We drew pictures; however; if a father kicks a dog at home or if parents have no interest in stray animals, then what I teach in the classroom is a waste of effort"*. T7 said *"At home, it requires a long time to consolidate and identify these values. Firstly, families should have these values and practice them. When this is not the case, we face some big problems"*. T8 said *"It does not make sense if I teach the values in theory because children imitate their parents. No matter how much I explain in the life studies course, I cannot achieve anything if value education is not given at home"*. T4, who shared his idea about the sub-theme of ignorance of the course stated that *"Life studies is considered as an easier subject than Math or Turkish, and no parent asks about life studies"*. According to T5, *"Parents do not ask whether their children have any problems with the life studies course because they do not consider it as part of the education: Does my child have a trouble with life studies? Are there any problems with the behaviors of my child? What values has my child acquired? Does my child have disrespectful behavior? Does my child have good relationships with others?"*. T3 added *"Expectation of the parent is not related to the life studies course itself. They give more importance to Math and Turkish in terms of academic success, not life studies. Turkish and Math are considered as academic skills. If the grades for these subjects are good, there is a perception among parents that life studies grades are high as well"*. Lastly, T2 said *"There are some parents who are not aware of the life studies course. Some of them want their children to study Turkish and Math rather than life studies. Also, one of the students' parents asked me why I teach life studies instead of Math in the morning classes when the students have high levels of concentration"*.

Lastly, regarding the sub-theme of socio-economic level, T2 said *"Economic concerns are prevalent. I cannot ask parents who fail to afford to pay for the school trip. I cannot tell students to have a balanced diet during life studies classes if their parents cannot afford that food"*. T7 reported *"The economic situation of the family affects the content and progress of this course. As much as we talk about love and respect, the child is aware of the fact that he/she cannot show up with a Turkish lira or share his/her allowance. Because if the child shares it, s/he will starve and will not be able to buy lunch."* The teachers' views implied that parents should be role models and give much more importance to life studies course and that economic difficulties and lack of awareness about the value of schooling are among the most prevalent problems teachers face.

The theme of teaching-learning process is based on the sub-themes of *wide scope of subjects*, *avoiding out-of-class activities* and *crowded classrooms*. For the sub-theme of wide scope of subjects, T9 said *"Life studies course has a wide scope. You start with the toothbrush and end in a totally different subject. It is hard for me to follow the objectives and learning outcomes."* T3 complained that sometimes she could not guess what the topic of the lesson would lead to. She said there were times when she was frustrated with the students' answers. In terms of the sub-theme of avoiding out-of-class activities, T5 said *"I took the students out with their parents' permission, but I always had the fear that something may happen to them. So, I do not prefer*

out-of-class activities". T2 explained *"I cannot take them for a visit to Anıtkabir or Ulubey. I cannot ask any money from their parents"*. Accordingly, the teachers had difficulties in relation to taking responsibility in out-of-class activities and having limited financial means, and they did not prefer such activities. For the sub-theme of crowded classrooms, T6 said *"crowded classrooms cause problems, and students get bored. There is not enough time to talk to each student"*. T7 said *"every student wants to talk, but the classroom is crowded. There is not enough time for each of them to talk. This leads to negative results. Students feel isolated when they cannot express their ideas"*. Another teacher, T10, said that she could not do different activities. She just gave the lecture and then delivered a test. She added that women had a heavy workload such as doing housework or caring children; therefore, she could not find many chances to prepare for the lessons. According to these explanations, crowded classrooms make it difficult for students to concentrate, and teachers cannot do effective activities.

The curriculum-based theme included the sub-themes of *lack of preparing for social studies and science course, inefficient textbooks, simple acquirements and conflict of real life-acquirements*. For the sub-theme of deficiency in preparing for social studies and science course, T1 said the social studies course started with wars and culture, which confused the students. She suggested, instead, that the wars could be taught lightly for third grade students. T7 said *"life studies is separated from the social studies course. It continues with history, and it is not related to science anymore. Life studies course does not prepare students for the science course"*. T8 agreed that the life studies course did not prepare the student for social studies or science course. He argued that the subjects were different, so they had difficulty in the fourth grade. As a result, the teachers agreed that the life studies course lacked the necessary content to prepare the students for other courses in upper grades.

For the sub-theme of inefficient textbooks, T5 said *"The acquirements are good, but the books are bad. Textbooks are not useful. Topics could be shorter. Books could include activities based on cutting and painting. That is why I cannot use the books efficiently"*. T10 said *"The books are not up-to-date. It is the same as the book I used four years ago. They should be up to date as we provide students with dynamic everyday information. I think this is a big problem"*. Lastly, T1 said *"The books are old, and we do not have the new versions. Who are the other staff at school? The kid has no idea. What parts are there in the school? But we could not do many of the activities due to the online and distance education"*. The problems such as out-of-date textbooks or inappropriate materials for the first-grade students affected the teaching of the course negatively. Regarding the sub-theme of simple acquirements, T6 said, *"There are always such physical features, personality traits and environmental cleanliness issues. Every time the children see them, they say we learned them last year. It sounds simple. There are not many different things"*. T2 said *"I think the acquirements are simple. For example, children know the school. The manager knows the class. I have a hard time in teaching these"*. Another teacher who gave an opinion about this sub-theme mentioned;

"Children know many things. We need to teach new things. I have to admit; this situation is rather difficult for me. For instance, five sense organs, if I show them the ears or eyes, it will not be meaningful. But when I say that our eyes are so powerful than a camera or our tongue is made up of pigments, I reach my goal"
(T1)

According to the teachers' views, life studies seemed simple to the children, and the teachers had difficulties in finding striking examples. Lastly, in the curriculum-based theme, there was a sub-theme of conflict of real life – acquirements. In this sub-theme, T9 said *"this is a rural area. The programs are prepared in a way that they tell about a perfect life. For example, the division of labor at home is well described in the book, but students say, 'my father does not work at home'. What we tell is different from what they experience at home"*. T7 expressed *"the examples given by the child from his/her own life do not match with the subjects of the life*

studies course. It is a lesson of life, but that life is very different from these children's real lives. Therefore, the program is very unrealistic." Finally, T8 mentioned *"The situation of parents is bad. I am talking about healthy foods for a balanced diet. Some students say that they have never eaten cheese or butter. Therefore, the subject of the lesson and the real life of students do not match. I have a hard time on such issues"*. Accordingly, life studies acquirements seem unrealistic for children in schools located in a low socio-economic area. Teachers find it difficult to connect the subjects with the real lives of the students.

DISCUSSION AND CONCLUSION

The study revealed that the attitudes of the primary school teachers towards the life studies course were high. Similarly, the qualitative findings showed that the teachers expressed positive views about life studies teaching, and they found the course important, valuable and easy. They also enjoyed teaching the course, and the course helped self-improvement. In the literature, studies carried out with teachers (Yurtbakan & Altun, 2019; Çetin, 2020) and with preservice teachers (Çetin, 2018; Batmaz & Altun, 2019) showed that attitudes towards life studies teaching were at a high level. The quantitative results demonstrated that the subscale of caring had the highest mean, which was followed by loving and appreciation, and the qualitative data supported this finding. In relation to the sub-scale of appreciation, the teachers valued the course but did not spend much time for planning, and they thought that was not necessary. Parallel to this finding, studies (Çetin, 2018; Yurtbakan & Altun, 2019) using the scale developed by Sarıkaya, Özgöl, and Yılar (2017) found that teachers had the highest mean in the sub-scale of caring, which was followed by the sub-scales of loving and appreciation, respectively. Therefore, the themes of attitudes towards life studies teaching in this study were consistent with the aforementioned research findings. Education at Glance 2019 (OECD, 2019) reported that the majority of the time at primary school is allocated to courses related to reading-writing, mathematics and literature. Accordingly, the time allocated to the courses of Turkish and mathematics is more than to life studies. This was expressed by some of the teachers as well. For instance, one of the teachers mentioned that the life studies course was considered less important compared to Turkish and Mathematics and suggested that reducing the course hours of Turkish and Mathematics might allow the life studies course to become more important in the primary school curricula.

The gender perspective showed that the male teachers' attitudes towards life studies were higher than the female teachers'. For example, a teacher who expressed an opinion in the sub-theme of crowded class stated that women had a lot of work at home and could not spare time to prepare for lessons. However, inconsistent with this finding, a study by Çetin (2020) revealed that attitudes towards life studies teaching did not differ based on gender. Another study conducted by Gündüz (2000) found that female preservice teachers had higher attitudes towards life studies teaching compared to the male participants. The differentiation of the research results in the context of the gender variable might be due to the geographical location, economic factors and personal characteristics.

The study showed that the teachers working in schools with low socio-economic level had lower level of attitudes towards life studies teaching than the teachers working in schools with medium and high socio-economic levels. Some of the qualitative data obtained in the study supported this finding. In the sub-theme of socio-economic code of the parent-based theme formed based on the teachers' views and in the sub-theme of conflict of real life-acquirements of the curriculum-based theme, the teachers emphasized the problems arising from the socio-economic level. Accordingly, the teachers who worked at low-income schools had difficulties because some of the life studies issues were unrealistic for the students at economically disadvantaged schools. The most important variable determining student performance at

primary education level is socio-economic level (ERG, 2014). Academic development of children with low socio-economic level progress is slower than that of other children (Aikens & Barbarin, 2008). Difficulties experienced in the context of life studies course due to socio-economic reasons also affect teachers' attitudes towards the teaching of the lesson. The research findings showed that these difficulties negatively affected the teachers' attitudes towards life studies teaching.

During the interviews, the teachers reported that the scope of the course was very wide and that they had difficulty in presenting the subject in a coherent way due its comprehensive scope. Life studies is a comprehensive course based on the thoughts of Plato and Aristotle (Brückl, 1932), and its scope consists of social sciences, natural sciences, art, thoughts and values (Sönmez, 2010). The subjects in the curriculum are presented in a simplified manner in accordance with the developmental characteristics of students. However, the lesson subjects within the scope of the course are related with life, and the willingness of each student to talk about their own life can sometimes distract students' attention. The teachers stated that they had difficulty in taking advantage of out-of-class activities within the scope of the life studies course. They attributed this difficulty to the socio-economic level of the family and unwillingness of parents to take responsibility. Contrary to this finding, a study by Armağan-Erbil & Doğan (2019) showed that it was important to benefit frequently from out-of-class activities. Another study by Gündoğan (2020) concluded that students were willing to benefit from out-of-class activities in life studies course. Based on this difference between the findings of the present study and other research findings in the literature, it could be stated that teachers consider out-of-class activities necessary in life studies course and that they yet have difficulty in performing them, which prevents the course from being taught effectively and achieving the learning outcomes.

Another important finding obtained in the study was related to the problems arising from parents such as being a wrong role-model, ignoring the course and not paying attention to values or education at home. This is related to the family's not being actively involved in the schooling process. Studies revealed that family support was important for teachers and students (Pena, 2000; Barge & Loges, 2003; Argon & Kıyıcı, 2012; Jafarov, 2015). Hatipoğlu & Kavas (2016) found in their study that positive parenting approaches had positive reflections on teachers' performances. Argon & Kıyıcı (2012) reported that the family's low level of intention to participate in the education of the child negatively affected the motivation and performance of the teacher. In this context, the reinforcement of the topics learned in the life studies course by the family at home is important in terms of both student motivation and the teacher's attitude towards the lesson.

The study indicated that the teachers had problems arising from the curriculum. Some of the acquirements differed from the real lives of the children; in other words, the acquirements emphasized the ideal life. This posed a problem especially for students living in disadvantaged areas. According to the teachers, these students had difficulty in internalizing the subject and adapting it to their own lives. Similarly, a study by Karaman (2019) showed that life studies subjects were prepared without taking into account the cultural values and regional differences of the country and that textbooks were not up-to-date. Hanbaba & Bektaş (2007) emphasized the necessity to include playing in life studies textbooks while teaching this course. Gündoğan and Kılıç (2020) stated that the nature and content of the course were quite suitable for learning via playing. Therefore, enriching and updating the textbooks with methods such as educational games will make students more active. Also, it may allow teachers to benefit more from the textbooks.

Teacher attitude affects the teaching of a course directly or indirectly (Wilkins, 2009). Teachers' attitudes towards the subject are important in creating a learning desire in students (Bhargava & Pathy, 2014). Primary school teachers' care and love for the lesson are effective on students'

participation. Teachers' high attitudes towards life studies teaching are important to achieve the goals of the course, to teach the lessons effectively and to enjoy the lessons. Although teachers' attitudes towards life studies teaching are at a high level, they have some difficulties in teaching. These difficulties arise from students, parents, teaching-learning process and curriculum. The main difficulties expressed by the teachers could be listed as parents' devaluation of the course, not being an effective role-model, low socio-economic level, wide subject content, crowded classes, inadequacy of textbooks and differences between real life and acquirements. These difficulties may negatively affect their attitudes towards the course. This situation may prevent students from getting the maximum benefit from life studies course. Therefore, it is obvious that teachers, parents and curriculum development experts have a great responsibility in achieving the goals of the life studies course, which is one of the important courses at primary school. At this point, the following suggestions could be offered to practitioners and researchers:

- Teachers' attitudes towards life studies teaching and students' attitudes towards this course can be analyzed comparatively.
- Participant observation can be used to analyze teachers' attitudes towards life studies teaching. Thus, other factors that affect attitude can be studied.
- More research can be conducted on the relationship between the attitude towards life studies teaching and the socio-economic level. The data can be collected from students and parents. Diversity can be made in the data collection process.
- Based on the problems that teachers experience in life studies teaching, needs analysis studies could be conducted. These studies can be used in the curriculum development process.
- The factors underlying negative thoughts of parents about the life studies course can be examined.
- The necessary planning could be done to encourage parents' participation in the life studies course. Parents can be encouraged to take responsibility for in-class activities. Parents can provide support for social responsibility projects.

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THE USE OF TRAVEL BLOG WRITING IN A TERTIARY LEVEL ENGLISH FOR SPECIFIC PURPOSES COURSE

Abstract: Blogs can be used as constructive means in EFL teaching allowing learners to exert control over their own writing and enabling them to communicate with the global community of internet users. Among different types of blogs, travel blogs can be employed as pedagogical means for real life based learning and L2 writing improvement. Through travel blogs, learners can both explore different places and write about their travel experience in L2. However, the use of travel blog writing in teaching English for Specific Purposes (ESP) has not yet been investigated. In this study, travel blog writing was integrated into a tertiary level ESP course aiming to improve learners' linguistic skills in the fields of tourism and travel. The research investigates the learners' views about blog writing as a part of their ESP course through a questionnaire and interviews. According to the findings, travelling and writing about the tourist attractions of one's city via a personalized blog was found to increase writing motivation but the experience was also defined to be demanding as it requires heavy workload. Overall, this experience was reported to enhance autonomous, reflective and collaborative learning, increase cultural awareness and contribute to learners' self-expression and L2 writing improvement.

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INTRODUCTION

Thanks to information and communication technologies and digital media, many language learners practice writing skills synchronously as is the case in chatting or instant messaging or asynchronously through means like blogs. Blogs are websites authored by an individual and organized in a reverse chronological order over a period of time and they are convenient means of digital communication due to their multifaceted merits over many internet tools (Akdağ and Özkan, 2017; Godwin-Jones, 2003; Palombo, 2011). First, they are easy to make and quick to create as they require no HTML knowledge. In blogs, it is possible to enhance the content and intensify the attractiveness of appearance with multimedia features including external links, digital photos as well as audio and video clips. The “comment” feature of blogs enables readers to interact with the author paving the way for the co-construction of knowledge. Also, through the “hyperlink” function of blogs, one can easily link and crosslink to online processes, discourses and communities. Above all, they can be free or of very low costs. Hence, blogs supply authors with a dynamic, interactive and cost-effective medium where they can not only create and update the content easily in their own ways but also share and exchange ideas (Nepomuceno, 2011).

Blogs have been cited as useful sources in L2 education contexts since with their asynchronous mode, they can give students a chance to write at their own pace without time pressure, possibly leading them to reflect critically and creatively on the content (Huffaker, 2005; Lin and Yuan, 2006; Pinkman, 2005). They also increase students’ literacy through the ubiquitous and easily-accessible content they offer and the network of authentic sources they potentially incur (Arena, 2008; Jones and Nuhfer-Halten, 2006; Oravec, 2002). Additional advantages include enhancing analytical writing skills, intellectual confidence, and student autonomy (Richardson, 2006). Thus, students can often make their own decisions in such settings as to what, when and how much to publish their work online and take advantage of independent learning (Kovalchuk and Krasnokutskaya, 2017). Besides, students’ works that accumulate in the form of archived entries over time cause both the students and teachers to assess writing improvement. A further benefit is that by means of blogs, students open their works to a broad audience, which potentially increases their motivation to produce works of high quality (Sun, 2009; Ward, 2004). Consequently, blogs set the grounds for not only personal but also social spaces for learners to express thoughts and feelings, and develop a digital identity to make connections with others within a wide virtual learning community (Mabuan, 2018).

Drawing on Vygotsky's (1978) educational theory, the use of blogs in language learning can be defined as a social constructivist approach (Fageeh, 2011; Ferdig and Trammell, 2004; Sun and Chang, 2012). In this approach, learning is seen as a form of knowledge construction that develops through the social process of language use over time. Knowledge is fluid, not fixed and construction of knowledge is discursive, relational and conversational in nature. Blogs are social constructive means in the way that they afford a space for L2 students to voice their unique experience with their surroundings and their ideas and feelings about them (Sun and Chang, 2012). Moreover, blog publication offers an opportunity for collaborative feedback, which, in turn, scaffolds a learner in his or her quest for knowledge construction (Fageeh, 2011). Students can also understand the relational and contextual basis of knowledge, knowledge construction and meaning making through the comment and hyperlink features of blogs (Ferdig and Trammell, 2004).

Blog writing can also serve as useful means in contexts where English as a lingua franca (ELF)-aware pedagogy is applied. In the pedagogy of ELF, non-native varieties of English are acknowledged in their own right and non-native users of language with their own unique characteristics (i.e. with their own use of English, L1s, and sociolinguistic and sociocultural

backgrounds) and it is argued that this non-native speaker reality should be integrated into English lessons (Kemaloglu-Er and Bayyurt, 2018, 2019a, 2019b; Kemaloglu-Er and Deniz, 2020). In English language teaching (ELT) settings which emphasize variability and functionality in ELF use deviating from native norms, blog writing can be an effective way to highlight each student's English with their own unique characteristics and make it visible to a global community and help them interact with other users of English. This form of blog writing would also pave the way for intercultural exchanges and aid the incorporation of local cultures into the English classroom.

BLOGS IN WRITING INSTRUCTION

Blogs can be employed as vehicles for meaningful and purposeful writing tasks in L2 learning environments. They are reported to act as promising tools in the key areas of L2 writing instruction affording several advantages including motivating learners intrinsically and extrinsically, allowing them to exert control over their own writing, presenting them a real-life setting and a great range of authentic materials, and enabling them to communicate with real audience (Ducate and Lomicka, 2008; Fotos and Browne, 2004; Throne and Payne, 2005). According to Warschauer (2003), interaction on the internet including blogs encompasses a complexified view of literacy that goes beyond decoding and encoding texts. Today, as he indicates, to know English means to know how to effectively read, write and communicate in electronic environments. Blogs, therefore, lay the grounds for multiple literacies among learners.

To this end, blogs can well be employed as supporting means in L2 writing instruction to increase writing fluency and literacy skills (Bloch, 2007; Fellner and Apple, 2006; Ward, 2004). Jones and Nuhfer-Halten (2006) state that by blog writing, students can become more and more confident in writing and develop their own personal writing styles. Lin and Yuan (2006) underline the audience awareness feature of blogs mentioning the fact that blogs derive students to think critically about how their views might be conceived by the target audience. As stated by Arena (2008), blogging helps students to develop metacognitive skills to regulate their own writing. According to Lee (2010), blogs increase students' motivation to write as they now address not only the instructor but also a broad audience. As Ward (2004) remarks, exposure to multiple views via blogs can cause learners to develop their interpretative and critical thinking skills, which is also likely to affect the quality of their writing content.

Several studies display students' views on the advantages and challenges of blog use in English as a foreign language (EFL) instruction. Blogs are reported to develop linguistic skills, particularly writing and reading as well as grammar and vocabulary, enhance interaction and collaboration, build confidence in writing, encourage autonomous learning, augment analytical and critical thinking skills, increase writing and reading motivation, sense for responsibility and desire for life-long learning (Akdag and Ozkan, 2017; Aydan, 2014; Aydin, 2014; Campbell, 2003; Featro and DiGregorio, 2016; Grami, 2012; Gunduz, 2016; Kovalchuk and Krasnokutskaya, 2017; Kuimova and Zmekov, 2016; Johnson, 2004; Lee, 2010; Mabuan, 2018; Musa, 2016; Nepomuceno, 2011; Pinkman, 2005; Sun and Chang, 2012; Zhang, 2010). On the other hand, blog use in English lessons is said to have some challenges like complicated tasks, intense workload, and technological limitations like internet problems or unavailability of computers (Aydan, 2014; Featro and DiGregorio, 2016; Kovalchuk and Krasnokutskaya, 2017; Mabuan, 2018).

Among blog types, travel blogs can present certain benefits to language learners, yet this type of blogging has received little attention in ELT literature. As stated by Pascual (2019), travel blog as a digital genre allows the implementation of communicative language teaching, task based learning and process based writing in the English classroom and has the potential to develop students' communicative and digital competencies and raise their genre awareness. Romaniukha,

Shelomovska and Sorokina (2020) suggest integration of travel blog writing into the ESL classroom through project work activities since such form of writing leads students to introduce cultural concepts and this offers opportunities for enriched use of language and enhanced verbal creativity. The only study about travel blogging in ELT was conducted by Pascual Oliva (2017). The study aimed to measure the attitudes of secondary education students towards the use of travel blogging in the EFL classroom. The findings displayed the general need to further learners' awareness of the genre of travel blogging since most of the participants were found to have some basic information about blogs and not to consult travel blogs before embarking on a trip. However, learners were also found to be in favour of using travel blogs in the English classroom and view it as a functional resource to improve linguistic skills and enhance learning motivation.

Although travel blogging has been proposed to be a useful pedagogical means to improve L2 communicative skills, there is no research on the integration of travel blog writing in EFL or ESP contexts. This study aims to introduce a sample implementation where travel blog writing was integrated into a tertiary level English for Specific Purposes (ESP) course and investigate the students' views on travel blog writing experience. More specifically, the study aims to explore the descriptions of the students about the blog writing process, their opinions on the effects of travel blogging on L2 writing improvement, and their views on the advantages and challenges of incorporating travel blog writing into the ESP course along with their suggested solutions.

The study addresses the following research questions:

1. How do the students describe travel blog writing process as a part of their ESP course?
2. What do the students think about the effects of travel blog writing on their writing improvement?
3. What do the students think about the advantages of travel blog writing within their ESP course?
4. What do the students think about the challenges of travel blog writing within their ESP course?
5. How should the challenges be addressed according to the students?

METHODOLOGY

This qualitative case study was conducted in an English for Specific Purposes (ESP) class given in the Translation and Interpreting Department of a state university in Turkey. The course entitled "Translation of Travel and Tourism Texts" is a multi-modular course adopting a real life-based learning approach which primarily aims to have students make translations about travel and tourism-related subjects and write their own travel writings. The course primarily focuses on the tourist attractions, historical places and local events in Adana, where the university is located. In this course, students not only make translations of texts about the given locations/events but also visit these locations, attend local events and write about their own travel experience. More specifically, in this course, the students are asked to

- i) visit the tourist attractions and historical places in the city and experience local events attracting tourists in the location like a local festival,
- ii) make translations of texts related to the chosen location and/or the local event and critically analyze the translations,
- iv) write travel writings about their travel experience in English,
- v) post their writings on the blogs they particularly prepare for the course,
- v) exchange opinions on their travel experience and travel writing with their classmates, instructor and the blog audience.

Thus the course mainly has two modules with respect to ESP improvement: Translation of tourism- and travel-related texts in the languages of English and Turkish and travel writing in English. In the travel writing module of this course, blog writing was applied as a pedagogical means to increase the students' writing motivation and encourage them to actively and reflectively take part in real-life based writing, knowledge generation, personalization and sharing. Every other week the students were expected to visit a location in their local settings or experience a local event, learn about the qualities of this place/event and introduce this place/event and write about their travel experience and their own feelings and thoughts about this experience and then post their travel writings with the visuals they select for their blogs.

In the course, the students were assigned to

- 1) visit and write about their travels to main tourist attractions in Adana namely,
 - (i) Adana Museum, which mainly houses the archaeological and the historical heritage of Adana,
 - (ii) Adana Cinema Museum, which introduces the cinematographic works of directors, producers, actors and actresses from Adana as well as films shot in Adana, a city which is known to give significance to art, literature and cinema and where Adana Gold Cocoon Film Festival is held every year,
 - (iii) Adana Atatürk Museum, the old Adana house, where Atatürk, the founder of the Turkish Republic, was hosted when he came to Adana in 1924,
 - (iv) Sabancı Central Mosque, the second largest mosque in Turkey with six minarets and the interior intensively embroidered with tile work and calligraphy,
 - (v) Central Park, a large urban park located on both banks of the Seyhan River in Adana,
- 2) recommend a restaurant or a café in town to the target audience and write about it since Adana is known for its cuisine, particularly *kebap*, a common meat dish made with minced meat, and
- 3) attend the well-known festival of the city they lived in, namely Adana Orange Blossom Festival, named after the scents of orange flowers dominating the city in early April and held to celebrate the arrival of spring with activities, and write about this experience.

The students were told to not only give information about these places and events but also write about their personal opinions and feelings about their travels and make their blog writings personalized pieces of work that reflect their own perspectives as travelers. The course lasted 14 weeks and there were 7 pieces of writing assigned to be written and posted on the blogs.

Blog writing was defined to be a compulsory part of the course and assessed as a part of the overall course assessment. Each task was given points and evaluated on the basis of the established criteria including accuracy, clarity, coherence, inclusion and reflection of author's voice, and verbal and visual appeal. The participants were trained about how to start blogs and how to use blog features before the training. Samples of travel blogs were also shown to the students. Systematic and comprehensive feedback about blog tasks was provided by the instructor to each student on a regular basis. The students also received collective feedback via classroom discussions and group interactions.

PARTICIPANTS

9 sophomores majoring in the Translation and Interpreting Department of the research setting, who were enrolled in the course entitled "Translation of Travel and Tourism Texts" and wrote their own travel blogs as a part of the writing module of the course, participated in the study. 6 of them were female and 3 of them were male. Their ages were between 20 and 22. Their level of English proficiency was advanced (C1) according to the proficiency test of the setting and their native

language was Turkish. The participants were informed about the study, the procedures and confidentiality and voluntarily participated in the research.

DATA COLLECTION

Data collection was performed through a triangulation process to ensure validity and reliability. The data were collected via an open-ended questionnaire given to the students and semi-structured interviews conducted with each student. The open-ended questionnaire was designed to elicit in-depth data about the participants' views concerning blog writing as a part of the ESP course. The participants were asked to describe the blog writing process and comment on the advantages and challenges as well as ways to address these challenges. The semi-structured interviews were conducted to provide comprehensive and supportive data on the same themes to maintain validity and reliability.

DATA ANALYSIS

The data were analyzed via qualitative data analysis. In qualitative analysis, patterns in textual data are defined, investigated and interpreted to address research questions through pertinent themes, categories and descriptions (Patton, 2002). As a qualitative analysis method, thematic analysis was implemented. For this purpose, the salient and recurring themes are identified and categorized by moving back and forth within the data by means of multivariate readings (Creswell, 2013). To this end, iterative readings and in-depth analyses were performed to scrutinize the data from the open-ended questionnaires and interviews and repetitive themes were attentively refined, categorized and defined.

FINDINGS

DESCRIPTIONS OF TRAVEL BLOG WRITINGS

Writing travel blogs was defined to be an experience that gave the writers a sense of belonging, confidence, motivation and a sense of freedom since they were able to create their own content about the places they personally visited and write about them in their own words with their own styles. Thus autonomy and personalization were found to be factors differing blog writing from the essays and formal reflection papers they had to write in their department to get grades. Here is a sample excerpt displaying this situation:

For the first time in my life I felt so free about writing in English. Through such writings I wrote with intensive care, I felt like an experienced world traveler and I became so engaged with the weekly tasks that my mind was often occupied with travelling tasks of the week and how to make my blog as attractive as possible to the audience.

There were some students who described blog writing as a satisfying and enjoyable experience since they had a chance to express themselves and show what they did and achieved to the internet community while some others found the process extremely demanding as described below. There were some other participants who expressed their concerns about intimacy and said they felt uncomfortable with displaying what they had personally experienced and put into writing to an unknown audience.

The participants who were found to describe blog writing as hard work pointed out it requires regular and intense writing and regular follow-ups. Designing the pages by selecting appropriate and attractive visuals was also defined to be pretty difficult by some students and they said this post-writing process where they were busy with visuals took a great deal of time and energy. Some

of the participants said they started writing blogs in high school but could not go on with them since blogs need discipline and control. Most of them also found blog writing obsolete and effortful compared to relatively novel social sharing platforms like Instagram and they stated blogs necessitate more profound analyses and effective and intensive writing presented with attractive visuals and designs and all these were exhausting for them compared to the new social media platforms where they can practically convey their messages by simply posting their photos with limited number of words.

The participants were asked to use a metaphor for travel blog writing and the expressions in general have revealed a feeling of contentment despite the hardships. Here are some examples:

- It broke my taboos. I was kind of against the idea of opening a blog and sharing what I would name as personal. But I liked it once I opened the blog. Travel blog writing is like jumping into a pool at once and getting used to the cold water and enjoying it gradually.
- Travel blog writing is like a sweet torture because I don't like writing as much as translating. But it was still a lovely experience.
- Travel blog writing is something that can be difficult but enjoyable. It is like hosting guests in your house, loving them and pampering them with treats.

EFFECTS OF TRAVEL BLOG WRITING ON WRITING IMPROVEMENT

The participants mostly emphasized that unlike the other forms of writing they write in English classes, blog writing was a type of writing where the writer feels free to form and convey their own content to the audience. As they maintained, this freedom led to more creative pieces of writing produced with their own initiative and aesthetic power, where memorized phrases and mechanical expressions of typical school essays are avoided. In addition they were content about the fact that they honestly told their opinions and feelings to the audience without being restricted by the strictness of formal writing and possible forms of hierarchy in the relations between the author and the audience as in conventional teacher-student relationship. Here is a sample excerpt displaying such a case:

Normally I don't like writing. But the idea of blog writing aroused my interest. You have your own page; you can create a name that tells about you. I think blogs are very useful for everyone because there are always honest thoughts about the subjects.

Apart from freedom, being more attentive and careful about not making mistakes was stated to be a difference experienced in the participants' writing process. That is, blog writing made the students pay more attention to what they wrote as they knew that their audience was not only their teacher and classmates but the whole internet community. Most of them said they did not want their English to be thought ineffective and insufficient and this paved the way for their intense care about their writings. They were found to check their writings several times in order that they can be quality pieces with almost no mistakes. They stated they also paid attention to the tone of their writing and made it semi-formal and put emphasis on sounding as natural as possible with their own voice. The following excerpt exemplifies the participants' efforts for effective writing:

I can say that both the quality and quantity of my writing increased thanks to my travel blog. In the middle of the day I caught myself thinking about what to write in my blog and making stylistic sentences I had never made before. And I was so motivated that I constantly advertised my blog writings in my Instagram account.

As seen by the sample excerpt above, most participants said blog writing required drawing the attention of the reader and keeping them hooked as in advertisement writing and this brought about a new change to their school writing as they weren't used to such genres as a part of their educational life. As stated, they tried to create flamboyant titles and make attractive sentences to catch the attention of potential readers. Also organizing the coherence, content, and mechanics of writing were now meaningful to them as the writings served specific and real-life based purposes, namely, introducing the places they visit, sharing their real life travel observations and experience as well as their opinions and feelings with the audience.

The students also said through the comments they received from their instructor and classmates, they were able to understand the parts that they were successful at and the parts they should improve in writing in English. Collective assessment also helped them to see the views of different people on their writing, which led to a multidimensional revision process. Furthermore, with the help of blog facilities, they were also able to receive comments from the blog readers and the comments increased their motivation to produce more and write better as exemplified below:

It was amazing when I received the first comment about my blog from a person from Ukraine and the words she used were so positive that I just wanted to write more and more.

ADVANTAGES OF TRAVEL BLOG WRITING

Travelling in one's local setting and writing a blog about the travel experience for a real audience was widely mentioned to increase the learners' knowledge and cultural awareness of the city they were living in. The participants said travel blog writing helped them discover the local assets in their own surroundings and get to know the historical background and the cultural value of their location. As most of the participants stated, although they had been living in the local setting all their life, they had never been to such places and this experience gave them a new vision about their own location and its value. Some participants also mentioned their discovery about the fact that travelling does not necessarily mean going to distant places, they can even do this in their own local settings. To illustrate, one participant said:

Travel blog writing has shown me you don't have to go so far to be a traveler. Even your hometown can be full of adventures. It is a perfect way to express the feelings you have during travelling and sharing them with people.

Also by travel blogging, the participants said they had realistic aims to achieve so this kind of writing practice was said to give the participants a sense of purpose and a sense of achievement. They also stated blogs created a sense of belonging since they now saw themselves as the owner of a personal site and a guide of a specific internet community. Thus they felt confident and motivated in their writing:

I have never associated myself with the idea of sharing my travel experiences by posting it on a website let alone having my own travel blog and designing my own website. I have started blogging for the first time on account of this particular course. It made me change my views on traveling in many ways and also gave me a feeling that I'm the one who is in control of what the audience is exposed to.

Blog writing was also found to be a supportive means to improve the students' translation skills and translation perspectives regarding travel- and tourism-related texts. Since the participant group of the current study consisted of students majoring in translation and interpreting who need to acquire knowledge about different genres of texts and discourse, they said travel blog writing

enabled them to gain deeper insights about travel- and tourism-related subjects, strengthen their knowledge about this text genre and improve their genre-specific vocabulary. By visiting tourist attractions and historical sites in their city, the students also said they were able to read the informative texts there both in their native language, Turkish, and English and analyze the translations from Turkish into English, which also gave them an opportunity to acquire knowledge and real life experience about tourism and travel texts and their translations. Thus travel blog writing was said to contribute to not only the literacy skills but also translation and translation criticism skills of the students. As one participant said:

It was enjoyable to take photos of the texts written in Turkish and English about the museum objects and analyze them afterwards. I realized how difficult it can be to give the meaning to the audience and be that visible to public as a translator because even a small mistake you make will remain there forever.

Furthermore, some participants said they found translating from their native language, Turkish, into English more difficult than vice versa so analyzing Turkish-English translations on site was defined to be an effective real-life based opportunity for improving this type of translation. Some participants also pointed out as they were in a translation department, they were expected to translate more than writing and the blog writing practice was said to give them an opportunity to improve their writing skills in an intensive and enjoyable way.

A further advantage of blog use in ESP learning was said to be the ease of accessibility to all pieces of writing in one setting and within a chronological order, thus blogs also served the function of an electronic portfolio for the participants. Also, as elaborated above, independent and autonomous writing, i.e. taking initiative and responsibility in forming the content and format of their own writing was found to be a feature emphasized by all the participants. Moreover, the students not only wrote their contents but also talked about them and received relevant feedback from their peers and teacher on their blogs and how to improve them, thus blog writing integrated with speaking and reflective thinking was defined to be an advantage contributing to their improvement in active use of English.

CHALLENGES OF TRAVEL BLOG WRITING AND SUGGESTIONS TO DEAL WITH THEM

The hardship of creating an effective blog writing accompanied with attractive visuals was stated to be the biggest challenge by the participants as the whole process was found to be onerous. Furthermore, the course load was deemed to be heavy since the students were demanded to do various things as a part of the multimodular course. They were expected to not only make translations of texts relevant to tourism and travel but also travel different places, prepare a travel blog, and write about their travel experience in this setting. Besides, as the course focuses on action accompanied with reflection, there were reflective interactions conducted systematically on both students' translations and blog writings. All these course-related aspects were stated to be beneficial as well as challenging by the participants.

The other challenges included technological accommodation to blog writing as some participants had difficulty adapting to blog technology in the beginning stage. Another difficulty was said to be arranging the tone and content of the writing and the design of the blog page to attract readers. The travel blog as a part of the ESP course was stated to require longer and more intensive posts compared to mainstream social media means like Instagram and this was also a feature the new generation digital native participants found strenuous and hard to adapt.

Despite the challenges, a great majority of the students found blog writing in the ESP course a beneficial experience. The following excerpt exemplifies this mixed type of conception:

It is not an easy job, let me tell. You have to be aware of your surroundings, you need to be into the place you're visiting in order to write something about it. And you have to know about the use and editing of websites, otherwise you'll have lots of difficulties. I have started to respect more those who travel and share their experiences with us but also I have gotten envious as to how many places they visit and how well they write about them. I think it is one of the best duties a person can have.

As the blog writing and heavy course load were found to put pressure on the students, a common suggestion was that the course load can be reduced or the current program can be extended to two terms so that the course content with multiple dimensions can be handled more feasibly. It was also emphasized that teacher support and feedback should be given at all stages of blog writing, that is before, during and after the process and peer collaboration must again be integrated into blog writing in the forthcoming courses as they had been helpful and motivating components within the process. All the participants said that although blog writing was demanding, it acted as a meaningful and purposeful means increasing their writing enthusiasm and joy and improving their writing skills thus it can be incorporated into future courses.

DISCUSSION AND CONCLUSION

It was seen that travel blog writing helped EFL students increase their cultural awareness and build a great sense of autonomy and empowerment. By travelling to the significant tourism sites and experiencing a local festival and an aspect of culinary culture in the city they were living in, they learned about the specific cultural assets in their environment, took pleasure in travelling, discovery and exploration, read authentic texts written in English and presented with Turkish translations, and communicated with new people. Most importantly, they wrote about their authentic experience and presented it to English-speaking internet community with their own English and blog-specific content. The content was informative and entertaining and the tone of writing in general was lively and informal, which gave them a context different from formal school writings. This experience was defined to provide them with an intense sense of freedom in L2 writing and a chance for self-expression.

Travel blogs were also reported to give the participants a clear purpose for writing and contribute to their L2 writing improvement. By sharing the same goal of travelling and travel writing, the students felt a sense of belonging to their class community as well as the community of travel blog writers. In order to write a specific genre, travel blogs in our case, they analyzed different samples of travel blogs and then created their own travel blogs. Writing a specific genre raised their awareness of genre-based writing and had positive contributions to their genre-specific vocabulary and organizational skills. They also said being pressurized by public visibility, they did their best to make accurate sentences and adopt a professional style in writing. The raised awareness of the genre of travel writing was also said to support the translation skills of the participants regarding travel texts. As the ESP course also aimed to develop the translation skills of students concerning tourism and travel texts, the writing module of the course was said to fulfill the purpose of supporting this type of translation education through authentic and genre-specific reading and writing experience.

Also, addressing a global community was found to contribute to an increase in the students' extrinsic motivation for L2 writing and their texts' being published was seen to create an aura governed with commitment, carefulness and revision. Seeing one's own piece of writing as a publicly visible blog was also reported to increase confidence and willingness to write more pieces.

As a whole, all these positive features can be said to help the participants construct an authentic L2 writer identity.

The collaborative nature of blog writing was also observed to improve students' communicative and reflective skills and help their own Englishes be heard by others, as intended by ELF-aware pedagogy (Kemaloglu-Er and Bayyurt, 2018, 2019a, 2019b; Kemaloglu-Er and Deniz, 2020). Through student-student and teacher-student interactions, the learners were able to share information about their travel blogs and receive feedback about them. The interactional nature of blog writing allowing interacting with the global audience through comments also enabled the learners to receive feedback from people outside their classroom group and this aided the participants form ELF-aware interactions and become aware of their own use of English as well as others'. These interactions were also reported to encourage the participants to write more.

As for challenges, the complaints were centered on heavy workload. The course was found to be demanding and most participants said it was difficult to design a blog with intensive content and attractive visuals. Also having to draw the attention of the target audience with appealing language use was found to be laborious. The course was stated to be loaded with several tasks aiming at both translation of travel and tourism texts and travel blog writing after real life visits. Together with technological adaptation, all this content was seen to be demanding. Thus it was commonly suggested the number of tasks be diminished or the course content be given in two terms. Despite the challenges, a great majority of the participants were found to be in favor of travel blog writing and suggested its continuation in the following terms.

In this study, therefore, travel blog writing has been favored and defined as an effective pedagogical means for EFL and ESP education. The experience of travelling and writing about the local attractions of one's city via a personalized blog was reported to increase writing motivation, boost autonomous, reflective and collaborative learning, raise cultural awareness and have positive impacts upon learners' self-expression and L2 writing improvement. These findings are in line with those of several studies regarding the advantages of blog use in ELT (Akdag and Ozkan, 2017; Aydan, 2014; Aydin, 2014; Campbell, 2003; Featro and DiGregorio, 2016; Grami, 2012; Gunduz, 2016; Kovalchuk and Krasnokutska, 2017; Kuimova and Zmekov, 2016; Johnson, 2004; Lee, 2010; Mabuan, 2018; Musa, 2016; Nepomuceno, 2011; Pinkman, 2005; Sun and Chang, 2012; Zhang, 2010). The findings of the study about the affordances of travel blog writing also support the suggestions of Pascual (2019), Pascual Oliva (2017) and Romaniukha et al. (2020) in that integration of this genre into EFL settings would develop linguistic skills, enhance verbal creativity and increase learning motivation. On the other hand, the study also highlights the hardships of blog writing, intense workload and technology-related challenges, similar to Aydan (2014), Featro and DiGregorio (2016), Kovalchuk and Krasnokutska (2017) and Mabuan (2018).

Different from other studies on blog use in ELT, this study for the first time has shown that a specific genre of blogging, travel blog writing, can be incorporated into EFL and ESP learning and display positive psycho-educational impacts in terms of autonomous knowledge construction, self-discovery as well as reflective and collaborative learning through scaffolding and feedback. Moreover, contribution of travel blog writing to translation skills has never been a mentioned aspect in ELT literature, thus it is another novelty of the current study. This implies the fact that if travel blog writing is applied as a part of an English course centered on travel and tourism as subject matters, this may pave the way for students' improvement in the use of English regarding these specific topics. Another implication is that travel blog writing can also be used as a part of a task-based curriculum in General English instruction and be integrated as a series of tasks to be applied for a certain period of time among several other tasks intended for communicative language teaching.

The study implies travelling and writing about this experience in a travel blog can be a beneficial pedagogical implementation in EFL and ESP contexts. The practice would primarily contribute to students' writing development since writings in such settings would be enriched by students' raised cultural awareness about their surroundings and their own reflections and collective interactions about their meanings and significance. The students' being autonomous in their travels and forming their own travel writing platforms would also distinguish this form of writing from formal school writings and this would then be likely to keep their writing motivation high. Besides, through travel blog writing, students' linguistic skills would develop as they would read more texts in the field of travel and tourism for their blogs as well as explore introductory tourism texts and their translations on site, and interact with their classmates, teacher, English speaking people they may encounter in their travels, and the global internet community about their travel experience and blog writings. Thus it is highly suggested travel blog writing be incorporated into L2 teaching contexts.

In the times of emergency situations like COVID-19, where online education gets into the center of education, blog writing about students' different forms of life experience and / or interests can also be an enriching activity for all L2 learners. COVID-19 experience has shown us the very fact that even if we are locked down in our houses, it is possible to explore the world through virtual tours. Thus travel blog writing can also be adapted to online English classes in the form of virtual explorations and reflections upon them.

This study has shown that on the path of appropriating and transforming knowledge, it would be illuminating for learners to have authentic opportunities for discovering their environments, reflecting on and writing about this travel experience and sharing them with the people in their learning context as well as the global community. Travel blog writing affords such kind of self-actualization framework and a collaborative space for L2 learners to publish their own understandings of the world of travel in their own walks of life.

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THE SCALE OF DETERMINING THE PROBLEM BEHAVIORS OF CHILDREN IN PRESCHOOL PERIOD: A VALIDITY AND RELIABILITY STUDY

Abstract: This study was aimed to develop a scale to determine the problem behaviors of 3-6 aged preschool children. A systematic process was carried out during the development of the scale. A total of 305 preschool teachers filled in the scale development study. Based on the results of exploratory factor analysis (EFA), it was identified that the scale consists of 30 items and three factors, explaining 52.13% of the total variance. These factors are named academic skills problems, peer relationship problems, and developmental-behavioral problems in accordance with the literature. Confirmatory factor analysis (CFA) was used to examine whether the collected data confirmed the determining factor structure. The whole scale's Cronbach's alpha reliability coefficient was found as .94. Cronbach alpha coefficients were .91 for "academic skills problems", .89 for "peer relationships problems", and .83 for "developmental behavior problems". As a result of the analysis, the scale is valid and reliable to determine the problem behaviors of preschool children.

Keywords: Problem behaviors, scale development, preschool period

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INTRODUCTION

Behaviors below or above the social acceptance level can be expressed as the problem behavior. Kanlıklıçer (2005) has defined the problem behaviors as behaviors that are harmful to the individual and their environment and cause the individual to be kept away from social environments. Gimpel and Holland (2003) classified problem behaviors into two groups: internalizing problem behaviors and externalizing problem behaviors. Being anxious, shy, and nervous can be classified as internalizing problem behaviors. On the other hand, externalizing problem behaviors can include aggressiveness, resistance, anti-social behaviors, and hyperactivity (Campbell, 1995; Kaya & Deniz, 2020).

In the preschool period, children's behavior that causes problems for themselves or their environment is generally defined as problem behavior (Yumuş, 2013). Problem behaviors such as non-obedience, stubbornness, jealousy, shyness, lying, aggression, swearing, and spoiling can be observed during sleep, eating, and cleaning times of preschool children (Alisinanoğlu & Kesicioğlu, 2010). In addition to these behaviors, behaviors such as hitting, biting, and throwing objects around can be seen in children (Yumuş, 2013). Problem behaviors decrease the acceptance level of children by their social environment. The child that is not accepted by his/her environment faces many developmental and psychological problems (Gültekin Akduman, Günindi & Türkoğlu, 2015). The learning or development of children who display problem behaviors may be impeded by exposure to the negative effects of their behavior (Sugawara & Cunningham, 1988). Preschool children who display aggressive behavior face more social difficulties and experience disciplinary problems in later school years (Ladd, Herald & Andrews, 2006). For instance, the friendship relations of aggressive children are frictional and tense (Yaşar Ekici, 2013). When it is late to prevent children's external problem behaviors that can be observed by the environment, serious behavioral disorders can occur in children (Topçu Bilir & Sop, 2016). Problem behaviors seen in the preschool period appear as the cause of more serious problem behaviors such as crime, aggression, antisocial behavior, and substance addiction in later years (McCabe & Frede, 2007).

The developmental period of the child should be taken into account to determine whether the behaviors expressed as problem behavior are problematic. At the same time, it should be determined how often the behaviors examined as problem behaviors are repeated and the level of behavior severity (Gültekin Akduman, Günindi & Türkoğlu, 2015). Teacher and parent assessments are considered important in determining and classifying children's problem behaviors (Kaner & Uçak-Çiçekçi, 2000).

In Gültekin Akduman, Günindi, and Türkoğlu (2015)'s study, the relationship between behavioral problems and social skills levels of preschool children was examined. It was concluded that the problem behavior levels of boys are higher than girls, and that the problem behavior levels of children who grow up in an extended family type are significantly higher than their peers who grow up in a nuclear family type. Contrary to this result, it contradicts a study conducted to determine the effects of various familial factors on the social behavior problems of 6-year-old children. As a result of the research, children's social behavior problem scores do not differ according to gender and family type (Seven, 2007).

The information obtained from the teachers has a critical function in the scales about the behavior of preschool children (Keleş, 2016). There are four types of problem behaviors that disturb teachers (Algozzine, 1977). The researcher identified and named these problem behaviors as social immaturity, motorically disturbing behaviors, social defiance, and socialized delinquent behaviors. While social immaturity includes behaviors such as anxiety, withdrawal, and shyness; social defiance consists of destructive, aggressive, and disobedient behaviors.

In a study that aims to determine the most common behavioral problems in classrooms, 13 preschool teachers were interviewed. As a result of the study, 11 problem behaviors emerged

and teachers stated that children with problem behaviors had tantrums and crying; yelling and stubborn behaviors were observed in children while having anger attacks (Güder, Alabay & Güner, 2018). In another study conducted by Baş & Şimay (2013), 15 preschool teachers stated that the most problem behaviors they encounter in educational institutions are children not wanting to participate in activities, exhibiting aggressive behaviors, swearing, and not adapting to a regulated environment.

As a result of examining the literature, there are some scales developed to measure problem behaviors of preschool children. Goodman (1997) developed the Strengths and Difficulties Questionnaire SDQ, which consists of five dimensions and 25 items, in which the psychological symptoms of children are examined. Questionnaire forms are prepared for the 4-16 age group. Parents, teachers, and adolescents are in the 11-16 age group can fill the questionnaire forms. The dimensions of the questionnaire named conduct problems, emotional symptoms, peer relationship problems, hyperactivity/inattention, and prosocial behavior. The adaptation study of the questionnaire to Turkish culture was conducted by Güvenir, Özbek, Baykara, Arkar, Şentürk, and İncekaş (2008), and the data on the behavior of children aged 4-16 were obtained from mothers. Dursun, Ögütü, and Esin (2020) conducted a study to adapt the psychometric properties of the Strengths and Difficulties Questionnaire (SDQ) for children aged 2-4. Based on the result of the study, the SDQ (2-4) scale was found to be valid and reliable in the Turkish language.

In another study, Kaner and Uçak-Çiçekçi (2000) made a Turkish adaptation study of the Revised Behavioral Problems Checklist developed by Quay and Peterson (1996) to identify the behavioral problems of children and adolescents aged 5-18 in schools and mental health centers. As a result of the study, three dimensions emerged: depression-attention deficit, socialized aggression behavior disorder, and hyperactivity-impulsivity. As a result of validity and reliability analyzes, it has been proven that the 56-item measurement tool can be used in educational settings and as a diagnostic tool.

Kanlıkılıçer (2005) has also adapted the Preschool Behavior Questionnaire (PBQ), which was developed by Behar (1976), to Turkish to determine the behavioral problems of preschool children. The Preschool Problems Screening Scale (ATSS) obtained as a result of the adaptation study is filled in by the teachers of 3-6 years old preschool children. The scale includes three factors and 30 items and was named as aggressive-belligerent, weepy-anxious, and careless-excessively mobile.

Alisinanoğlu and Özbey (2009) have adapted the Preschool and Kindergarden Behaviour Scala (PKBS-2), which was revised by Merrell (2003). The scale consists of two independent scales: Social Skill Scale and Problem Behavior Scale. Higher scores on the problem behavior scale indicate that children have more problem behaviors. Problem behaviour scale separated into four factors, they were named as externalizing problems, antisocial, internalizing problems, and self-centered. Teachers, families and social workers can use these scales to measure social skills and problem behaviors of children.

Sucuoğlu (2003) conducted examined the psychometric properties of the Turkish version of the Problem Behavior Checklist, problem behaviors of mentally disabled individuals between the ages of 10-25 were evaluated by their teachers. The checklist includes five factors and they were named as hyperactivity, lethargy, stereotypic behavior, self-injury, and other behaviors.

The fact that teachers are in an excellent position to observe children's behavior continuously for extended periods, in a variety of settings, and a non-intrusive manner (Phillips, 1968). Preschool teachers have an important role in adapting children to society, as they have the opportunity to intervene when they see children's problem behaviors (Özgün, 2016). There is a need for a measurement tool to be used by preschool teachers to determine the problem behavior of children. Since the adaptation studies of the scales in the literature are old and not culturally unique, it is necessary to determine problem behaviors appropriate to today's conditions and

culture. The fact that they are mostly adaptation studies has created the need for original study. This scale, developed for this purpose, is expected to contribute to the literature.

METHOD

This study was carried out to develop a scale that could evaluate the problem behaviors of preschool children by preschool teachers. In that sense, The Scale of Determining the Problem Behaviors of Children in Preschool Period (SDPBCPP) was developed. Participants of the study, the process of developing the scale, data collection processes, and data analysis procedures were mentioned in the related heading.

PARTICIPANTS

The working group was composed of a total of 305 volunteering preschool teachers who working in schools affiliated with the Ministry of National Education. Tavşancıl (2014) claims that a valid study needs to have a working group size that is five times or more than the number of items. Accordingly, it can be said that this criterion was fulfilled because the used scale consisted of 56 items, a number that is almost one sixth of the total teacher number. Demographics and other background information of participants can be seen in Table 1.

Table 1. Demographic Characteristics

Variable	Categories	f	%
Gender	Female	269	88.2
	Male	36	11.8
Age	20-24	25	8.2
	25-29	100	32.8
	30-34	47	15.4
	35-39	70	23.0
	40-44	37	12.1
	45-49	18	5.9
	+50	8	2.6
Professional Seniority	0-4	103	33.8
	5-9	66	21.6
	10-14	78	25.6
	15-19	23	7.5
	20-24	26	8.5
	+25	9	3.0
Geographical Region	Mediterranean	121	39.67
	Southeast Anatolia	66	21.63
	Marmara	64	20.98
	Egean	19	6.22
	Eastern Anatolia	18	5.90
	Central Anatolian	11	3.60
	Black Sea	6	1.96
Total		305	100

As seen in Table 1, 88.2% of the study group (n = 269) were female and 11.8% (n = 36) were male. Considering the ages of the teachers in the study group, there were 25 teachers (8.2%) between the ages of 20-24, 100 (32.8%) between the ages of 25-29, 47 (15.4%) between the ages of 30-34, 70 (23%) between the ages of 35-39, 37 (12.1%) teachers between the ages of 40-44, 18 (5.9%), and 8 (2.6%) between the ages of 45-49. Considering the professional seniority of the teachers in the study group, it is seen that there were 103 teachers (33.8%) between 0-4 years, 66 (21.6%) 5-9 years, 78 (25.6%) between 10-14 years, 23 (7.5%) between 15-19 years, 26 (8.5%) between 20-24 years, and 9 (3%) with 25 years or more seniority. Considering the regions where participants work, it is seen that 121 (39.67%) teachers work in

the Mediterranean Region, 66 (21.63%) teachers work in the Southeastern Anatolia Region, 64 (20.98%) teachers work in the Marmara Region, 19 (6.22%) teachers work in Egean Region, 18 (5.9%) teachers work in the Eastern Anatolia Region, 11 (3.60%) teachers work in the Central Anatolian Region and 6 (1.96%) teachers work in Black Sea Region.

THE DEVELOPMENT PROCESS OF THE SCALE

A systematic process was followed in the development of a valid and reliable measurement tool to be used in determining the problem behaviors of preschool children. First, the relevant literature was reviewed. Taking into account the theoretical framework, an item pool consisting of 68 items was prepared. Secondly, to determine the content validity, the opinions of three experts from the field of Preschool Education, an expert from the field of Measurement and Evaluation, and an expert from the field of Guidance and Psychological Counseling were obtained through form. The scale items were examined by an expert in Turkish Education to ensure face validity. As a result of expert opinions, 12 items that meant the same, were misleading, and seemed problematic were removed from the scale form. Following the recommendation of the Turkish Education expert, the expression 'child' at the beginning of the items was removed. A draft scale with 56 items was created to be implemented by making the suggested corrections. Since there is no scale that can be used as a criterion, criterion validity has not been examined. The draft scale was graded in four-point Likert type as "Always (4)", "Frequently (3)", "Occasional (2)", and "Never (1)". Participants answered the items on a Likert-type scale with four categories varying from never to always intervals. There are no adverse items that were reverse coded in the scale.

DATA COLLECTION PROCESS

The said scale was created in electronic medium and participants received a link to fill the form online. Participation to study was on voluntary basis and a consent form was obtained from each participant. 13 teachers who did not give their consent left the study without seeing the questions. Participants needed approximately 10 minutes to fill the form. The data collection process started in October of the 2020-2021 academic year. The data collection process took 10 days, and 305 preschool teachers were reached during this period. In this scientific study, it was unanimously decided that there was no ethical harm. The ethics approval from the Institutional Review Board at İstanbul 29 Mayıs University was obtained for the scientific study.

DATA ANALYSIS

First and foremost, the collected data was examined to eliminate any missing, incorrect or outlier values. Kaiser-Meyer Olkin (KMO) coefficient and Bartlett Sphericity test were used to examine the suitability of data for exploratory factor analysis (EFA). Item validity was tested by calculating the item test correlations. EFA was carried out using with SPSS 25.0 package program for construct validity. The determining factor structure was confirmed by conducting a confirmatory factor analysis (CFA) with AMOS 23 program. EFA and DFA were carried out with the data obtained from the same study group ($n=305$). Cronbach alpha coefficient, correlations between factors, and item-total correlations were calculated to determine reliability.

FINDINGS

This section includes EFA and CFA findings related to the validity and reliability studies of the scale of determining the problem behaviors of children in the preschool period.

FINDINGS REGARDING THE VALIDITY OF THE SCALE

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were examined whether this study, which focuses on the development of the scale is appropriate for the factor analysis. The

value of KMO was calculated as .934, and the Barlett value was calculated as 4376.736 ($p = .000$). These results show that the data for the Scale of Determining the Problem Behaviors of Children in Preschool Period were suitable for factor analysis and EFA was applied to obtain a meaningful structure. Based on the result of EFA, a structure with 30 items and three factors was obtained. According to Tabachnick and Fidell (2001), the factor load values should be above .32 and, items should not be overlapped at .10 level. In this context, the factor loads of twelve items (i1, i2, i3, i5, i10, i11, i12, i15, i19, i29, i34, and i35) were found to be below .32, therefore these items were removed from the scale. Additionally, fourteen items (i4, i7, i14, i21, i22, i27, i41, i42, i46, i47, i48, i52, i53, and i56) were found to be overlapping. These items were also removed from the scale. According to Tabachnick and Fidel (2001), principal component analysis is one of the most frequently used techniques. The main purpose of this analysis is to extract the maximum variance from the data set with each component. The most common axis rotation technique is varimax in deciding the number of factors along with principal component analysis (Izquierdo, Olea & Abad, 2014). The results of principal component analysis and the varimax rotation technique are given in Table 2.

Table 2. Results from Principal Component Analysis

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance Explained	Cumulative % Variance	Total	% of Variance Explained	Cumulative %
1	11.703	39.011	39.011	6.335	21.12	21.117
2	2.163	7.210	46.221	5.138	17.13	38.244
3	1.774	5.912	52.133	4.167	13.89	52.133

As can be seen in Table 2, there were three factors with an eigenvalue over 1. Initially, the eigenvalues of the factors were respectively 11.70, 2.16, and 1.77. The first factor explains 39.01%, the second factor explains 7.21%, and the third factor explains 5.91% of the total variance. Table 2 also shows the distribution of the variance after the varimax rotation. The developed scale explained 52.13% of the total variance, and the eigenvalues of the factors were respectively 6.33, 5.13, and 4.16. The first factor explains the largest portion of the total variance. After varimax rotation, the first factor explains 21.12%, the second factor explains 17.23%, and the third factor explains 13.89% of the total variance.

Additionally, the items were examined in terms of the acceptance level of the factor load values and overlapping. The results of the rotated factor matrix with loadings are given in Table 3.

Table 3. Rotated Factor Matrix

Items	Factors			R ²
	1	2	3	
I6	.544			.362
I8	.751			.628
I16	.560			.453
I18	.622			.451
I23	.725			.591
I26	.680			.563
I33	.742			.599
I43	.512			.364
I44	.811			.683
I45	.651			.612
I50	.558			.532
I55	.646			.572
I9		.528		.375
I13		.721		.553
I17		.641		.525
I20		.679		.556

I25		.707		.650
I28		.664		.617
I32		.771		.706
I38		.607		.576
I39		.597		.479
I54		.445		.358
I24			.635	.519
I30			.598	.469
I31			.507	.473
I36			.701	.540
I37			.537	.438
I40			.510	.402
I49			.572	.447
I51			.725	.548
Eigenvalues	6.335	5.138	4.167	
Explained Variances	21.11%	17.12%	13.88%	
Explained % of Variance	21.11%	38.24%	52.13%	
the Kaiser–Meyer–Olkin Test			.934	
Bartlett's Test	$\chi^2=4376.736$; sd: 435; p=.000			

Table 3 shows that a structure with 30 items and three factors was obtained from the result of EFA. The first factor has 12 items and factor loads ranged from .36 to .68. The second factor has 10 items and factor loads ranged from .35 to .70. The third factor has eight items and factor loads ranged from .40 to .54.

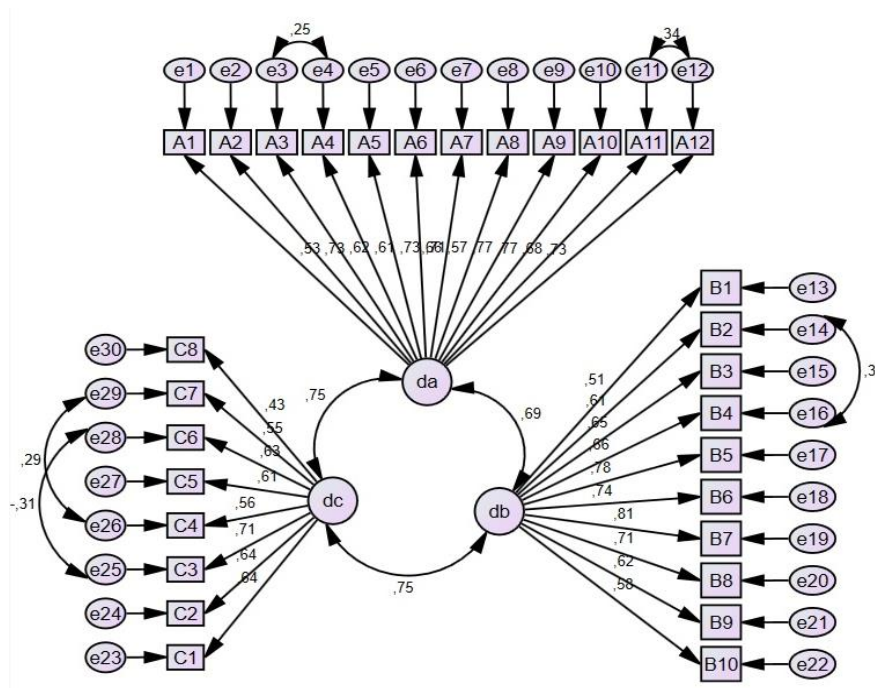
Based on the result of the factor analysis, CFA was conducted to examine the construct validity of the scale. Various goodness of fit indexes was used to evaluate whether the model was compatible with CFA. CMIN/DF (Chi-Square/Df), RMSEA (Root Mean Square Error of Approximation), GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), NFI (Normed Fit Index), CFI (Comparative Fit Index), and IFI (Incremental Fit Index) indexes were analyzed. The fit indexes obtained are given in Table 4.

Table 4. Findings Regarding CFA

Fit Indexes	Acceptable Fit Criterion	Finding of Research	Result	References
χ^2/sd	< 3	1.895	Acceptable	Sümer, 2000
RMSEA	≤ 0.08	0.05	Acceptable	Jöreskog & Sörbom, 1993; Tabachnick & Fidell, 2001
GFI	≥ 0.90	0.84	Not Acceptable	Hooper, Caughlan & Mullen, 2008
AGFI	$0.80 < AGFI < 1$	0.81	Acceptable	Andersen & Gerbing, 1984
NFI	$0.90 < NFI < 1.00$	0.82	Acceptable	Thompson, 2008
RMR	≤ 0.05	0.02	Acceptable	Brown, 2012
CFI	≤ 0.90	0.90	Acceptable	Sümer, 2000
IFI	$0.95 \leq IFI \leq 0.97$	0.90	Not Acceptable	Schermelleh-Engel, Moosbrugger & Müller, 2003

When the CFA model is examined, the chi-square, chi-square/degree of freedom and fit indexes values of the model with CFA were calculated as $\chi^2 = 752.405$, Df = 397, P = .00, $\chi^2 / Df = 1.895$, RMSEA = .058, GFI = .84, AGFI = .81, NFI = .82, RMR = .02, CFI = .90 and IFI = .90. A value of χ^2/Df below 3 indicates a perfect fit (Sümer, 2000). As a result, the χ^2/Df fit index shows a perfect fit. The value of RMSEA was found to be .05. According to Tabachnick and Fidell (2001), a value below 0.08 means a good fit. Accordingly, the RMSEA fit index corresponds to a good fit. The GFI value was found to be .84. According to Hooper, Caughlan, and Mullen (2008), a GFI value high than .90 indicates a good fit. According to Andersen and Gerbing (1984), a model with an AGFI value between .80 and 1 has an acceptable fit. The value

of AGFI was found to be .81 and indicates an acceptable fit. The NFI value was found to be .82. Thompson (2008) stated that a model with an NFI value between .90 and 1 has an acceptable fit. This shows the NFI does not indicate an acceptable fit. The value of RMR was .02. According to Brown (2006), the RMR value below .05 corresponds to perfect fit. Results show that RMR has a perfect fit. When the CFI fit index is examined, it is seen that the CFI is .90. If the CFI fit index value is over .90, it means that it has a good fit (Sümer, 2000). This shows the CFI has a good fit. Finally, when the IFI fit index is examined, the value of the IFI was .90. Schermelleh-Engel, Moosbrugger & Müller (2003) stated that the acceptable value range for IFI is between .95 and .97. Accordingly, the IFI value is not considered acceptable. The path diagram of DFA is given in Figure 1.



Source: own research

Figure 1. Confirmatory factor analysis correlation diagram (da: academic skills problems, db: peer relationships problems, dc: developmental-behavioral problems)

By looking at these values, it was seen that the items in the scale that were compatible with the results revealed by EFA represented the structure. When the correlation values of the items are examined, it is seen that the correlation between the factor and the factor is between 0.43 and 0.81. According to the results obtained from CFA, correlation values between the three factors were determined as 0.75, 0.75, and 0.69. These values show that the three factors are interrelated. At the end of the study, a three-factor scale consisting of 30 items was obtained. Since the 12 items in the first factor (6, 8, 16, 18, 23, 26, 33, 43, 44, 45, 50, 55) consist of expressions about children's academic skills, this factor was named "academic skills problems". The 10 items in the second factor (9, 13, 17, 20, 25, 28, 32, 38, 39, 54) were named "peer relationships problems" because they consist of relationship expressions towards peers. The eight items (24, 30, 31, 36, 37, 40, 49, 51) in the third factor was named "developmental-behavioral problems" because they consist of relational expressions about children's developmental behavior.

FINDINGS REGARDING ITEM ANALYSIS AND RELIABILITY

Cronbach's alpha coefficient for the reliability of the scale, item-total correlations, and correlations between factors were calculated. Item-total correlations were examined for each scale item. The results are presented in Table 5.

Table 5. Item-Total Correlations and Cronbach Alpha Reliability Coefficients

Factors	X	SS	Item-Total	Cronbach's Alpha If
1 st Factor ($\alpha = .91$)				
I6	2.14	.59	.527	.912
I8	2.07	.48	.725	.904
I16	1.82	.56	.592	.909
I18	2.03	.50	.588	.909
I23	2.20	.63	.702	.904
I26	2.15	.54	.687	.905
I33	2.33	.60	.681	.905
I43	2.23	.69	.547	.912
I44	2.25	.59	.740	.902
I45	2.12	.60	.741	.902
I50	2.09	.72	.657	.907
I55	2.15	.63	.704	.904
2 nd Factor ($\alpha = .89$)				
I9	1.38	.50	.502	.891
I13	1.72	.60	.616	.884
I17	2.03	.59	.600	.885
I20	1.81	.60	.668	.880
I25	1.92	.59	.716	.877
I28	1.56	.57	.690	.879
I32	1.82	.59	.773	.873
I38	1.76	.59	.676	.880
I39	1.81	.59	.604	.885
I54	1.90	.66	.512	.892
3 rd Factor ($\alpha = .83$)				
I24	1.50	.63	.611	.805
I30	1.84	.74	.582	.809
I31	1.79	.69	.580	.809
I36	1.52	.64	.591	.808
I37	1.68	.63	.533	.815
I40	1.89	.69	.513	.819
I49	1.55	.66	.553	.813
I51	1.28	.51	.513	.819

As a result of the analysis, the Cronbach alpha coefficients are .91 for the first factor, "academic skills problems", .89 for the second factor, "peer relationships problems", and .83 for "developmental behavior problems", which is the third factor. The Cronbach alpha coefficient for the whole scale was determined as .94. According to Karagöz (2016), if the reliability coefficient is in the range of .80-1.00, the instrument is extremely reliable. Based on the findings, the whole scale and the factors are highly reliable. The correlation coefficients between the factors are shown in Table 6.

Table 6. Correlation Coefficients Between Factors

Factors	1 st Factor	2 nd Factor	3 rd Factor	Total
1 st Factor	1	.661	.654	.905
2 nd Factor	.661	1	.637	.872
3 rd Factor	.654	.637	1	.846
Total	.905	.872	.846	1

The correlation coefficient values seen in Table 6 show that there is a medium and high-level relationship between the factors. It can be clearly said that the three factors are not independent of each other.

DISCUSSION AND CONCLUSION

In the study, it was aimed to develop a scale to determine the problem behaviors of preschool children. For this purpose, a 56-item scale form was created and applied to 305 preschool teachers. Based on the data, validity and reliability analysis were obtained. To be suitable for factor analysis, the KMO value of the data obtained from the teachers in the study group should be higher than .60 and the Barlett value should be significant (Tabachnick & Fidell, 2001). In this context, it was concluded that the data obtained were suitable for EFA. As a result of the analysis, it was seen that the 30-item scale was gathered under three factors and the factors explained 21.11%, 17.12%, and 13.88% of the total variance, respectively, and 52.13% of the total variance. Reliability coefficients were calculated as alpha 0.91 for the first factor, 0.89 for the second factor, and 0.83 for the third factor. The alpha value for the whole scale was found to be 0.94. When the results obtained from this study were evaluated as a whole, the evidence regarding the validity and reliability of the "The Scale of Determining the Problem Behaviors of Children in Preschool Period" was found to be quite strong.

In the literature, there are few scales developed to measure problem behaviors of preschool children. When the factor structure of the scale developed in this study was compared with the scales in the literature, it has been seen that there were some similarities and differences. For example, in Goodman (1997)'s study, sub-dimensions were "peer relationship problems", "emotional symptoms", "conduct problems", "hyperactivity/inattention", and "prosocial behaviour". Similarly, Kaner and Uçak-Çiçekçi (2000)'s study, sub-dimensions were "depression-attention deficit", "socialized aggression behavior disorder", and "hyperactivity-impulsivity". Sucuoğlu (2003) had named the dimensions as "hyperactivity", "lethargy", "stereotypic behaviour", "self-injury", and "other behaviors". Additionally, in Özbey and Alisinanoğlu (2009)'s study, factors' names were "externalizing problems", "antisocial", "internalizing problems", and "self-centered". In this study, factors, considering the relevant literature, were named "academic skills problems", "peer relationship problems", and "developmental-behavioral problems". Especially for the first factor, the academic problems, it differs from other scales in terms of naming factors obtained as a result of the analysis, but it shows that second and third factor are coherent with the relevant literature.

It has been observed that studies conducted in our country on problem behaviors of preschool children are generally adaptation studies. This scale, developed for this purpose, is expected to contribute to filling the gap in the literature. After this study, the scale will be named "The Scale of Determining the Problem Behaviors of Children in Preschool Period" and will be applied. As a result of the validity and reliability study conducted by the researchers, it can be used in determining the problem behaviors of preschool children.

* We undertake that all the rules in the Higher Education Institutions Scientific Research and Publication Ethics Directive are complied with and that none of the "Actions Against Scientific Research and Publication Ethics" in the second part of the directive are carried out.

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MICROTEACHING LESSON STUDY FOR PROSPECTIVE ENGLISH LANGUAGE TEACHERS: DESIGNING A RESEARCH LESSON

Abstract: In this study, Microteaching Lesson Study (hereafter MLS) was applied for a research lesson designed by the MLS group members including three third-year prospective English language teachers in line with the Content and Language Integrated Learning (hereafter CLIL) approach. This qualitative study aims to uncover the contribution of MLS to the improvement of the teaching within a single lesson geared toward young learners and the perspectives of MLS group members about major components of the MLS process. The participants of the study are three MLS group members, 15 peers and an instructor in the English Language Teaching (hereafter ELT) department of a state university in Turkey. The lesson collaboratively developed by the MLS group members was presented three times by a different member to a different group of five peers who pretended to be young learners. After each lesson, revision meetings were held to analyze the self-reflection of the presenter, the peer/instructor feedback about the lesson and the recorded lesson. The analysis of the revision meetings illustrated the instructional improvement cycle of MLS. Moreover, the analysis of the semi-structured interviews with the MLS group members revealed that they were generally satisfied with the major components of MLS, such as collaborative lesson planning and receiving feedback from peers although a few concerns were mentioned as well. It is suggested that MLS should be incorporated into ELT programs.

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Keywords: Microteaching Lesson Study, English Language Teaching

INTRODUCTION

With the widespread popularity of learning English as a Foreign Language (hereafter EFL), English language teacher education programs have been given special attention, and the professional development of EFL teachers has become a key to quality English language instruction (Richards, 2017). However, the design of some professional development programs for language teachers can be based on a one-size-fits-all and one-shot mentality causing a one-way knowledge transmission; instead, such programs should encourage reflective processes, experiential learning, construction of new knowledge and the joint efforts of communities of practice as a means of improvement over time (Atay, 2007; Burns & Richards, 2009; Daloğlu, 2004; Diaz-Maggioli, 2003; Uysal, 2012).

It is recommended that rather than being the passive receivers and implementers of expert-driven prescribed classroom routines, teachers should be reflective enough to take informed professional decisions in the classroom and engage in continuous improvement of their pedagogical skills; therefore, the current teacher education practices should provide teachers with sufficient opportunities to experiment teaching by practicing (Cochran-Smith & Lytle, 1999; Garet et al., 2001; Leu, 2004). The merits of inquiry showing potential to enable teachers to work on an area of their instruction, collect and analyze data and make necessary changes in their instructional processes were emphasized in the literature (Darling-Hammond & McLaughlin, 1995).

In the midst of the discussion above related to teacher education, Lesson Study (hereafter LS) is considered by many researchers to be an effective, sustainable and an inquiry-based teacher education approach which is alternative to other approaches with such shortcomings as being short-term and administered externally (Cerbin & Kopp, 2006; Dudley, 2011; Hunter & Back, 2011; Murata & Takahashi, 2002; Rock & Wilson, 2005). In LS, a group of teachers plan, implement, observe and revise their collaborative research lesson (Cerbin & Kopp, 2006). Originally known as *Jugyou kenkyuu*, LS originated in Japan as a teacher education approach (Watanabe, 2002) based on the application of communities of practice through which teachers cooperate to reflect upon and improve their teaching practices (Lewis, Perry, & Murata, 2006; Rock & Wilson, 2005). LS has been the subject of many studies in different disciplines as a means of contributing to students' achievement test scores, teachers' professional development and confidence, the cooperative relationships among teachers and the improvement of instruction (Lewis, Perry, & Murata, 2006; Rock & Wilson, 2005; Stigler & Hiebert, 1999; Takahashi, 2014).

Although LS is mainly used among in-service teachers, its use for pre-service teacher education is a recent phenomenon (Yalçın Arslan, 2018). Similar to in-service teachers, pre-service teachers are also in need of the development of skills leading them to reflect on their own and others' practices (Peters, 2012). Therefore, based on the LS approach, MLS emerged as an approach for pre-service teachers by combining elements of LS and microteaching (Fernandez, 2005).

Unlike LS in which the lessons are taught to usual classes for usual class length, the lessons in MLS are presented to a smaller group of students or a group of peers for shorter length of class hour (Fernandez, 2010; Suryani et al., 2018). In studies outside the field of pre-service EFL teacher education, it was found that MLS paved the way for reform-oriented teaching, active learning through discussions, planning, support from a knowledgeable advisor, collaboration with peers, and opportunity to try, analyze and revise (Fernandez, 2005; Fernandez, 2010). Therefore, this study aims to apply MLS to a language-driven CLIL lesson collaboratively designed by three third-year prospective EFL teachers in the ELT department of a state university in Turkey. CLIL is known to be a general term used for the integration of foreign language learning and content by means of different models, such as content-driven and

language-driven (Banegas, 2013). In a language-driven CLIL context, learning the language is prioritized, and content from various disciplines is regarded as a tool (Ikeda, 2013).

LESSON STUDY IN ENGLISH LANGUAGE TEACHER EDUCATION

LS has recently been popular in EFL teacher education programs in Turkey and in different parts of world. For instance, it was revealed in studies carried out in Turkey that despite some drawbacks such as the timing and effort required by the LS process (Bayram & Canaran, 2019; Coşkun, 2017), LS is useful in terms of enabling EFL teachers to be more enthusiastic about carrying out research (Bayram & Canaran, 2019) and providing them with opportunities to observe and evaluate their teaching practices (Kıncal, Ozan, & İleritürk, 2019). It was also discovered that LS contributes to EFL teachers' positive changes related to their assessment and reflection skills in addition to creating a learning environment suitable for the growth of pedagogical content knowledge and a goal-oriented community of practice (Orhan, 2020; Uştuk, 2020).

Additionally, there have been some studies using LS in the language teaching and learning processes abroad. For example, LS was found to be beneficial in the following areas: enhancing students' literature writing ability (Susanto et al., 2020), aiding professional development (Lander, 2015), increasing teachers' pedagogical knowledge in technology and confidence in teaching with technology (Nami, Marandi, & Sotoudehnama, 2015), improving the teaching and learning process (Nashruddin & Nurrachman, 2016), switching from a teacher-centric view to an understanding of the teacher role as a facilitator (Tan-Chia, Fang, & Ang, 2013), fostering self-reflection, professional knowledge and pedagogical skills (Lee, 2008) as well as gaining a pedagogical point of view to be able to approach the lesson from students' perspectives (Goh & Fang, 2017).

The LS process has also been recently incorporated into pre-service foreign language teacher education programs abroad and in Turkey. To illustrate a study carried out abroad, Ducrey Monnier and Gruson (2018) discovered that through the LS process, the way student teachers carried out the stages of an EFL lesson integrating a speaking pair-work activity improved, and it was concluded that LS can enhance their teaching skills and didactic knowledge. On the other hand, in the Turkish pre-service EFL teacher education context, it was demonstrated that LS has the potential to increase student teachers' agency because it deepens their understanding of teaching (Yalçın Arslan, 2018). In another study in Turkey, Altınoy (2020) found that LS gives rise to positive attitudes towards professional development opportunities (e.g., willingness to work in a collaborative environment) and the teaching and learning process in addition to increasing awareness about the complex nature of classroom and focusing more on student learning.

Although LS has been implemented in both in-service and pre-service EFL teacher education contexts abroad and in Turkey, MLS requiring a reduced lesson length and a class size including either students or peers (Fernandez, 2005; Fernandez, 2010) has mostly been the subject of pre-service teacher education in such fields as mathematics and elementary education in studies in Turkey (Akbaba Dağ & Doğan Temur, 2018; Aldemir, 2017). Furthermore, the number of research studies using MLS in EFL contexts is limited to a few international studies concluding that MLS can promote pre-service EFL teachers' life-long learning to teach the English language, teaching practices and reflective skills (Nguyen, 2020; Suryani, 2016; Suryani et al., 2017; Suryani et al., 2018).

To the best of the researcher's knowledge, no studies involving student teachers in an MLS procedure have been conducted in the EFL context of Turkey. Considering the benefits of LS and MLS components for pre-service EFL teacher education as mentioned in the aforementioned literature, there is a need to implement MLS in Turkey. Moreover, even though materials development and lesson planning play an important role in forming prospective CLIL

teachers' practices (Banegas & del Pozo Beamud, 2020), there have been no studies in Turkey dealing with the design of a CLIL research lesson by EFL student teachers engaging in MLS. Thus, this study has the main objective to reveal the improvement of instruction within a CLIL lesson by means of the MLS procedure and to ascertain the perspectives of three MLS group members about the major components of MLS. In line with these aims, the following research questions were addressed:

1. How is instruction in a CLIL research lesson improved throughout the MLS procedure?
2. What are MLS group members' perspectives about the components of MLS?

METHODS

Qualitative research studies in the field of language teaching and learning include data from a number of different sources so as to obtain the perspectives of participants (Nassaji, 2015). Therefore, this qualitative study focuses on how instruction in a CLIL lesson improved over time throughout the MLS process and what the MLS group members think about major MLS components.

The data related to the improvement of instruction were collected via pre-lesson meetings held to collaboratively prepare a lesson, and revision meetings arranged after each lesson to discuss the self-reflections and peer/advisor feedback about the lesson as well as to critique the recorded lesson (Fernandez, 2010). On the other hand, MLS group members' perspectives about major components of MLS were obtained through individual semi-structured interviews, and descriptive analysis requiring the presentation of direct quotations reflecting the opinions of the participants relevant to the interview questions was used in the study (Yıldırım & Şimşek, 2003).

PARTICIPANTS

The MLS group members in the study were three volunteer third-year prospective teachers at the ELT department of a state university in Turkey. Two of them were female while the other was male. Also, 15 peers, 13 of whom were female and two were male, volunteered to pretend to be students and gave feedback for the improvement of instruction. Also, the instructor took part in the MLS process as a knowledgeable advisor (Fernandez, 2010).

CONTEXT OF THE STUDY

ELT programs in Turkey are four-year programs aiming to equip prospective teachers with skills to teach the English language to students in different grade levels. As pointed out by Öztürk and Aydın (2019), first- and second-year students in these programs are mostly offered skill-based courses (e.g., Writing Skills 1-2) and theoretical courses (e.g., Linguistics 1-2) while third- and fourth-year students attend practice-based courses (e.g., Practicum).

RESEARCH PROCEDURE

As MLS group members in the study were unfamiliar with CLIL, a language-driven CLIL lesson topic (i.e., Planets) was chosen purposefully by the instructor in accordance with the 7th grade English language syllabus of the Ministry of National Education (MoNE, 2018) in Turkey to increase their awareness of teaching CLIL.

The MLS cycles and the research procedure in this study are based on the framework suggested by Fernandez (2010). Firstly, a thirty-minute microteaching lesson plan was collaboratively prepared by the MLS group members in pre-lesson meetings. The lesson was first presented by one of the volunteering MLS group members to five peers who pretended to be 7th grade young learners. Necessary revisions were made in the revision meetings considering the peer/instructor feedback, self-reflection of the presenter and the critique of the recorded lesson.

The revision process was repeated after the second and third lesson presented to other groups of five peers by other MLS group members.

DATA COLLECTION

In this study, a number of data collection instruments were used as this is believed to contribute to the validity of the research (Creswell & Miller, 2000). Therefore, pre-lesson meetings and revision meetings were recorded to analyze the instructional improvement. The written feedback provided by the instructor and peers and the self-reflections of the presenters centered on the weaknesses of teaching the lesson (Aldemir, 2017; Dudley, 2011). At the end of the last revision meeting, participants were interviewed regarding whether the instruction was perceived to be improved throughout the MLS process. The whole MLS procedure in this study was applied via a digital platform.

Also, a few days after the final revision meeting, the MLS group members were invited to individual semi-structured interviews in Turkish at their convenience. The interview questions prepared in line with the relevant literature (Akbaba Dağ & Doğan Temur, 2018; Fernandez, 2005; Fernandez, 2010; Suryani, 2016) aim to reveal the perspectives of the MLS group members about the major components of MLS (e.g., collaborative lesson planning, observing other MLS group members' lessons, critiquing the recorded lessons, receiving peer feedback, the involvement of the instructor in the MLS process, writing self-reflections, revision meetings). Additionally, interview questions were included to reveal MLS group members' willingness to participate in another MLS, their perceived advantages and disadvantages of MLS in general, their opinions about the integration of MLS into pre-service teacher education (Akbaba Dağ & Doğan Temur, 2018) and the implementation of MLS via a digital platform.

DATA ANALYSIS

The pre-lesson meetings illustrating how the lesson was collaboratively prepared by the MLS group members were summarized, and the issues about the lesson discussed in revision meetings were presented in two categories as weaknesses and revisions made for the next lesson. The weaknesses and revisions agreed by all the MLS group members in the revision meetings were included in the analysis. On the other hand, their perspectives about MLS obtained through the semi-structured interviews were supported by their relevant quotations, and by providing the MLS group members with the findings, respondent validation which is also known as member checking was used as a means of checking whether the researcher's interpretation was accurately presented in accordance with their opinions (Creswell & Miller, 2000).

PRE-LESSON MEETINGS

Before the pre-lesson meetings, the MLS group members had been given necessary information and training by the instructor about key concepts such as LS, MLS and CLIL. Five pre-lesson meetings were arranged at regular intervals to encourage MLS group members to cooperate with each other and with the instructor towards the lesson on the other days. In the first pre-lesson meeting, they were provided with the functions and useful language (e.g., making simple comparisons, talking about past events, vocabulary items such as 'evidence' and 'explore') and language skills (e.g., speaking, reading, writing, listening) in the unit *Planet* in the 7th grade syllabus (MoNE, 2018). The type of activities and visuals, possible sources to use in the process of developing the lesson, ways of integrating skills into the lesson, and possible lesson stages were the major issues of the first meeting. Until the next meeting, MLS group members were requested to brainstorm a list of activities to be discussed in the second meeting.

In the second meeting, the instructor introduced Mohan's (1986) knowledge framework to follow while designing the CLIL lesson for this study. The framework was explained using the guide published by Alberta Education (2007). The following knowledge framework thinking

skills in the guide were presented to the MLS group members: description (e.g., compare, contrast), sequence (e.g., relate, sequence), choice (e.g., form personal opinions, make decisions), classification (e.g., classify, define), principles (e.g., predict, explain) and evaluation (e.g., evaluate, judge). Each knowledge structure and the relevant thinking skills as well as linguistic structures were illustrated through a lesson in the guide about spiders to enable the MLS group members to relate their lesson ideas to Mohan's framework. The following thinking skills and the related linguistic structures given in parentheses were found by the MLS group members to be compatible with the activities they brainstormed: predict (modals used for prediction, phrases such as 'I think'), sequence (clauses of time, simple past tense) and compare (adverbs of comparison).

It was also agreed unanimously in the meeting that the lesson would start with a typical warm-up question (What comes to your mind when you hear the word *Planet*?) and continue with the following three major stages in line with Mohan's (1986) knowledge framework:

1. *Predict*: Students look at two photos of an old and a modern planetarium and try to predict what they are and what they are/were used for. They are also encouraged to make comparisons between the two photos.
2. *Sequence*: Students listen to a text including clauses of time and simple past tense structure about the history of astronomical research and the scientists (e.g., Galileo) who contributed to its development. While listening, they fill in the blanks with the target vocabulary items (e.g., observe, evidence, orbit). The text is followed by a timeline illustrating the photos of scientists and the dates of their major works mentioned in the text. Students look at the timeline and try to remember the names of the scientists. Then, they read the text carefully to answer open-ended questions. Two vocabulary parts follow the open-ended questions. In the first part, students match some of the target words mentioned in the text with the given pictures while some of the other words are matched with their definitions in the second part.
3. *Compare*: Students look at the image of the solar system, read the information about each planet (e.g., temperature) and write ten sentences using the comparative forms of the given adjectives.

In the third meeting, the activities were put into a logical order, and the visuals, skill focus as well as the number of questions/items were determined for each activity. On the other hand, in the fourth meeting, the language in the lesson material was simplified for 7th graders, the visuals were evaluated in terms of clarity and any linguistic mistakes were corrected. Finally, in the fifth pre-lesson meeting, the thirty-minute lesson was rehearsed by the first MLS group member volunteering to present the first lesson.

FINDINGS

REVISION MEETINGS

The written peer/instructor feedback, presenter's self-reflection and the recorded lesson were discussed in the revision meeting held immediately after the first lesson. In line with the first research question (How is instruction in a CLIL research lesson improved throughout the MLS procedure?), Table 1 illustrates the instructional weaknesses agreed upon by all the MLS group members and the relevant revisions made for the second lesson:

Table 1: First Revision Meeting

Weaknesses	Revisions made for the second lesson
Neglecting to openly state the topic of the lesson	Starting the lesson with the following explanation: 'Today, we will talk about planets'
Skipping the timeline following the listening passage because the names of the scientists were difficult to remember	Placing the timeline right before the listening text to use it to prepare peers for the reading text with the question 'Do you know any of these scientists?'
Not enumerating the blanks in the text	Enumerating the blanks in the text
Placing the text and the relevant open-ended questions on different pages	Presenting the text and the related questions next to each other on the page
Including small visuals and fonts	Enlarging the visuals and the fonts and replacing some visuals with bigger ones
Allocating too much time by asking each peer to write ten comparative sentences about the information given in the solar system image	Allocating shorter time for this activity by asking each peer to write only two comparative sentences

As can be realized from Table 1, after the first lesson, necessary revisions were made related to giving information about the topic of the lesson, changing the place and function of the timeline, the enumeration of the blanks in the text, presenting the text and its questions on the same page, enlarging the visuals and fonts and managing the time more effectively. Following the second revised lesson, the same revision procedure was applied. The weaknesses of the second lesson and the revisions made for the third lesson are presented in Table 2:

Table 2: Second Revision Meeting

Weaknesses	Revisions made for the third lesson
Not receiving answers about the question 'Do you know any of these scientists?' related to the timeline	Placing the timeline after the open-ended questions about the text including the names of the scientists
Not informing the peers about how many times they would listen to the text	Indicating that the text would only be listened to once
Neglecting to write letters and numbers to help match the pictures with the words	Writing numbers and letters for each item in this part
Having equal number of items in the matching vocabulary activities (i.e., match words with pictures & match words with definitions) because the last item can easily be found	Adding one extra picture/definition for the vocabulary matching parts and indicating that there is one extra item
Including unfamiliar words (e.g., diameter) in the information about the solar system image	Encouraging peers to use dictionaries to look up any new words they encounter

As can be understood in Table 2, revisions considered for the third lesson by the MLS group members were as follows: placing the timeline after the open-ended questions, informing peers about how many times they would listen to the text, adding numbers and letters to the matching items, placing an extra item for the matching parts to make them more challenging and encouraging students to use their dictionaries in case of unfamiliar words.

Following the third revised lesson presentation, the revision process was repeated, and the MLS group members agreed that most of the weaknesses were about the individual presenter rather than the collaboratively designed lesson. For example, the overuse of the same verbal praise (e.g., good, perfect) and ignoring some mistakes deliberately made by the peers were considered as comments pertaining to the personal preferences of the presenter. However, only the following weakness related to the lesson itself was determined by the MLS group members as an issue to be revised in the third revision meeting: the small font size of the information in the solar system image about which peers made comparative sentences.

In addition to the reduced number of lesson-related feedback about the third lesson, MLS group members (e.g., Student Teacher 1: *ST 1*) also made the following comments in the interviews at the end of the third revision meeting about the decreased number of negative feedback and the improved instruction:

ST 1: "If I were the presenter today, the criticism would be centered on my personal teaching style, not on the lesson plan. Since the first lesson, the criticism has decreased and currently we have nearly no criticisms against the lesson."

ST 2: "First, we showed the timeline to our peers before they read the text, and then we showed it after they read the text, but today we showed it after all the reading questions were finished and we were able to use it effectively."

ST 3: "I think the process contributed a lot to the improvement of the lesson. In our first lesson, there were plenty of inadequacies. For example, while the peers could see the reading text, they could not see the relevant questions. For the second lesson, we revised them. Also, we added an extra picture and definition because students could answer the last matching item without any thinking."

Despite feedback about the instructional weaknesses, some strengths were also mentioned by the peers, instructor or the presenters themselves. The following positive issues about the lesson were discussed in the revision meetings: using visuals, recycling the target words with various activities, encouraging active participation, integrating skills and giving example sentences for some activities.

PERSPECTIVES ABOUT MLS COMPONENTS

In the semi-structured interviews, the MLS group members were asked to comment on major components of the MLS process as applied in this study to answer the second research question (What are MLS group members' perspectives about the components of MLS?), and their relevant quotations were presented for each component.

One of the important components of MLS focused on during the interviews was collaborative lesson planning about which the following positive issues were mentioned by the participants: noticing problems, respecting each other during the MLS process and the reduced workload. For instance, *ST 1* underlined that they can notice problems in the lesson thanks to collaborative lesson planning, and *ST 2* highlighted that the process was based on respect. Moreover, *ST 3* held the idea that MLS paved the way for reducing the workload to design the lesson. Conversely, not being able to prepare materials in one's own way was stated as a concern by *ST 1*:

ST 1: "On one hand, as we have different perspectives, it is easier to notice mistakes. On the other hand, one cannot exactly do what he/she wants to do as there are different views."

ST 2: "All of us actually thought of different activities, had different ideas and developed the lesson by respecting each other's views."

ST 3: "Planning the lesson together reduced the workload."

Another component of MLS was observing the other group members while teaching the lesson. Seeing the lesson from different perspectives and correcting the mistakes after the observations were mentioned as advantages by the participants. *ST 1* pointed out that they had the chance to see the lesson from different perspectives by means of observations, *ST 2* indicated that observations were useful in terms of noticing and correcting mistakes, and *ST 3* gave the example of the 'timeline' used in the lesson:

ST 1: "Observing our lesson gave us the opportunity to see what we have developed and to experience it. While preparing the lesson, we had the role of a teacher, and while observing it, we took up the role of a student as well as a teacher."

ST 2: "Lesson observation is very useful because we can see the mistakes and correct these mistakes in our lesson plan."

ST 3: "When you observe, you can say that it should have been like this. For example, we became aware that the timeline was not effective because students were not able to find the answer and made a change about its place in the lesson."

When asked about the recording of lessons for discussion in the revision meetings, the participants touched upon the benefits of this component. For instance, while watching the recording, the lesson can be approached more critically (ST 1) and it presented an idea about what not to do in future teaching practices (ST 2). Likewise, ST 3 mentioned its usefulness in terms of noticing lesson-related problems:

ST 1: "Watching the lesson can help us approach the lesson more critically from an external perspective."

ST 2: "I was able to notice my own mistakes. In my future teaching, I would never make them again."

ST 3: "It is useful to watch the lesson because we sometimes cannot notice the problems during the lesson."

Receiving peer feedback is another component of MLS responded to positively. From the participants' points of view, peer feedback contributed to their personal teaching styles and preferences as well as to the improvement of the lesson:

ST 1: "Peer evaluation of the lesson has benefits in terms of the improvement of the personal teaching preferences and the lesson."

ST 2: "When we look at the lesson from the teachers' perspective, we may not be able to see some issues in the lesson. Peer feedback improved our lesson and personal teaching styles."

ST 3: "There could have been lot of things we could have missed if it had not been their comments."

Moreover, the involvement of the instructor in the MLS process was favored by ST 1 and ST 2. ST 1 stated that the instructor provided them with a professional perspective, and ST 2 argued that the instructor respected them about their decisions in the MLS process. Conversely, ST 3 maintained that the existence of the instructor in the revision meetings caused some tension:

ST 1: "The presence of the instructor provided us with a professional viewpoint which is necessary for the improvement of teaching."

ST 2: "The instructor always respected our decisions and supported us. In our future teaching career, we can make decisions depending on the feedback we received from the instructor."

ST 3: "While teaching, I never thought about the existence of the instructor, but in the revision meetings, I felt a little tense."

When it comes to revision meetings, all the participants expressed their positive remarks because necessary changes were made in the lesson in those meetings. ST 1 made an additional point by explaining the importance of holding revision meetings in the same day a short time after the lesson:

ST 1: "Revision meetings were useful because we came together almost immediately after the lessons. I think it would not have been as effective if these meetings had been arranged one day later."

ST 2: "We saw our peers' comments in these meetings and we revised our lessons depending on these comments."

ST 3: "We structured our lesson plans based on the feedback we discussed in the revision meetings."

Also, after each lesson, the MLS group member who presented the lesson wrote a self-reflection. As far as this component is concerned, ST 1 stated that mistakes can be realized through self-reflections, ST 2 thought of it as 'facing yourself', and ST 3 exemplified this component:

ST 1: "Through self-reflection, one can realize the mistakes and the changes he/she wants to make."

ST 2: "This is actually facing yourself. For example, I planned to give examples for comparative sentences but I forgot it. Writing reflections make you aware of your mistakes."

ST 3: "While writing my self-reflection, I realized that I was a little anxious in some parts of the lesson and were not able to correct some of the mistakes deliberately made by the peers."

As for the implementation of the MLS process on a digital platform, ST 1 explained that it was practical in terms of issues, such as coming together more easily and recording the lesson clearly. Yet, ST 2 underlined the benefits of face-to-face education such as establishing eye contact. Similar to ST 2, ST 3 wished for the implementation of MLS in a classroom setting:

ST 1: "The digital platform made it easier to observe, record the lessons and have regular meetings. If we had organized face-to-face meetings, we would not have come together for meetings that easily and would not have such clear recordings."

ST 2: "In lessons conducted on digital platforms, you cannot establish eye contact with the students or carry out various activities."

ST 3: "If it had been in a real classroom environment, it would have been better."

The participants were also asked to make comments on the pros and cons of the MLS process in general. As advantages, ST1 indicated that MLS made them feel like a teacher. ST 2 mentioned issues, such as teaching different skills in a short time and creating an interactive student-centered environment. In a similar vein, ST 3 focused on realizing mistakes, learning how to design a lesson in a group and experiencing teaching:

ST 1: "Although the students we taught were peers, we were able to feel like a teacher."

ST 2: "In a short time, we could teach different skills to the students, and an interactive student-centered environment could be created."

ST 3: "Seeing each other's mistakes, learning how to prepare a lesson together and experiencing teaching are the advantages."

On the other hand, as disadvantages, ST 1 commented that the peers who attended one of the microteaching sessions did not join the other revised lessons. ST 2 drew attention to the presentation of the lesson to the peers instead of real students while ST 3 did not mention any disadvantages:

ST 1: "A group of five different peers attended each of the three lessons and gave feedback but they did not know what kind of improvement we made in the revised lessons. If all the peers who attended an earlier lesson had joined the last lesson, they could have also realized the benefit of the MLS process."

ST 2: "Peers pretended to be children. But it could have been better if the lesson had been taught to real 7th grade students. While teaching, I wondered whether we could have the same responses in different activities from real students. Also, we would not have been able to finish the lesson in thirty minutes with real 7th graders."

Furthermore, pertaining to whether the participants would like to attend another MLS, ST 1 expressed willingness as it gave the opportunity to gain teaching experience. Similarly, ST 2 agreed on taking part in another MLS because of feeling more motivated after the MLS experience to attend university lessons offered online during the pandemic. Still, some suggestions were made by ST 1 and ST 3. ST 1 recommended that a further step could be to present the lesson to real 7th graders and to their English teacher to receive feedback from him/her. Also, ST 3 stated that they would be busy with university courses and the preparation for KPSS (Public Personnel Selection Examination) in the last year, so MLS should be carried out in the third year as a preparation for final year courses such as the Practicum:

ST 1: "I would attend another MLS study because it helped us experience lots of things such as teaching to a group of peers in a real-like environment. But I think we can teach the revised lesson to a group of real 7th graders in a classroom with the participation of their English teacher to receive feedback from him/her as the person who knows the classroom environment best."

ST 2: "I normally do not very actively participate in my university courses so much. Especially in online lessons, I rarely turn on my microphone and speak out. Thanks to this process, I have

overcome this problem. This was actually my first live lesson as a prospective teacher and I felt motivated to turn on my microphone and speak out. So, I would attend such a project again."

ST 3: "If there is another MLS in the final year, I may not be able to attend it because we will be very busy in the fourth year studying for KPSS and the university courses. It was good to participate in an MLS in the third year because this is a preparation for last year courses such as the Practicum."

Finally, all the participants supported the idea of integrating MLS into the pre-service EFL teacher education programs. *ST 1* indicated that through MLS, pre-service teachers can learn to design shorter lessons, gain teaching experience, understand their weaknesses and receive feedback about the lesson. Furthermore, *ST 2* highlighted the benefit of integrating skills into a short lesson. Finally, MLS was regarded by *ST 3* as an approach preparing prospective teachers to the last year's Practicum:

ST 1: "It should definitely be integrated. Teacher candidates can learn how to prepare a short lesson plan, have teaching experience, see their weaknesses, and receive feedback about issues they cannot realize."

ST 2: "It can be integrated. I have realized that even in a thirty-minute lesson, all the skills can be integrated. I think, in my future teaching life, I can apply MLS."

ST 3: "I think we should integrate it. This was my first teaching, and I was very anxious about next year because we will have the Practicum. But now I am more aware of how I can teach and what kind of things can emerge in a lesson. MLS is a good idea to prepare us for the final year Practicum course."

DISCUSSION

The aim of this study was to apply MLS into teaching a CLIL lesson collaboratively prepared by three MLS group members. At the end of every microteaching session presented by a different MLS group member to a different group of five peers, revisions were made in the lesson in line with self-reflections of the presenters in addition to peer and instructor feedback (Fernandez, 2005; Fernandez, 2010).

In the first and second revision meetings, the MLS group members revised a number of issues, such as the enumeration of the blanks in the text and adding numbers and letters to the matching items. However, in the final revision meeting, only one negative feedback was considered by the MLS group members as an issue to be revised. Not only the reduced number of revision points but also the MLS group members' perceived satisfaction with their instruction in the third revised lesson revealed the potential of MLS for instructional improvement. This finding corroborates with the relevant literature concluding that MLS can enable student teachers to recognize their instructional problems and overcome these problems properly (Suryani, 2016; Suryani et al., 2017).

It is also argued that LS leads to the improvement of the instruction by means of refining the lessons (Lewis & Perry, 2006; Lewis, Perry, & Murata, 2006). The improvement cycle embedded in LS has been well documented in the literature (Cerbin & Kopp, 2006; Gutierrez, 2015; Hurd & Licciardo-Musso, 2005; Lewis, 2002). Similarly, it is maintained that MLS including major components, such as the cyclical process of lesson planning, presenting, analyzing and revising the lesson fosters EFL student teachers' reflection skills, life-long learning to teach EFL and their instructional practices (Nguyen, 2020; Suryani, 2016; Suryani et al., 2017; Suryani et al., 2018).

In this study, the following MLS components were generally perceived positively by the MLS group members: planning the lesson collaboratively, observing other MLS group members' lessons, the involvement of the instructor in the MLS process, writing self-reflections, analyzing the recorded lessons and revision meetings. To illustrate a similar finding in the

literature in terms of collaborative lesson planning, the usefulness of preparing a joint lesson plan in MLS was agreed upon by the majority of student teachers as a means of broadening their knowledge of teaching the lesson (Suryani, 2016). In another study, the observation component of MLS was found to be helpful for student teachers to become more reflective in their future teaching career (Suryani et al., 2017). On the other hand, as far as the engagement of the instructor in the LS process is concerned, Cajkler and Wood (2016) conclude that LS involved by a mentor was regarded by student teachers as an efficient means of enabling them to improve their knowledge, teaching skills, and teaching confidence.

When it comes to writing self-reflections, Lewis and Tsuchida (1998) assert that teachers should learn to criticize themselves and identify their weaknesses through self-reflections to improve their pedagogical competencies. On the other hand, related to recording the lesson to analyze it in the revision meetings, Mitchell and Reid (2016) point out that the recordings facilitate reflections on different dimensions of teaching, which leads to positive influence on student teachers' professional learning. About the revision process embedded in the MLS process, it was discovered that thanks to the improvement cycles and the revisions in line with feedback, student teachers build up their understanding of teaching concepts and reform-oriented teaching (Fernandez, 2005; Fernandez, 2010).

Additionally, MLS was regarded by the MLS group members as an approach that should be integrated into pre-service EFL teacher education programs. They believed that through the MLS cycles, they were able to notice the problems in their lesson and gain teaching experience in their third year. As also highlighted in the literature, increasing pedagogical skills, understanding of teaching and the awareness about the complex nature of classroom are the benefits of LS and MLS processes (Altınsoy, 2020; Lee, 2008; Suryani, 2016; Yalçın Arslan, 2018). However, some considerations were also expressed by the MLS group members. For instance, regarding the integration of MLS into pre-service EFL teacher education programs, one participant suggested that MLS should be applied in the third grade as in the current study because it can prepare them for last year courses such as the Practicum, and they will be busy with their university courses and the preparation for KPSS in the final grade. The idea of incorporating MLS into pre-service teacher education programs in the third year was also favored by one of the participants in another study due to similar reasons (Akbaba Dağ & Doğan Timur, 2018).

Moreover, the necessity of presenting the lesson to real students instead of peers came to the fore in some interviews. This finding concurs with the result of another study revealing that the most frequent negativity of microteaching is its artificial nature which can prevent student teachers from improving their real teaching skills (He & Yan, 2011). Furthermore, the involvement of the instructor in the MLS process was another concern, and one MLS group member mentioned the existence of the instructor in the revision meetings as a reason for tension. A similar finding is that recording the lesson and the presence of an instructor in the MLS process are causes of stress for pre-service teachers (Akbaba Dağ & Doğan Timur, 2018). Another issue highlighted by one of the MLS group members in this study was that the peers who attended one of the lessons were not able to see the other revised lessons; therefore, it was recommended that the peers who had attended an earlier lesson should have attended the last lesson in order to realize the benefits of MLS.

CONCLUSION

Prioritizing the characteristics of professional development such as planning, implementing, observing and revising the instruction (Cerbin & Kopp, 2006; Hunter & Back, 2011), procedures such as LS and MLS are deemed to be useful for prospective teachers in terms of realizing the dynamic nature of teaching and professional development (Altınsoy, 2020);

consequently, it is advisable to incorporate MLS into pre-service EFL teacher education programs.

However, considerations mentioned by the MLS group members in this study should be taken into account. For example, it is important for the peers who attend the first or second lesson to be invited to the last revised lesson in the MLS process. Moreover, teaching the lesson to real students should be considered for further MLS implementation. The application of MLS in the third year of pre-service teachers is also recommended as a means of preparing them for last year practice-based courses (e.g., Practicum).

The instruction in the thirty-minute CLIL lesson developed for this study was improved by the cyclical process of MLS, and the whole process embodied certain components which were generally responded to positively by the MLS group members. Still, there is a need for a larger body of literature regarding the use of MLS in the field of ELT (Suryani, 2016). For instance, future studies in different EFL contexts can involve a higher number of participants and a longer period of MLS implementation to yield further evidence about the usefulness of MLS in preparing pre-service EFL teachers for their future careers. Also, experimental research studies in which the control group is educated in line with traditional teacher education approaches while the experimental group actively involves in MLS should be carried out. Finally, further research studies can use both qualitative and quantitative data collection instruments to reveal the contribution of the MLS process to the improvement of foreign language instruction and teaching skills.

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HOW RESPONSIBLE ARE TURKISH SECONDARY SCHOOL STUDENTS FOR DISTANCE LEARNING DURING THE COVID-19 PANDEMIC: A SCALE DEVELOPMENT AND IMPLEMENTATION STUDY

Abstract: The purpose of the current study is to investigate the distance learning responsibility levels of secondary school students attending schools in the Aegean Region of Turkey by developing a scale of responsibility for distance learning. The study is a descriptive study employing the survey model. Two different study groups were used in the current study. In the first stage, a total of 477 secondary school students attending schools in the cities of İzmir, Denizli and Muğla in Turkey in the 2020-2021 school year were included in the study group to develop the Scale of Responsibility for Distance Learning. In the second stage of the study, the study group is comprised of 2043 secondary school students selected from among the secondary school students attending schools located in the cities of İzmir, Manisa, Aydın, Denizli, Muğla, Afyonkarahisar, Kütahya and Uşak in the Aegean Region of Turkey in the 2020-2021 school year. The data were collected face-to-face and online via Google Forms during COVID-19 pandemic by using the Scale of Responsibility for Distance Learning. According to the findings of the study, the scale is a valid and reliable scale with adequately satisfied psychometric features. Another finding of the current study is that the participating secondary school students' responsibility scores vary significantly depending on the city where they attend the school, grade level and gender.

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INTRODUCTION

Responsibility for learning is thought to have an important role in the success desired to be achieved in education-instruction. When the literature is reviewed, it is seen that the concept of responsibility for learning is related to concepts such as self-regulation, learner control, and academic self-efficacy. According to Yakar (2017), responsibility for learning is important as it is a key structure in students' school success and their academic-educational-instructional life. Responsibility for learning is thought to have an undeniable place in success. In many classrooms from different levels of education, it is necessary to determine students' levels of responsibility for learning and to create quality learning environments that will facilitate the achievement of educational goals. Learning is the holistic changes experienced by individuals (living beings) in knowledge, emotion, behaviour and all other dimensions. Learning is an inevitable, multidimensional and integrated structure. Responsibility for learning is what learners feel while acting for purposes such as completing the things they feel lacking, fulfilling the tasks, and determining the requirements to reach the goals. Responsibility for learning is an important indicator in determining the quality of learning.

According to Allan (2006), as dimensions of responsibility for learning, "orientation towards school and learning" helps learners to increase their knowledge about the learning environment at school; "active participation in learning activities" enables learners to participate actively in the learning-teaching process; "control of learning and autonomy" refers to the supervision of learners' state of learning by themselves and the instructor and automatization of learning; "initiative" refers to learners' taking the responsibility for their own learning and directing the outcome; "control of learning resources" refers to availability of resources needed to learn to learners and management of these resources; "control of the behaviours in the classroom and cooperation" refers to the management of learners' reactions and behaviours in the learning environment and what they do as a group of learners.

According to Bacon (1993), responsible learners always do their best to learn and show persistent attitudes towards the removal of barriers to learning. Responsible learners see act of responsibility for learning as a tool to ensure school success and to achieve long-term individual career goals. As an indicator of students' acts of responsibility for learning, attitudes and behaviours such as "wanting to learn as soon as possible", "trying to do their best as much as possible", "believing that school success is important for future success", and "preferring challenging learning tasks" can be listed (Allan, 2006). These behaviours can be expressed as behaviours that students can exhibit in activities that they can perform both inside and outside the school. It is necessary to understand the motivational and will-related processes implied by socio-cognitive theories in order to explain students' responsibilities towards school and learning. While socio-cognitive theories highlight individual influences on learning and performance, it should be recognized that thinking and behaviours somehow depend on environmental factors. While individuals with self-regulation skills learn something, they take control of their own feelings and thoughts and fulfil their own learning responsibilities towards their targeted tasks (Corno, 1992; Zimmerman and Schunk, 1989).

According to Barr and Tagg (1995), those who take responsibility for their own learning are decisive people in setting goals, organizing, taking action, and they can change their behaviour when necessary for their success (Yeşil, 2013). Learners' carrying out activities by taking the responsibility for their own learning makes a significant contribution to the accomplishment of permanent learning through active participation and to the increase in their sense of responsibility. Within the framework of this understanding, education systems are in search of new perspectives and new directions (Başbay, 2008). In the literature, responsibility for learning is generally addressed considering face-to-face educational and instructional processes in schools. However, no research has been found on responsibility for distance learning.

Especially during the COVID-19 pandemic, the importance of distance education and distance learning has started to be felt more.

During the COVID-19 pandemic, students from all levels of education participate in the learning-teaching process through distance education. As it cannot be predicted when this pandemic will end, there is no clarity on how long students will go on learning distance. In the ongoing distance learning process, especially when the affective characteristics of students are considered, responsibility for learning is thought to have an important place in learning as well as in motivation to learn. According to Kaya (2002), distance education is based on motivation to learn as well as being an individual activity. Learning is guided, and getting students active requires constant support. In the centre of learning and teaching in distance education, there should be personal relationships between students and those who support students, the pleasure of working and understanding by participating in emotions. In addition to these, it is thought that the active participation of students in the learning process and their affective characteristics in this process play an important role in their learning.

According to Yıldız (2020), online learning environments have made the online interaction between student and student and student and teacher a part of education by moving educational practices beyond the physical boundaries of the classroom. Thus, students have started to interact with their teachers / lecturers and classmates using synchronous or asynchronous online communication tools (Wang, 2008). In this interaction process, in learner-centred approaches to distance education, it is stated that learners learn actively and they have greater inputs about what they will learn and how and when they will learn it. At this point, it is stated that students take responsibility for their own learning and participate in the process with this responsibility (Duckworth, 2009).

Regarding the affective characteristics of students while participating in distance learning, Kaya (2002) points out some advantages of distance learning, such as providing opportunities for independent and individual learning and giving the individual the responsibility for learning but he also talks about some serious disadvantages such as not being able to provide sufficient support to students who do not have the habit of learning on their own without help. Moore (1973) defines students who are autonomous in their learning as individuals who can stimulate themselves in learning, know the ways to achieve goals, and evaluate their own success by measuring it. In the process of distance education, students and teachers are in separate places, learners are responsible for their own learning, learners are offered a wide range of options about the choice of courses, the format and method of the course and students learn at their own pace whenever and wherever they want (Keegan, 1996). Except for the summer holiday in 2020, students have been experiencing distance learning from 23 March 2020 until the present day. According to the statistics on formal education issued by the Ministry of National Education (2020);

“...In Turkey, in preschool, elementary and secondary education, there are a total of 18,241,881 students of whom 9,435,000 are males and 8,806,881 are females... A total of 2,516 hours of broadcasting was made on TRT EBA TV Primary School, TRT EBA TV Secondary School and TRT EBA TV High School between March 23 and June 19. During the distance education process, 7,383,213 students, 1,030,516 teachers actively used the Education Information Network (EBA) ... EBA also developed an educational infrastructure that can be used for 7 days 24 hours for 18 million students ... 5,954,174 live lessons have been delivered in the EBA live classroom application so far. In addition, programs were prepared for 8th and 12th grade students covering the subjects they are responsible for in YKS and LGS (National Central Exams) exams. ... EBA Academic Support, which was put into service recently and powered by artificial intelligence for the use of students preparing for the university exam has been used by 1,170,168 students and 189,477 teachers...”

Participation of such a large number of people in the distance education process requires seeking solutions to the problems that might arise. This search for solutions must be supported with scientific and academic research. In this context, the participation of students in the education services offered by the Ministry of National Education and the state of their knowledge, emotions, behaviours and skills in the learning-teaching process are considered worth examining.

The Ministry of National Education (2020) explained the details of the distance education process for the fall term of the 2020-2021 school year (1st term) as follows;

“...With the new academic year, we will share the weekly course schedules of TRT EBA Pre-school / Elementary School, Secondary School and High School channels, where 812 teachers work in 112 branches and 1,653 lesson videos are prepared and broadcast in 13 studios, to the mobile phones of the parents of our 18 million students via SMS ... Our lesson broadcasts will continue to be displayed three times a day to allow our students to compensate and reinforce.... In addition, 60 thousand tablet computers provided by public institutions and organizations, local administrations, private sector organizations and civic initiatives and 500 thousand tablet computers to be provided by our ministry will be distributed to students in need according to the distribution strategy we have prepared in light of the official data until the end of the year ... Live classroom applications, which have served 49 million 768 thousand class hours since 23 March 2020, when we started distance education, will actively serve during this period ... With the integration of EBA live classroom and alternative applications into our system, we have the capacity to do approximately 2 million lessons per day ... Our EBA internet portal, which has become the world's most visited education website with 9.1 billion clicks, is at the service of our students with more than 1,700 lessons and more than 40,000 rich, reliable and interactive contents ... In EBA, video or interactive lectures complying with the subjects and objectives in the curriculums and exercises, summaries, infographics, project documents, special content for teachers, more than 5,000 books and more than 240,000 questions are presented to our teachers and students...”.

In this statement, while the Ministry of National Education provides information on the provision of necessary services, infrastructure, content and equipment, it also reveals some data on participation in the distance education process. In addition to the active participation of students in distance education activities, the adaptation of students from every region of the country to this process, the efficiency, success and permanence of distance learning, the affective status of students and in particular their responsibility for distance learning should be examined.

Gündüz Ögüdücü (2020), in his article titled "New Education Order After Coronavirus", defines the process as follows;

“...This epidemic has affected education worldwide ... Educational institutions at all levels from primary and secondary schools to high schools and universities have been almost completely closed ... According to UNESCO data, all schools in 191 countries have physically suspended education, while schools in 5 countries have been partially closed ... Approximately 1 billion 723 million students worldwide have been affected by this situation ... The coronavirus forced educators to produce innovative solutions in a short time to make distance education efficient ... For example, in Hong Kong, students were educated at home with interactive applications. In China, where the population is very high, students continued their education with television broadcasts, as in our country ... In this process, students were tried to be followed with different applications ... However, as students were not adequately followed by teachers, as in the classical education applied in classrooms, learners' responsibility to learn in distance education has increased significantly ... That is, responsibility for learning outweighed responsibility for teaching ... Taking this responsibility is easier for individuals who have learned to learn ... However, as it is not possible for students of primary school age to fulfil this responsibility, their

families are also involved in this process... For disadvantaged students and their families who have difficulty in accessing the Internet, computer or television, this responsibility has become even more severe ... In addition to being educational centres, schools are the environments where children and young people socialize and prepare for social life ... Today's students, who will be the employees and leaders of the future, need all kinds of social, emotional and academic support in order to be successful in their social relations and business life...”.

As can be seen above, the learning responsibility attributed to students from all levels of education is one of the affective characteristics that students need to have in the distance learning process and should be emphasized strongly. Otherwise, students' distance learning processes may be interrupted.

Undoubtedly, students may face many problems in this difficult process. These problems include not having tools such as internet connection and computer, tablet, loss of motivation for learning, low responsibility for learning, inability to manage the learning process, and inability to actively participate in the learning-teaching process. In order to overcome these problems, it seems to be necessary to determine the level of responsibility of students for distance learning. In this connection, the purpose of the current study is to develop the scale of the responsibility for distance learning and to investigate secondary school students' level of responsibility for distance learning in the Aegean Region of Turkey.

METHOD

The current study is a descriptive study employing the survey model. The survey model is “a research model that tries to describe a case as it was or is and to describe the individual, event or object being studied in its own conditions as it is” (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz and Demirel, 2014; Karasar, 2008). In the current study, first the scale of responsibility for distance learning was developed. In the second stage of the study, the scale developed was administered to the secondary school students that could be reached in 8 cities of the Aegean Region to elicit the students' level of responsibility for distance learning.

STUDY GROUP

Two different samples were constructed to be used in the first and second stages of the study. In the first study group, a total of 477 secondary school students (251 females and 226 males) attending schools in the cities of İzmir, Denizli and Muğla in the Aegean Region of Turkey in the 2020-2021 school year were included. From among the returned scales, 448 were found to be correctly completed and the validity and reliability studies of the scale were conducted on the data obtained from these 448 students. In the second stage of the study, the study group is comprised of 2043 secondary school students selected from among the secondary school students attending schools located in the cities of İzmir, Manisa, Aydın, Denizli, Muğla, Afyonkarahisar, Kütahya and Uşak in the Aegean Region of Turkey in the 2020-2021 school year by means of the convenience sampling method. During the data collection process, the data obtained from 108 participants were found to be invalid and excluded from the analysis. In Table 1, information about the study group used in the second stage of the study is given.

Table 1. Information about the Study Group Used in the Second Stage of the Study

Variable	Province/Grade Level/Gender	N	%
Province	İzmir	288	14.1
	Manisa	226	11.1
	Aydın	310	15.2
	Denizli	274	13.4
	Muğla	279	13.7
	Afyonkarahisar	206	10.1
	Kütahya	255	12.5
	Uşak	205	10.0
Grade Level	5 th Grade	504	24.7
	6 th Grade	477	23.3
	7 th Grade	496	24.3
	8 th Grade	566	27.7
Gender	Female	1116	54.6
	Male	927	45.4
Total		2043	100.0

DATA COLLECTION TOOLS AND DATA COLLECTION

In the current study, as the data collection tool, the Scale of Responsibility for Distance Learning whose validity and reliability studies were conducted was used. The scale was developed on the basis of the Scale of Responsibility for Learning, which had been developed by Yakar and Saracaloğlu (2017) to determine students' level of responsibility for learning. The Scale of Responsibility for Learning is a five-point Likert scale designed in the form of self-report scale ("Completely unsuitable for me=1", "Unsuitable for me=2", "A little suitable for me=3", "Suitable for me=4", "Completely suitable for me=5"). The scale consists of 35 items and a single dimension and there is no item reversely scored in the scale. Some values of the Scale of Responsibility for Distance Learning are given in Table 2.

Table 2. Values of the Scale of Responsibility for Distance Learning

The Number of Items	Cronbach Alpha Internal Consistency Coefficient	Minimum Score to be Taken from the Scale	Maximum Score to be Taken from the Scale	Level Intervals				
				Very Low Level	Low Level	Medium Level	High Level	Very High Level
35	.964	35.00	175.00	35.00-62.99	63.00-90.99	91.00-118.99	119.00-146.99	147.00-175.00

In line with the purposes of the study, the data were collected in all the cities located in the Aegean Region of Turkey by using the Scale of Responsibility for Distance Learning after the required permissions had been taken from the concerned authorities. Due to the disadvantages brought about by the pandemic, the data collection process lasted for about 3 months. Some of the data were collected through face-to-face administration of the scale while the majority of the data were collected online via Google Forms.

DATA ANALYSIS AND INTERPRETATION

In the first stage of the study, exploratory and confirmatory factor analyses and item analyses were conducted on the collected data to determine the validity and reliability features of the Scale of Responsibility for Distance Learning to be developed. As a result, values proving that the scale is valid and reliable were obtained. SPSS 22.0 program package was used for the exploratory analysis while AMOS 22.0 was used for the confirmatory factor analysis. In order to test the validity of the scale, Kaiser-Meyer-Olkin (KMO) and Bartlett test values, and then extraction, component values, the total variance explained by the scale, goodness-of-fit values, CFA and C.R. values and item total correlations were calculated while in order to test the reliability of the scale, the split-half reliability of the scale and Cronbach Alpha internal

consistency coefficients of the scale were calculated and level intervals of the scores to be taken from the scale were explained. After the information has been given about the stages of the development of the Scale of Responsibility for Distance Learning, interpretations about the usability of the scale are given.

In the second stage of the study, the secondary school students' level of responsibility for distance learning attending schools in the Aegean Region was investigated in terms of province where they attend school, grade level and gender. In this regard, first, normality tests were conducted in SPSS 22.0 program package and as the Kolmogorov-Smirnov and Shapiro-Wilk values were found to be significant, it was concluded that the distribution is not normal. Therefore, Kruskal Wallis Test was used in the comparative analyses conducted for the variables of province and grade level, which had more than two categories while Mann-Whitney U Test was used for the gender variable having two categories and then the results were analyzed and interpreted by using the Tamhane comparative analysis technique, one of the components of these tests.

RESULTS

DEVELOPING SCALE AND VALIDITY-RELIABILITY STUDIES

The studies carried out to establish the validity of the Scale of Responsibility for Distance Learning were conducted in three stages. First, the items in the Scale of Responsibility for Learning developed by Yakar and Saracaloğlu (2017) were examined. From among the items in the scale, the items thought to be suitable to be included in the Scale of Responsibility for Distance Learning with some small changes were determined. Then, the relevant literature was reviewed, and various items were written on the basis of the studies in the literature. Then, the developed items were submitted to the review of a measurement and evaluation expert, an educational psychology expert, a curriculum and instruction expert and an educational technologies expert and in light of their feedbacks, a 35-item scale was developed. This scale was administered to 477 secondary school students (448 of them were correctly completed). The collected data were subjected to factor analyses and item analyses in SPSS 22.0 and AMOS 22.0 program packages.

In order to determine the construct validity of the scale, exploratory factor analysis (EFA) and then confirmatory factor analysis (CFA) were conducted. In the analysis of the items to be included in the scale, the item analysis technique based on the item total correlation was used. In order to estimate the reliability of the scale, the internal consistency and split-half methods were used. In the estimation of the reliability through the internal consistency method, Cronbach Alpha internal consistency coefficient was calculated.

VALIDITY

After the required corrections were made on the basis of the expert review for the face validity of the scale, the scale was administered to 448 students and in order to determine the construct validity, first exploratory factor analysis and then confirmatory factor analysis were conducted. In the principal components analysis, Kaiser-Meyer-Olkin (KMO) value (.812) and Bartlett test (2297.829, $df=595$, $p=.000$) were found to be significant. As the KMO value was found to be higher than .60 and Bartlett test was found to be significant, the data were considered to be suitable for factor analysis (Büyüköztürk, 2005; Seçer, 2013). Thus, exploratory factor analysis was conducted. In order to determine the number of important factors, the factors having an eigenvalue higher than 1 and the variance explained were examined. As a result of the exploratory factor analysis and rotation, it was concluded that the scale is consisted of 35 items and a single dimension. According to Büyüköztürk (2010), this scale can be considered to be a unifactorial scale. The fact that the items in the scale were found to have high factor loading values before the rotation, that the variance explained by the first factor is high and that the

eigenvalue of the first factor is three times higher than the eigenvalue of the second factor can be seen as evidence supporting the unifactorial structure of the scale. In such cases, researchers can decide on the factor structure of the scale on the basis of theoretical and empirical evidence. After the analysis of the principal components of the scale, the values of the exploratory factor analysis were examined. The results of the exploratory factor analysis obtained for the Scale of Responsibility for Distance Learning are given in Table 3.

Table 3. Results of the Exploratory Factor Analysis of the Scale of Responsibility for Distance Education

Item	Extraction	Component	Item	Extraction	Component
1	.560	.525	19	.524	.481
2	.727	.536	20	.637	.644
3	.662	.585	21	.598	.706
4	.510	.549	22	.647	.570
5	.668	.648	23	.647	.782
6	.601	.568	24	.548	.561
7	.530	.551	25	.511	.578
8	.674	.628	26	.697	.636
9	.715	.588	27	.739	.574
10	.583	.699	28	.592	.629
11	.653	.617	29	.733	.644
12	.727	.612	30	.668	.724
13	.709	.691	31	.594	.703
14	.555	.605	32	.596	.635
15	.633	.637	33	.609	.715
16	.597	.584	34	.629	.595
17	.655	.713	35	.570	.637
18	.584	.625	Total Variance Explained by the Scale: 47.690%		

As a result of the exploratory factor analysis, it was found that the 35 items in the scale were collected under a single factor. The scale items collected under a single dimension explain 47.690% of the total variance. After the exploratory factor analysis, confirmatory factor analysis was conducted in AMOS program package to confirm the construct validity of the scale. The goodness-of-fit values of the scale were determined in this confirmatory factor analysis. The fit values of the Scale of Responsibility for Distance Learning are given in Table 4.

Table 4. Fit Values Obtained from the Confirmatory Factor Analysis of the Scale of Responsibility for Distance Learning

Fit Measure	Fit Values of the Scale	Good Fit Interval	Acceptable Fit Interval
χ^2	2199.923 (Acceptable Fit Interval)	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$
χ^2/df	3.92 (Acceptable Fit Interval)	$0 \leq \chi^2/df \leq 2$	$2 < \chi^2/df \leq 3$ or <4
RMSEA	.077 (Acceptable Fit Interval)	$0 \leq RMSEA \leq .05$	$.05 < RMSEA \leq .08$
SRMR	.074 (Acceptable Fit Interval)	$0 \leq SRMR \leq .05$	$.05 < SRMR \leq .10$
CFI	.962 (Acceptable Fit Interval)	$.97 \leq CFI \leq 1.00$	$.95 \leq CFI < .97$ or $.90 \leq CFI < .97$
GFI	.943 (Acceptable Fit Interval)	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI < .95$
AGFI	.864 (Acceptable Fit Interval)	$.90 \leq AGFI \leq 1.00$	$.85 \leq AGFI < .90$

The fit values obtained from the confirmatory factor analysis of the Scale of Responsibility for Distance Learning; RMSEA: .077 (within the acceptable fit interval); SRMR: .074 (within the acceptable fit interval); CFI: .962 (within the acceptable fit interval); GFI: .943 (within the acceptable fit interval); AGFI: .864 (within the acceptable fit interval), were found to be good enough (Browne and Cudeck, 1993; Hu and Bentler, 1999; Schermelleh-Engel, Moosbrugger and Müller, 2003). The Chi-square value for the model was calculated to be $\chi^2=2199.923$;

df=561; $p < .001$ and found to be significant. When the Chi-square divided by its degrees of freedom was calculated, it was found to be $X^2/df=3.92$ and as the value is lower than 4, it indicates an acceptable fit (Şimşek, 2007; Seçer, 2013). The results of the confirmatory factor analysis of the Scale of Responsibility for Distance Learning are given in Table 5.

Table 5. Results of the Confirmatory Factor Analysis of the Scale of Responsibility for Distance Learning

Item	CFA	C. R.	Item	CFA	C. R.	Item	CFA	C. R.
1	.71	14.51	13	.65	14.14	25	.71	14.55
2	.78	14.58	14	.78	14.63	26	.65	14.30
3	.69	14.23	15	.64	14.26	27	.72	14.61
4	.68	14.49	16	.68	14.47	28	.61	14.53
5	.63	14.25	17	.64	14.75	29	.73	14.66
6	.64	14.18	18	.63	14.52	30	.73	14.77
7	.72	14.48	19	.64	14.24	31	.71	14.46
8	.75	14.51	20	.71	14.62	32	.67	14.72
9	.77	14.76	21	.68	14.48	33	.72	14.75
10	.66	14.50	22	.68	14.57	34	.67	14.73
11	.67	14.62	23	.68	14.33	35	.68	14.70
12	.75	14.64	24	.63	14.55			

According to the results of the confirmatory factor analysis, the factor loading values of all the items in the scale are statistically significant. The item-factor loading values were found to be ranging from .61 to .78. When the C.R. values of all the items in the scale are examined, it is seen that factor-loading values are statistically significant. These findings show that the scale has the construct validity. After the establishment of the construct validity, the item-total correlation values of the items in the scale were examined. The results of the item-total correlation analysis of the items in the scale are given in Table 6.

Table 6. Results of the Item-Total Correlation Analysis of the Items in the Scale

Item	Item-Total Correlations	Item	Item-Total Correlations
1	.733	19	.765
2	.780	20	.635
3	.712	21	.703
4	.696	22	.774
5	.759	23	.771
6	.700	24	.660
7	.764	25	.673
8	.625	26	.628
9	.796	27	.783
10	.687	28	.743
11	.601	29	.663
12	.791	30	.708
13	.688	31	.681
14	.705	32	.613
15	.638	33	.708
16	.693	34	.686
17	.697	35	.636
18	.611		

When the item-total correlations within the results of the item analysis conducted on the scale items were examined, the correlations were found to be ranging from .601 to .783. These values obtained for the scale items can be said to make contribution to the validity of the scale.

RELIABILITY

In order to test the reliability of the scale, first split-half test was conducted and then Cronbach Alpha internal consistency coefficients were calculated. The Cronbach Alpha internal consistency coefficient obtained from the split-half test was calculated to be $r_{1/2}=.894$. A $r_{1/2}$

value higher than .80 indicates that the scale is highly reliable (Özdamar, 1999; Tavşancıl, 2006). In addition, the Cronbach Alpha internal consistency coefficient for the whole scale was found to be .944, which can be interpreted as an indication of high reliability. The scores related to the use of the Scale of Responsibility for Distance Learning are given in Table 7.

Table 7. Scores related to the Use of the Scale of Responsibility for Distance Learning

The Number of Total Items	Cronbach Alpha Internal Consistency Coefficient	Minimum Score to be Taken from the Scale	Maximum Score to be Taken from the Scale	Level Intervals				
				Very Low Level	Low Level	Medium Level	High Level	Very High Level
35	.944	35.00	175.00	35.00-62.99	63.00-90.99	91.00-118.99	119.00-146.99	147.00-175.00

When the Scale of Responsibility for Distance Learning is used in any study, a single score will be obtained by the participant and the evaluation will be made on this score. For example, when a participant takes 98.00 points from the scale, it will be evaluated that he/she has a medium level of responsibility for distance learning, and when a participant takes 140.00 points from the scale, it will be evaluated that he/she has a very high level of responsibility for distance learning.

THE LEVEL OF RESPONSIBILITY OF THE STUDENTS ATTENDING SCHOOLS IN THE AEGEAN REGION FOR DISTANCE LEARNING

First, in line with the purpose of the current study, the normality of the distribution of the data was checked to analyze the data and in this connection, Kolmogorov-Smirnov and Shapiro-Wilk were calculated and found to be significant ($p < .05$), which means that the distribution is not normal. Therefore, Kruskal Wallis Test was used for the variables of province and grade level having more than two categories while Mann-Whitney U Test was used for the variable of gender having two categories. The results of the Kruskal Wallis test conducted to determine whether the students' scores taken from the scale vary significantly depending on the province where they attend school are given in Table 8.

Table 8. Kruskal Wallis Test Analysis Results of Students' Responsibility Scores for Distance Learning by Province

Province	N	μ	S	Mean Rank	X^2	df	p
İzmir	288	123.25	23.69	781.59	106.11 1	7	.000
Manisa	226	137.45	25.18	1143.23			
Aydın	310	134.11	26.42	1062.01			
Denizli	274	135.65	24.65	1093.18			
Muğla	279	137.46	25.01	1142.04			
Afyonkarahisar	206	124.63	24.33	824.82			
Kütahya	255	137.12	24.01	1123.89			
Uşak	205	130.91	26.13	978.50			
Total	2043	132.71	25.48				

The results of the Kruskal Wallis test and Tamhane comparison analysis conducted to determine whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on province have revealed that the mean scores of the secondary school students attending schools located in the cities of Muğla, Manisa, Kütahya, Denizli and Aydın are significantly higher than those of the secondary school students attending schools located in the cities of Afyonkarahisar and İzmir and that the mean score of the students attending schools located in the city of Uşak is significantly higher than that of the secondary school students attending schools located in İzmir ($X^2=106.111$; $df=7$; $p=.000$). When the students' mean responsibility scores obtained in the comparisons made were examined, a significant difference was found in favour of the secondary students attending

schools located in the cities of Muğla, Manisa, Kütahya, Denizli and Aydın. In other words, it can be said that the secondary school students attending schools located in the cities of Muğla, Manisa, Kütahya, Denizli and Aydın have higher responsibility for distance learning than the secondary school students attending schools located in the cities of Afyonkarahisar and İzmir in the Aegean Region.

In the current study, Kruskal Wallis test was conducted to investigate whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on grade level and the results of this analysis are presented in Table 9.

Table 9. Kruskal Wallis Test Analysis Results of Students' Responsibility Scores for Distance Learning by Grade Level

Grade Level	N	μ	S	Mean Rank	X^2	df	p
5 th Grade	504	128.66	26.45	927.35	60.053	3	.000
6 th Grade	477	130.01	25.83	956.61			
7 th Grade	496	131.95	25.09	1000.85			
8 th Grade	566	139.27	23.34	1179.92			
Total	2043	132.71	25.48				

The results of the Kruskal Wallis test and Tamhane comparison analysis conducted to determine whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on grade level have revealed that the mean score of the 8th graders is significantly different from the mean scores of the 7th, 6th and 5th graders ($X^2=60.053$; $df=3$; $p=.000$). When the secondary school students' mean responsibility scores were examined through comparisons, a significant difference was found in favour of the 8th graders. In other words, it can be said that 8th grade students have higher responsibility for distance learning than the 7th, 6th and 5th grade students attending schools located in the Aegean Region.

In the current study, Mann Whitney U Test was used to determine whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on gender and the results of the test are presented in Table 10.

Table 10. Mann Whitney U Test Analysis Results of Students' Responsibility Scores for Distance Learning by Gender

Gender	N	μ	S	Mean Rank	Sum of Ranks	U	z	p
Female	1116	135.17	24.68	1079.75	1205004.00	452814.00	-4.856	.000
Male	927	129.76	26.11	952.47	882942.00			
Total	2043	132.71	25.48					

When the results of the Mann Whitney U test conducted to determine whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on gender were examined, it was found that the mean score of the female students ($\mu=135.17$) is significantly higher than that of the male students ($\mu=129.76$) ($U=452814.00$; $z=-4.856$; $p=.000$). This finding shows that the female students have higher responsibility for distance learning than the male students.

DISCUSSION, RESULTS AND SUGGESTIONS

In Turkey, the necessary infrastructure and learning management system, tools and materials are provided by the Ministry of Education during the pandemic. Students from all levels of educational participate in live lessons through the Education Information Network (EBA). Unfortunately, students who do not have internet connection or who live in places where there is no internet infrastructure cannot attend live lessons. In order to eliminate such a disadvantage, the Ministry of National Education has developed EBA TV for primary, secondary and high school students in 2020 and put it into service as a national channel. Although these

opportunities are provided to students in terms of participating in classes and improving their learning, students experience various problems in the distance education process. According to Özer, Suna, Çelik and Aşkar (2020), the main determinants of the motivation and continuity of learning in the distance education process are the family's possibilities and the value they attach to education, the physical conditions of children at home and the digital literacy levels of children. Another problem that students can or may experience in this process is the "responsibility for distance learning" discussed in the current study.

What is expected from students in terms of responsibility for distance learning includes adapting to different situations (the lesson in a virtual environment, differentiation of interaction, etc.), entering the lesson on time, active participation in the lesson, completing the tasks given outside the lesson, completing the online tasks given through the EBA system (videos to be watched, tests to be solved, etc.), responding immediately when asked questions during the lesson, not being interested in anything else that will distract them while in the lesson, informing the teacher before the lesson if there is a compulsory situation that causes them to be absent from the lesson, communicating with the teacher about issues or questions they do not understand, and having high motivation for the lesson.

In line with the purposes of the current study, firstly, validity and reliability studies of the Scale of Responsibility for Distance Learning were conducted. The scale was administered to 448 students and then first exploratory factor analysis and then confirmatory factor analysis were conducted to establish the construct validity. In the principle components analysis, Kaiser-Meyer-Olkin (KMO) value was found to be .812 and Bartlett test was found to be significant. As a result of the factor analysis, the 35 items in the scale were found to be collected under a single factor. The scale items were found to explain 47.690% of the total variance. After the completion of the exploratory factor analysis, the goodness-of-fit indices obtained from the confirmatory factor analysis of the Scale of Responsibility for Distance Learning were calculated and the following fit values were found; RMSEA, SRMR, CFI, GFI and AGFI within the acceptable fit interval. These values were found to be good and adequate. According to the results of the confirmatory factor analysis of the scale, the factor loading values of all the items in the scale were found to be statistically significant. In the confirmatory factor analysis, item-factor loading values (CFA) were found to be ranging from .61 to .78. When the C.R. values of all the items in the scale were examined, factor-loading values were found to be statistically significant. These findings show that the scale has the construct validity.

In the current study, in order to establish the reliability of the scale, the split-half method was used and then the Cronbach Alpha internal consistency coefficient was calculated for the whole scale. The Cronbach Alpha internal consistency coefficient obtained from the split-half method was found to be $r_{1/2}=.894$ and the Cronbach Alpha internal consistency coefficient was calculated to be .944 for the whole scale and these values can be evaluated as an indicator of high reliability. All these results show that the Scale of Responsibility for Distance Learning is a valid and reliable measurement tool. The scale is a valid and reliable measurement tool with adequate psychometric features. This scale based on the concepts related to responsibility for distance learning and teaching can be used to determine secondary school students' level of responsibility for distance learning.

In the second stage of the study, it was investigated whether the levels of responsibility of the secondary school students attending schools in the Aegean Region of Turkey for distance learning vary significantly depending on the city where they attend the school, grade level and gender. The mean responsibility score of the students was calculated to be ($\mu=132.71$) and on the basis of this mean score, it was concluded that the students have a "high level" of responsibility for distance learning. This high level yet is closer to the medium level of the high level category (medium level is 133.00). Thus, necessary studies and activities should be done to increase students' level of responsibility for distance learning to a very high level. Such

studies and activities and support services and guidance are believed to develop students' responsibility for distance learning and lead to positive developments in terms of their academic achievement and motivation.

When the students' scores taken from the Scale of Responsibility for Distance Learning were examined according to the province where they attend school by using Kruskal Wallis test and Tamhane comparison analysis, it was found that the mean scores of the students attending secondary schools located in the cities of Muğla, Manisa, Kütahya, Denizli and Aydın are significantly higher than those of the secondary school students attending schools located in Afyonkarahisar and İzmir and that the mean responsibility score of the secondary school students attending schools in the city of Uşak is significantly higher than that of the secondary school students attending schools located in the city of İzmir. Thus, it can be said that the secondary school students attending schools in the cities of Muğla, Manisa, Kütahya, Denizli and Aydın have higher responsibility for distance learning than the secondary school students attending schools in the city of Afyonkarahisar and İzmir in the Aegean Region. Rather than the city variable, the main reasons for these differences may be shown the efforts of families and students, the budget they allocate for their distance education, and the socio-economic status of the school regions in the cities.

It was also investigated whether the mean scores taken from the Scale of Responsibility for Distance Learning by the secondary school students attending schools in the Aegean Region vary significantly depending on grade level through Kruskal Wallis and Tamhane comparison analysis and it was found that the mean responsibility score of the 8th graders is significantly different from the mean responsibility scores of the 7th, 6th and 5th graders. Thus, it can be said that the 8th graders have higher responsibility for distance learning than the 7th, 6th and 5th graders. This might be because the 8th graders have to prepare for centralized high school entrance exam. Within the framework of the responsibility for distance learning, there are no research results that support or do not support this finding in the literature.

In the current study, Mann Whitney U test was used to investigate whether the secondary school students' scores taken from the Scale of Responsibility for Distance Learning vary significantly depending on gender and it was found that there is a significant difference between the mean score of the female students and that of the male students. Thus, it can be said that the female secondary school students attending schools located in the Aegean Region have higher responsibility for distance learning than the male students. Within the scope of the responsibility for distance learning, no research results were found that support or do not support this finding in the literature.

Regarding the distance learning process, Willis (1992) emphasizes that the primary role of students in distance learning processes is "learning". This challenging task (learning) requires motivation, planning, analyzing and application skills. It is underlined that in distance learning environments, students may encounter complex situations due to various reasons in the learning process and teachers, administrators and educational institutions have various and important responsibilities in this regard. In another study on distance learning, Yılmazsoy and Kahraman (2018) stated that the reason why students should take more responsibility in the distance learning process is that online learning is more flexible, more learner-centred and includes more autonomy compared to face-to-face learning environments, students need to focus on the lesson and make their learning planning for the success of education. Otherwise, educational and instructional environments that are uniform, do not contain innovations and where student achievement is low may emerge.

Hidayati, Budiyo and Sugiman (2018) emphasize that responsibility has various aspects such as fulfilling duties and obligations, taking risks or initiatives, and striving in a disciplined manner until the tasks have been completed. For these reasons, it is necessary to determine the responsibility levels of students for both distance and face-to-face learning and to carry out the

required guidance and support activities. In the perceived classroom responsibility climate questionnaire study conducted with the participation of secondary school students, according to Fernandez-Rio, Cecchini, Merino-Barrero, and Valero-Valenzuela (2019), after the completion of the programs applied to students in order to develop responsibility, measuring the changes occurring in the classroom atmosphere, encouraging students to improve their behaviours, and allowing them to determine their own achievement goals and future can contribute to their academic performance. In another scale development study on responsibility, Akbay, Çapri, and Gündüz (2013) stated that if students, educators and institutions have more information about academic responsibility content and the characteristics of a person with academic responsibility, it will be easier to achieve academic goals.

In the current study, a measurement tool whose validity and reliability studies were completed and which was proved to have adequate psychometric features was developed to measure the responsibility for distance learning and then was used to determine whether the responsibility scores of the secondary school students attending schools located in the Aegean Region vary significantly depending on the city where they attend school, grade level and gender. In light of the findings of the current study, following suggestions can be made: The Scale of Responsibility for Distance Learning can be administered to students from different levels of education and different regions of Turkey so that their level of responsibility for distance learning can be determined. After the determination of students' level of responsibility for distance learning, various activities and support services can be provided to develop this aspect of students, which is an important component of their academic achievement. It is hoped that this developed measurement tool will contribute to the literature and will make distance learning processes more effective and productive during the pandemic and later.

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ANNEX

DATA COLLECTION TOOL IN THE LANGUAGE OF APPLICATION (SCALE OF RESPONSIBILITY FOR DISTANCE LEARNING)

No.	Uzaktan Öğrenmeye Yönelik Sorumluluk Ölçeği (Ortaokul Öğrencileri İçin) Scale of Responsibility for Distance Learning (For Secondary School Students)	Bana Hiç Uygun Değil	Bana Uygun Değil	Bana Kısmen Uygun	Bana Uygun	Bana Tamamen Uygun
1.	Uzaktan gerçekleştirilen derslerde başarılı olmak için konuları öğrenmem gerektiğini bilirim.	(1)	(2)	(3)	(4)	(5)
2.	Doğru cevabı bilsem de bilmesem de, derslerde sorulan sorulara cevap verme ihtiyacı hissederim.	(1)	(2)	(3)	(4)	(5)
3.	Arkadaşımdan zorlandığı ders veya konularda onlara yardım etmek isterim.	(1)	(2)	(3)	(4)	(5)
4.	Derste herhangi bir soruya cevap veremediğimde üzülürüm.	(1)	(2)	(3)	(4)	(5)
5.	Derslere veya sınavlara çalışmadan önce çalışma planı yaparım.	(1)	(2)	(3)	(4)	(5)
6.	Öğrendiğim yeni şeyleri arkadaşlarımla paylaşıyorum.	(1)	(2)	(3)	(4)	(5)
7.	Daha sonra da kullanabilmek için düzenli olarak notlar tutarım.	(1)	(2)	(3)	(4)	(5)
8.	Uzaktan gerçekleştirilen derslerde ve sınavlarda başarılı olmak için ders çalışmam gerektiğini bilirim.	(1)	(2)	(3)	(4)	(5)
9.	Konuları öğrenmede daha başarılı olmak için farklı yollar denerim.	(1)	(2)	(3)	(4)	(5)
10.	Uzaktan işlenen konuları anlamak için çaba harcarım.	(1)	(2)	(3)	(4)	(5)
11.	Sanal sınıfın düzenini bozmamak için davranışlarıma ve tepkilerime dikkat ederim.	(1)	(2)	(3)	(4)	(5)
12.	Daha iyi bir öğrenme ortamı için, sanal sınıfta bulunan herkesin sınıf kurallarına uyması gerektiğini düşünürüm.	(1)	(2)	(3)	(4)	(5)
13.	Gördüğüm konuları tekrar ederek bir sonraki derse hazırlıklı katılırım.	(1)	(2)	(3)	(4)	(5)
14.	Anlayamadığım konuları dijital imkânları kullanıp araştırarak öğrenmeye çalışırım.	(1)	(2)	(3)	(4)	(5)
15.	Uzaktan işlediğimiz konuları daha iyi öğrenebilmek için farklı kaynaklardan soru çözerim.	(1)	(2)	(3)	(4)	(5)
16.	Sanal sınıfta öğrenme sürecinde diğerleriyle etkileşimde bulunmaya gayret ederim.	(1)	(2)	(3)	(4)	(5)
17.	Ders için bana verilen ödevleri istenilen biçimde yaparım.	(1)	(2)	(3)	(4)	(5)
18.	Sanal sınıfta derslere zamanında giriş yapmaya özen gösteririm.	(1)	(2)	(3)	(4)	(5)
19.	Dersle ilgili kullanmam gereken araç-gereç ve materyalleri düzenli olarak yanımda bulundurmaya çalışırım.	(1)	(2)	(3)	(4)	(5)
20.	Ödevlerimi ertelemeden zamanında yaparım.	(1)	(2)	(3)	(4)	(5)
21.	Konuları öğrenirken her birine yeterli çalışma süresi ayırıyorum.	(1)	(2)	(3)	(4)	(5)
22.	Uzaktan yapılan dersin eğitimcisi ile sürekli iletişim halinde olmaya çalışırım.	(1)	(2)	(3)	(4)	(5)
23.	Ders çalışırken zamanı etkili kullanmaya çalışırım.	(1)	(2)	(3)	(4)	(5)
24.	Çalışırken en çok zorlandığım konulara daha fazla vakit ayırıyorum.	(1)	(2)	(3)	(4)	(5)
25.	Arkadaşımdan birisi öğretmene soru sorduğunda öğretmenin cevabını dikkatle dinlerim.	(1)	(2)	(3)	(4)	(5)
26.	Ödevlerimi günü gününe yaparım.	(1)	(2)	(3)	(4)	(5)
27.	Ödevlerini yapamadıklarında, arkadaşlarıma elimden geldiğince destek olmaya çalışırım.	(1)	(2)	(3)	(4)	(5)
28.	Sanal sınıfta bizden dersle ilgili bir görev istendiğinde, onu yapmaya gönüllü olurum.	(1)	(2)	(3)	(4)	(5)
29.	Uzaktan gerçekleştirilen derslere devamlı olarak erişim sağlama isteği duyarım.	(1)	(2)	(3)	(4)	(5)
30.	Uzaktan öğrenme sürecimin daha verimli olabilmesi için gerekli olanakları sağlamaya çalışırım.	(1)	(2)	(3)	(4)	(5)
31.	Dersle ilgili bana verilen görevleri en iyi şekilde yapmaya özen gösteririm.	(1)	(2)	(3)	(4)	(5)
32.	Uzaktan da olsa yeni bir şey öğrenmek benim için çok önemlidir.	(1)	(2)	(3)	(4)	(5)
33.	Uzaktan eğitim gerçekleştirilirken kendi öğrenme sürecimi başarıyla düzenlerim.	(1)	(2)	(3)	(4)	(5)
34.	Dersle ilgili uzaktan eğitim etkinliklerine katılmamın öğrenmeye katkı sağlayacağını düşünürüm.	(1)	(2)	(3)	(4)	(5)
35.	Dersin eğitimcisiinden dönüt alabilmek için çaba harcarım.	(1)	(2)	(3)	(4)	(5)

TEACHERS' METAPHORIC PERCEPTIONS OF COVID-19 AND SCHOOL IN THE PROCESS OF COVID-19

Abstract: The study aims to reveal teachers' perceptions of "Covid-19" and "School in the Covid-19 Process" through metaphors. The differences between the covid-19 perceptions of those who had Covid-19 disease in the participants' families and those who did not were examined. Phenomenology design, one of the qualitative research methods, was used in the study. Participants consist of a total of 100 teachers, 80 in Hatay and 20 in Gaziantep. The content analysis method was used. It was seen that teachers had 45 different metaphors in the perception of 'Covid-19' and were collected in eight categories. The most produced metaphors' codes related with covid-19 were "Flu", "Cancer", "Illness", "War", "Flu-pneumonia". Categories created according to metaphors were "Similar to other diseases", "Infectiousness", "Damaging", "Fatal", "Uncertainty", "Social order", "Immunity", "Isolating". Participants created 56 different metaphors in the perception of "School in the Covid-19 Process," and these metaphors could be gathered in seven categories. The most produced metaphors were "Dangerous zone", "Abandoned building", "Pandemic point / Virus slot", "House".

Keywords: Covid-19 perception, Isolation, Metaphor, Pandemic, School perception.

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INTRODUCTION

Covid-19 infection is a disease caused by a new coronavirus called SARS-CoV-2. It was reported that this virus, which spread to almost every region of the world at high speed, was first seen in Wuhan, China (Question and Answers Hub, 2021). Due to this disease caused by the new type of coronavirus, which reached an epidemic dimension quickly, it was declared a “pandemic” by WHO on March 11, 2020 (Covid-19 Data, 2021; Duban and Şen, 2020).

Countries have started to take measures with the detection of coronavirus cases within their borders. Social isolation was the basis of these measures, and steps were taken to reduce the contact and distance between individuals (Bozkurt et al., 2020). In this context, many countries preferred to shut down the whole educational process to combat Covid-19 (Gençoğlu and Çiftçi, 2020; Jameson et al., 2020).

According to the data of UNESCO (Covid-19 Educational Disruption and Response, 2020), approximately 1.5 billion students in the world could not benefit from educational services in this process. In Turkey, the schools closed as of March 16, 2020, and the pandemic formal education is seen as one of the most aspects of life affected. About 25 million students have had their education interrupted due to Covid-19. (Bakioğlu and Çevik, 2020). To compensate for this interruption for the right of education was quickly began to distance the education process in Turkey (Bozkurt, 2020). Ministry of Education reinforced Education Network Computing's (EBA) infrastructure and cooperated with Turkey Radio and Television Association to broadcast educational programs (Ozer, 2020).

Teachers who create a virtual classroom on EBA (Education Network Computing) and teach their students lessons with the video-speaking system try to ensure the continuity of education during the pandemic process. Teachers who work with younger age groups as a branch are more likely to encounter obstacles due to their students being in a substantial period and not having the discipline to study individually (Kantos, 2020). Besides, the low-level interaction between students and teachers in distance education and the limited level of peer sharing causes a lack of motivation for both teachers and students (Çetin et al., 2004; Uzoğlu, 2017). In the research conducted by Çakın and Akyavuz (2020) on the effects of Covid-19 on education, school administrators reported that they were intense over the EBA system and that students and teachers faced technical problems in accessing the internet. In the study of Arı and Arslan (2020), secondary school students' metaphoric perceptions towards Covid-19 were examined; it was determined that Covid-19 disease created negative perceptions on students, and it was suggested that teachers should eliminate these perceptions. During the Covid-19 pandemic, there were technical problems in the field of education, and the teachers and students who handled the education and training process were negatively affected. Teachers continued their education and training during the pandemic process thanks to the distance education program despite all technical issues. When distance learning is considered an educational opportunity, together with the quality of distance learning, the process of distance learning has also changed the perception of school and education (Demirli, 2002; Winthrop, 2020). With the change of this perception, teachers may regard themselves as more responsible vocationally because they are used to face-to-face learning, preventing them from adopting distance learning (Serçemeli and Kurnaz, 2020).

On the other hand, Yalçın and Yıldırım (2014) have examined the perceptions of teachers towards school principals and have concluded that 69.8% of the teachers perceived as the school principals were the ones who had the only power in administration and were all decisions makers and wanted to be obeyed with their decisions. Therefore, it can be thought that teachers' not being in the same environment with school principals during distance learning may change their perception of school. With all of these components, the whole education system must reveal the teachers' perceptions, who are one of the most essential school members during the

education process, about Covid-19 and the school during the pandemic process in which way and how the education process has been shaped. It is thought that all of these can ideally be revealed by metaphor work.

Metaphors can put forward simulations of how people make sense of organizational structure and how they perceive it and clues about their association with the organization (Arı and Arslan, 2020). According to Saban (2008), metaphors are a pedagogical tool that can reveal people's mental images or create a specific phenomenon. Metaphors represent a concept that forms an individual's labels, meanings, or conceptual expressions (Eraslan, 2011). Explanation of new and complex ideas for people through metaphors increases the ability to be understood for target areas. Therefore, the analysis of metaphors can be a proper scientific research method, especially in researching new and complex issues (Güneş and Fırat, 2016).

Metaphors are beneficial for both researchers and participants because metaphors are a method by which the participants can give creative and sincere answers and put forward the reality that researchers cannot predict. Consequently, it has been stated that participants express their thoughts and opinions more freely and clearly; researchers get the data on affective domains that are difficult to be determined (Koç, 2014). It is seen that the studies on education about the Covid-19 pandemic by using metaphors (Bozkurt, 2020; Arı and Arslan, 2020) are pretty limited. In this context, it is thought that teachers suggest some critical ideas in terms of giving a new path for the educational system after the pandemic as well as they contribute to putting forward the perceptions of Covid-19 and school during the Covid-19 pandemic when the whole education system is interrupted and understanding of education change.

This research aims to reveal teachers' perceptions of Covid-19 disease through metaphors and seeks some answers to the following questions

1. What are the metaphorical perceptions of teachers about Covid-19?
2. Which categories are teachers' metaphorical perceptions of Covid-19 disease grouped in terms of standard features?
3. What are the metaphorical perceptions of teachers towards school during the period of Covid-19?
4. Which categories are teachers' metaphorical perceptions toward school grouped in the period of Covid-19 in terms of their common characteristics?
5. Are there any differences between those who have undergone Covid-19 and those who have not among the metaphors created for Covid-19?
6. Are there any differences between those who have undergone Covid-19 and those who have not among the metaphors created for schools in the period of Covid-19?

METHOD

This research was designed as a phenomenology pattern, one of the qualitative research types, as it allows teachers to express their opinions about the effects of the Covid-19 process on education. This pattern forms a basis for searching for the phenomenon we are aware of but cannot completely understand (Fetah et al., 2014). With the usage of this pattern, it aims to produce information and uncover the truths behind a phenomenon (Arı and Arslan, 2020). The phenomenology research aims to reach the core of experience by questioning the experiences related to the phenomenon. Therefore, experience plays a critical role in this research (Ersoy, 2019).

STUDY GROUP (PARTICIPANTS)

Phenomenology is a method that evaluates and takes advantage of human experiences to gain information about a phenomenon. (Onat Kocabıyık, 2015). The study group for this study was chosen with a purposeful sampling method. It consists of 80 people from Hatay and 20 people

from Gaziantep for the 2020-2021 education fall term and involves teachers from pre-school (21), primary school (46), other branches (33), 73 female and 27 male, in total 100.

The participants of the phenomenology research sampling should be generally chosen among the ones with a particularly characteristic feature and the ones who experienced the phenomenon or related with the ones who experienced it before. The outcomes of participants' experiences and determining the theme would be more accessible. Therefore, when the collected data is examined, it has been thought that 100 teachers would be enough for the study (Baltacı, 2018).

The 100 teachers who participated in the study group are detailed in Table 1 below (age, gender, educational background, branch, professional seniority, and the province of duty).

Table 1. Demographic Characteristics of the Participants Evaluated

Variable	Features	f	%
Age	20-30	25	25
	31-40	49	49
	41-50	23	23
	51-60	3	3
Gender	Female	73	73
	Male	27	27
Educational Background	Associate Degree	2	2
	Bachelor's Degree	88	88
	Post Graduate	9	9
	Doctorate Degree	1	1
Branch	Pre-school Teacher	21	21
	Primary Teacher	46	46
	Other branch teacher	33	33
Professional Seniority	0-10	41	41
	11-20	44	44
	21-30	15	15
Province	Hatay	80	80
	Gaziantep	20	20
Total		100	100

The answers to the question: “Has anyone in your family ever suffered from Covid-19?” are given in Table 2 below.

Table 2. The status of the Covid-19 cases in the families of Participants Evaluated

		f	%
Has anyone in your family ever suffered from Covid-19?	YES	41	41
	NO	59	59
Total		100	100

DATA COLLECTION TOOL

In the research, an electronic form by taking expert opinions created on google was used to collect data which consists of two parts. In the first part, the teachers were asked to answer age, gender, educational status, branches, professional seniority, the city where they work, and whether there is any Covid-19 in their family.

In the second part, teachers were asked to complete these sentences with their free thoughts; “Covid-19 (Coronavirus) is like because” and “During Covid-19, school is like because”. The second part consisted of open-ended questions. Also, directive explanations for the participants were attached to the forms.

DATA COLLECTION PROCESS

The form that was created taken expert's opinions was sent to 30 teachers via email, to 100 teachers via Whatsapp, and they were asked to fill out the form in 15 days. A hundred responses were received at the end of 15 days. For metaphorical studies, two concepts are given to the

participants, such as “like” to state the relation between the context and subject of the metaphor more clearly, and “because” to the reason for their metaphors. The study aims to determine the perception of the concept “school” during the pandemic and the metaphors that participants specified by including the concept “because” (Saban, 2009).

DATA ANALYSIS

This study asked teachers to create a metaphor related to the concept “school” during Corona Virus and Covid-19. The data acquired from hundred teachers inform different branches in this research were analyzed by the content analysis system. The content analysis gathers data involving standard information with certain concepts and groups and interprets it comprehensibly (Ekici, 2016).

Thus, it aims to specific themes that explain the data and acquire the concepts that can explain and organize them. The analysis and interpretation of the information obtained in this study are made according to the stages created by Ekici (2016).

In this study, the analysis and interpretation of the metaphors determined for the two research questions asked to the teachers were organized in the following stages. These stages are respectively; (1) the stage of examining the data obtained from Google forms, (2) enumerating the data in the forms from the participants from 1 to 100 according to the time stamp, (3) the stage of determining the metaphors from the answers that are suitable for evaluation, (4) the development stage of the categories, (5) determination of distribution to categories by analyzing metaphors, (6) the stage of providing validity and credibility, (7) calculating the frequencies of metaphors, (8) interpreting the data and (9) reporting the study stage.

RELIABILITY AND VALIDITY

One of the essential criteria of scientific research is that its results should be convincing. Therefore, validity and reliability are the two most commonly used criteria in studies. Analyzing obtained data to ensure validity and reliability, one of the essential processes in qualitative research, has been explained in stages. Examples of metaphors in teachers’ explanations under the specified categories are included in the results section (Ekici, 2016). Besides, from the beginning of the study, expert opinion has been sought at the stages of determining the subject of the study, designing the study, preparing the survey, determining the method and analyzing the data, categorizing the results, and discussing the results.

The data analysis process was explained in detail to ensure the validity and reliability of the study. “A total of 45 different metaphors under eight categories related to Covid-19 perceptions” and “A total of 56 different metaphors in seven different categories determined for school perceptions in the Covid-19 process” to check whether the metaphors represent the categories or not, the metaphors and sample sentences sent to each other by email are compared in the tables where the categories are marked with numbers in brackets, the tables filled with the category numbers next to the relevant metaphor are compared to ensure reliability. Frequency tables were created due to the expert opinion on the category under which metaphors should be included (Güveli et al., 2011). The number of consensus and disagreement was determined in the comparisons, and the reliability of the study was calculated by applying the Miles and Huberman’s (2002) formula separately for both metaphor justifications; [Reliability of the Study=Agreement/(Agreement+Disagreement)x100]. In qualitative studies, the desired level of reliability is achieved when the alignment between evaluations is 70% or above (Saban, 2009). Accordingly, the calculation made according to the Covid-19 perception: Reliability=94/(94+6)*100=94%. In the calculation made according to the perception of school in the Covid-19 process; Reliability=96/(96+4)*100=96% agreement has been achieved. Besides, in the results section, teachers’ views on both metaphors are encoded as T1-Woman, T2-Man.

FINDINGS

In this section, metaphors developed by the teachers in the study group regarding the perceptions of “Covid-19” and the perceptions of “School in the Covid-19 Process”, the different conceptual categories created in line with these metaphors, and the quotations about why the participants developed the metaphors (sample sentences belonging to the participants) are included. As a result of the analysis of the data;

- It was determined that teachers developed 45 different metaphors for Covid-19 perceptions, and these metaphors were grouped under a total of 8 different categories by examining their similar and different characteristics.
- When metaphors for teachers’ perceptions of the “School in the Covid-19 Process” were examined, it was determined that they developed a total of 56 different metaphors. These metaphors are grouped under seven categories by taking similar and different characteristics into account and examining them.

These findings were listed in tables, firstly as Covid-19 metaphors and the categories formed by these metaphors, then the metaphors of the perception of “School in the Covid-19 Process” and the categories developed by these metaphors. Direct quotations from sample sentences related to the reasons for creating metaphors of the participants were included to allow the reader to add his/her interpretation under each category and increase the validity and reliability of the study. In the sample sentences, the teachers were encoded as T1, T2 gender.

1. FINDINGS REGARDING TEACHERS’ METAPHORIC PERCEPTIONS TOWARDS COVID-19:

As a result of the data analysis obtained in the study, it was determined that the teachers produced 45 different metaphors. The number of teachers who wrote any metaphor was calculated, and each metaphor’s frequency values were determined. The metaphors and the frequency values of the metaphors produced by the teachers for the Covid-19 epidemic are presented in Table 3.

Table 3. Teachers’ Metaphors about Covid-19

No	Metaphor	f	No	Metaphor	f
1	Flu	37	24	An Economic and Social Mirror	1
2	Cancer	4	25	Prison	1
3	Flu, Pneumonia	3	26	Apocalypse	1
4	Illness	3	27	Fear	1
5	War	3	28	Horror movie	1
6	Grim reaper	2	29	Scary	1
7	An Unknown Situation	2	30	Mushrooms	1
8	Bronchitis	2	31	Fruit Fly	1
9	Monster	2	32	Sloppy Life	1
10	Escape From Self	2	33	Flea	1
11	Small Grain of Sand	2	34	Sars and Mers	1
12	Germ	2	35	A sneaky enemy	1
13	Sars	2	36	Leech	1
14	Plague	2	37	Truck Crash	1
15	Adhesive	2	38	Edge of the Cliff	1
16	AIDS	1	39	Warning	1
17	Friend	1	40	Tuberculosis	1
18	Immune Filter	1	41	Loneliness	1
19	Infectious Disease	1	42	Pneumonia	1
20	Ignorance	1	43	Hellhound	1
21	Dead end	1	44	Poisoning	1
22	Thorny Plants	1	45	A poisonous flower	1

When Table 3 is examined, it is seen that the participants have produced a total of 45 different metaphors regarding the Covid-19 pandemic. Among these metaphors, the metaphors frequently used by the participants are “Flu”, “Cancer”, “Illness”, “War”, “Flu, Pneumonia”. When the metaphors produced by teachers are examined in general, it is seen that most of them create negative metaphors for the Covid-19 outbreak and that the metaphors produced are primarily associated with the disease and lethality characteristics of the pandemic.

1.1 CATEGORIZING TEACHERS’ METAPHORS FOR COVID-19:

Forty-five different metaphors produced by teachers were evaluated. After the evaluation, metaphors that represented similar features were brought together and analyzed and categorized. Each category is named to express its characteristics. In this context, it has been organized by grouping under eight categories in total. The metaphors of “Monster”, “Flu”, “Disease”, “Cancer”, “Sars”, “War” and “Plague” have been included in more than one category. During the analysis of the data in the research, it was taken into consideration that the categories may be different from each other but related to each other in a way. The metaphors stated by the participants emphasizing more than one conceptual category were determined as a criterion to detect mutual relationships. In the qualitative data analysis program, the conceptual categories found to be related and the direction of the relationship between them were specified, and quotations describing these relationships were included.

The participant metaphors grouped under the specified categories were explained in order. Conceptual categories related to the metaphors created by teachers for their perceptions of Covid-19 are presented in Table 4.

Table 4. Conceptual Categories Created Regarding Covid-19 (Coronavirus)

Metaphor Category (f:8)	f
Resembling Other Diseases	42
Infectiousness	15
Damaging	12
Fatal	12
Uncertainty	11
Social Order	4
Immunity	2
Isolating	2
Total	100

When Table 4 is examined, it is understood that the participants' metaphors regarding Covid-19 perceptions are grouped under eight different conceptual categories. These categories are respectively “Resembling Other Diseases”, “Infectiousness”, “Damaging”, “Fatal”, “Uncertainty”, “Social Order”, “Immunity”, “Isolating”. It is understood that the category with the highest frequency of metaphors is the category of ‘Resembling Other Diseases’. The metaphors in each conceptual category that teachers created for the Covid-19 pandemic were explained in detail within their own categories. Sample sentences related to each metaphor that were created by teachers are also included.

1.1.1 RESEMBLING OTHER DISEASES CATEGORY:

Forty-two of the metaphors which the participants created were associated with the quality of Covid-19 perceptions showing *Similar Effects with Other Diseases*. The metaphors and frequency values created under this category from the highest to the lowest are “Flu”, “Cancer”, “Disease”, “Sars, Truck Stroke, Pneumonia from each of these metaphors.” Some of the metaphors which are related to this category and the reasons for their development were stated as follows by the teachers:

"Covid-19 is like severe flu because the signs and symptoms are similar to each other." (T57, Male)

"Covid -19 is similar to sars because most of the symptoms are common." (T91, Female)

"Covid -19 is like the flu because it causes headaches and bone pain." (T33, Female)

"Covid -19 is similar to cancer because there is also no cure or solution for cancer yet." (T48, Female)

"Covid-19 is similar to flu because you experience the same symptom when you have severe flu." (T50, Female)

1.1.2 INFECTIOUSNESS CATEGORY:

Fifteen of the metaphors created by the participants were associated with the easy spreading and infectious qualities of the Covid-19 outbreak. That is why these metaphors have been collected under the *infectiousness* category. The metaphors and frequency values created under this category from the highest to the lowest are: "Germ", "Adhesive", "Flu", "Aids, Friend, Infectiousness Illness, Ignorance, Fruit Fly, Sloppy Life, Flea, Leech, Black Death from each of the metaphors". Some of the metaphors which are related to this category and the reasons for their development are stated as follows by the teachers:

"Covid-19 is like a germ because it spread quickly." (T44, Female)

"Covid-19 is like ignorance because it is infectious." (T58, Male)

"Covid-19 is similar to leech because it sticks to human." (T100, Male)

1.1.3. CATEGORY OF DAMAGING:

Twelve of the metaphors that the participants created were associated with the qualities of the covid-19 outbreak, such as sickening and poisoning. Therefore, these metaphors have been grouped under the category of *Damaging*. The metaphors and frequency values which were created under this category are from the highest to the lowest and one from each of the metaphors of "influenza, pneumonia", "bronchitis", "Monster, spiny plant, Apocalypse, fungus, Sars and Mers, insidious enemy, a poisonous flower". Some of the metaphors which are related to this category and the reasons for its development are stated by teachers as follows:

"Covid-19 is similar to pneumonia because it damages all organs, especially the lungs." (T83, Female)

"Covid -19 is similar to bronchitis because it reaches the liver." (T67, Female)

"Covid -19 is similar to mushrooms because it multiplies all of a sudden." (T8, Woman)

1.1.4 CATEGORY OF FATAL:

Twelve of the metaphors which the participants created were associated with the lethal nature of the Covid 19. Therefore, these metaphors have been grouped under the category of *Fatal*. The metaphors and frequency values created under this category are from the highest to the lowest and one from each of the metaphors of "Azrail", "Monster, disease, cancer, fear, Sars, war, plague, tuberculosis, Demon, poisoning". Some of the metaphors which are related to this category and the reasons for its development are stated by teachers as follows:

"Covid -19 is similar to the Azrail because it claims many lives." (T38, Male)

"Covid -19 is like a monster because it is a monster that has taken our health from us." (T13, Female)

1.1.5 CATEGORY OF UNCERTAINTY:

Eleven of the metaphors the participants created were associated with the unknown causes of the Covid-19 outbreak, its treatment that cannot be found, and its characteristics, such as the tension aroused among people. Therefore, these metaphors have been grouped under the

category of *uncertainty*. The metaphors and frequency values which were created under this category are from the highest to the lowest; “An unknown situation”, “self-escape”, “little grain of sand”, “dead end, bottomless well, horror film, Scary, cliff-edge” metaphors. Some of the metaphors related to this category and the reasons for its development are stated by teachers as follows:

“Covid-19 is similar to an unknown situation. Because it is not yet known or it has not been explained what the disease is.” (T35, Male)

“Covid-19 is similar to self-escape. Because it is unclear who has the disease and how it can be transmitted to whom.” (T5, Female)

1.1.6 CATEGORY OF SOCIAL ORDER:

Four of the metaphors which the participants created were associated with the Covid-19 pandemics in terms of their impact on society and society itself. Therefore, these metaphors have been grouped under the category of *social order*. Metaphors and frequency which were values created under this category are from the highest to the lowest; “War”, “An Economic and Social Mirror”, “Warning”. Some of the metaphors which were related to this category and the reasons for its development are stated by teachers as follows:

“Covid-19 is similar to “war”. Because, during the war, weak people die, and the strong ones survive.” (T26, Male)

1.1.7 CATEGORY OF IMMUNITY:

Two of the metaphors which the participants created were associated with the relationship of the Covid-19 outbreak with the immune system. Therefore, these metaphors have been grouped under the category of *immunity*. The metaphors and frequency values created under this category are “immune filter” and “Flu”. Some of the metaphors which were related to this category and the reasons for its development are stated by teachers as follows:

“Covid-19 is similar to an immune filter. Because it filters out people with weak immunity.” (T65, Female)

1.1.8 THE CATEGORY OF ISOLATING:

Two of the metaphors created by the participants were associated with the Covid-19 outbreak with the nature of keeping people away from everything. For this reason, these metaphors are grouped under *The Category of Isolating*. The metaphors and frequency values used under this category are “Loneliness” and “Prison”. Some of the metaphors related to this category and the reasons for their development were stated as follows by the teachers:

“Covid-19 is like loneliness. Because you are left alone.” (S56, Male)

2. FINDINGS REGARDING TEACHERS’ METAPHOR PERCEPTIONS ABOUT ‘SCHOOL IN THE COVID-19 PROCESS’

In this section, the metaphors developed by the teachers in the study group regarding the perceptions of “School in the Covid-19 (Coronavirus) Process”, different conceptual categories created in line with these metaphors, and sample expressions of the participants about the metaphors are included. In the sample sentences, the teachers were coded as ‘T1, T2... Gender’.

As a result of the analysis of the data gathered in the study, it was determined that teachers produced 56 metaphors that are considered valid. The number of teachers who wrote any metaphor was calculated, and each metaphor’s frequency values were determined. The metaphors and the frequency values that teachers have produced for their perceptions of the “School in the Covid-19 (Coronavirus) Process” are presented in Table 5.

It is seen from Table 5 that teachers have produced a total of 56 different metaphors regarding their perceptions of “*School in the Covid-19 (Coronavirus) Process*”. Among these created metaphors, the metaphors that the participants usually use are; “Danger Zone”, “Abandoned Building”, “Epidemic Point / Virus Nest (f: 7)”, “House”, “Orphan Child” and “Empty box, Torment, Chaos, Hospital, Safe area, Torment, Fruitless tree, Unbroken stone from each of the metaphors”. When the metaphors produced by teachers are analyzed, most of the teachers’ perceptions of school during the Covid-19 contain negative metaphors. It is seen that most of the metaphors produced are associated with the abandonment, dangerous environment, and epidemic/virus nest feature of the epidemic.

Table 5. Metaphors of the Perception of “School in the Covid-19 (Coronavirus) Process”

No	Metaphor	f	No	Metaphor	f
1	Danger zone	19	29	Ghost	1
2	Abandoned building	9	30	The nomad who moved everywhere	1
3	Pandemic point/virus slot	7	31	A peaceful place	1
4	House	4	32	Workplace	1
5	Orphan child	3	33	Closed garage	1
6	Empty box	2	34	A dark world	1
7	Torment	2	35	Shipping company	1
8	Safe zone	2	36	Folk remedy	1
9	Hospital	2	37	Harbor	1
10	Chaos	2	38	Market	1
11	Fruitless tree	2	39	Minefield	1
12	An unbroken rock	2	40	Fruit	1
13	Island	1	41	Unhappy family	1
14	Another model	1	42	Breath	1
15	Hard on the one hand, beautiful on the other	1	43	Nor school	1
16	Empty pool	1	44	Online cage	1
17	Space	1	45	Bus	1
18	Grieved teacher	1	46	Diamond	1
19	Propagator silent boy	1	47	Guide service	1
20	Ignorant human mind	1	48	A vulnerable state	1
21	Non-working factory	1	49	A silent ship	1
22	Desperation	1	50	A silent place	1
23	Roof	1	51	Danger	1
24	Park without children	1	52	A weird place	1
25	Desert	1	53	Desired place to be reached	1
26	Inaccessible environment	1	54	Building meaningless	1
27	Sun	1	55	Pedestrian in rainy weather	1
28	Flower waiting for the sun	1	56	Compulsory online education	1

*House=2	*Hospital=2	*Orphan Child=2	*Pandemic Point/Virus Slot=2	*Danger Zone=2

* These metaphors were used in more than one category at the same time.

2.1 CONCEPTUAL CATEGORY ACCORDING TO SIMILARITIES AND DIFFERENCES OF METAPHORS PRODUCED FOR THE PERCEPTION OF ‘SCHOOL IN THE COVID-19 PROCESS’:

Fifty-six different metaphors produced by teachers are evaluated comprehensively. After the evaluation, metaphors representing similar characteristics were brought together. The metaphors that include similar features were re-examined and categorized. Each category has been named to express its features. In this context, the metaphors that teachers have produced for “*School in the Covid-19 Process*” are grouped under a total of seven categories: “Abandoned”, “Dangerous”, “Contagious”, “Safe”, “Helpless”, “Education” and “Fear”. Metaphors created by teachers who are grouped under these categories are explained respectively.

Table continues...

The conceptual categories of the metaphors that teachers created for their perceptions of “School in the Covid-19 Process” are shown in Table 6.

Table 6. Conceptual Categories Regarding Perception of ‘School in Covid-19 Process’

Metaphor Category (f=7)	f
Abandonment	31
Dangerous	22
Contagious	17
Safe	13
Desperate	7
Education	6
Horror	4
Total	100

The metaphors that the teachers created for the “School in the Covid-19 Process” were categorized by grouping under the categories of “Abandoned”, “Dangerous”, “Contagious”, “Safe”, “Helplessness”, “Education” and “Fear”. It is understood from the Table 6 that the category with the highest frequency of metaphors is “Abandoned” and “Dangerous”. The metaphors in each conceptual category that teachers created for their perceptions of “School in the Covid-19 Process” are explained in detail within their own categories.

2.1.1 ABANDONMENT CATEGORY:

Thirty-one of the metaphors created by teachers, the perceptions of School in the Covid-19 Process, were associated with abandoned buildings, homeless and quiet environments. For this reason, these metaphors are grouped under the Abandoned category. The metaphors and frequency values produced under this category are as follows, from the highest to the lowest; “Abandoned building”, “Empty box”, “Tree without fruit”, “Orphan child”, “Silence-indicating environments”, “Island, Empty pool, Space, Ignorant human mind, Factory that does not work, Flower waiting for the sun, Ghost, Fruit, Unhappy family, Online cage, Not a school”. For a better understanding of the metaphors produced by the teachers, some of the teachers’ sentences are given as direct quotes:

“In the Covid-19 Process, School is like abandoned ruins. Because any place that does not have a child’s chirp is ruin in my eyes.” (T60, Female)

“In the Covid-19 Process, the School is like an empty building because of a place where there are no teachers and students in education is idle.” (T34, Male)

“In the Covid-19 Process, School is like a child without a mother and father. Because there are no teachers and students. It lacks the essential elements that make the school a school.” (T81, Female)

“In the Covid-19 Process, the School is like a desert. Because it is empty and desolate.” (T43, Female)

2.1.2 HAZARDOUS CATEGORY:

Twenty-two of the metaphors that teachers created were associated with the perceptions of “School in the Covid-19 Process” with dangerous environments and situations for people. Therefore, the produced metaphors were grouped under the *Dangerous* category. The metaphors and frequency values produced under this category are as follows, from the highest to the lowest; “Danger Zone”, “Epidemic point/Virus nest”, “Chaos”, “Contagious silent child, Hospital, a dark world, Bus, a vulnerable state, Reaching the desired place, from each of the pedestrian metaphors in rainy weather”. For a better understanding of the metaphors produced by teachers, some of the teacher sentences are as follows:

“School in the Covid-19 Process is similar to a dangerous environment. Because I do not believe that the necessary precautions are provided enough.” (T3, Female)

“School in the Covid-19 Process is similar to the contamination area. Because it is a closed area and there is no recess.” (T18, Female)

“School in the Covid-19 Process is similar to a vulnerable state. Because it is not clear from whom and how the case will come.” (T28, Male)

2.1.3 INFECTIOUS CATEGORY:

When the perceptions of the “School in the Covid-19 Process” were examined, it was seen that seventeen of the metaphors created by the teachers were associated with the ease of spread and the characteristics of the contagious environment. These metaphors are grouped under the Contagious category.

The metaphors and frequency values produced under this category are as follows, from the highest to the lowest; “Danger zone”, “Closed garage, Cargo company, Minefield, Mandatory online education, an Epidemic point from each of the metaphors. For a better understanding of the metaphors produced by the teachers, some of the teacher sentences are as follows:

“School in Covid-19 Process is similar to the dangerous area. Because the risk of contamination is high.” (T37, Male)

“Because of the students are together, in the Covid-19 Process, the School is similar to the epidemic point.” (T55, Male)

“In the Covid-19 Process, the School is similar to the cargo company. Because it is one of the best distribution places of the virus from person to person.” (T71, Male)

2.1.4 SAFE CATEGORY:

In thirteen of the metaphors created by the teachers, it was seen that the perceptions of “School in the Covid-19 Process” were associated with a safe environment and a place to be trusted. Therefore, the produced metaphors are grouped under the Safe category. The metaphors and frequency values produced under this category are as follows, from the highest to the lowest; “House”, “Safe area”, “Unbroken stone”, “Difficult and beautiful on the one hand, Roof, Strange place, Hospital, Peaceful place, Harbor, From each of the market metaphors”. For a better understanding of the metaphors produced by the teachers, some of the teacher sentences are as follows:

“School in the Covid-19 Process is like home. Because it is safe.” (T30, Male)

“School in the Covid-19 Process looks like an extraordinary place. Because everyone is distant.” (T67, Female)

2.1.5 DESPERATE CATEGORY:

Seven of the metaphors created by the teachers have been associated with the Desperate metaphor, as people feel desperate because of Covid 19. The metaphors and frequency values produced under this category are” Despair, Inaccessible environment, Sun, Workplace, Husband medicine, Orphan child, Humbled teacher”. For a better understanding of the metaphors produced by the teachers, some of the teacher sentences are as follows:

“In the Covid-19 Process, the School is similar to its despair. Because it does not work whether you go or not” (T66, Female)

2.1.6 EDUCATION CATEGORY:

Six of the metaphors created by the teachers were associated with the Education metaphor, as the perceptions of “School in the Covid-19 Process” evoke the educational and teaching environment of students and teachers. The metaphors and frequency values produced under this category are as follows, from the highest to the lowest; “House, another model, the nomad who moved everywhere, Guidance service, from each of the diamond metaphors”. For a better

understanding of the metaphors produced by the teachers, some of the teacher sentences are as follows:

“School in the Covid-19 Process is like home. Because we teach at home.” (T88, Female)

2.1.7 HORROR CATEGORY:

Four metaphors about the perceptions “School in the Covid-19 Process” were associated with the *Fear* metaphor because it evokes the concepts of the place to be feared and the tormented environment. Under this category, the metaphors and frequency values are as follows: “Torture, Danger, Breathing from each metaphor”. For a better understanding of the metaphors produced by the teachers, some of the teacher sentences are as follows:

“School in Covid-19 Process is similar to the harsh environment. Because he has not touched the children, you cannot give your love fully, you cannot play games, there is always fear.” (T5, Female)

3. FINDINGS REGARDING PARTICIPANTS HAVING COVID-19 (CORONAVIRUS) IN THEIR FAMILY

Forty-one out of 100 participants stated that they had a family member who had the Covid 19. The demographic characteristics of the participants who have Covid-19 in their families are shown in Table 7.

Table 7. Demographic Characteristics of Participants with Covid-19 in Their Family

Variable	Features	f	%
Gender	Female	29	70,73
	Male	12	29,27
Education Status	Associate degree	0	0
	Bachelor degree	38	92,68
	Master	3	7,32
	PhD	0	0
Branch	Preschool Teacher	6	14,63
	Classroom Teacher	17	41,46
	Other Branch Teacher	18	43,90
Province	Hatay	35	85,37
	Gaziantep	6	14,63
Total		41	100

3.1 ‘COVID-19’ PERCEPTIONS OF PARTICIPANTS WITH COVID-19 (CORONAVIRUS) IN THEIR FAMILIES

Considering the Covid 19 perception-related responses of those who had Covid-19 in their families, the participants stated that Covid-19 is more related to other diseases. The disease is a negative and uncertain condition. When this situation is compared with the participants who do not have Covid-19 in their family, it is seen that the state of being related to other diseases coincides with the answers given. There is no significant difference in this category. However, when we look at the general responses of those who have Covid-19 in their families, it is seen that the uncertainty, unfavorable condition of the disease is more dominant than those who have not had Covid-19 in their families. Also, those who did not have Covid-19 in their families expressed Covid-19 to be more contagious and deadly than those who had it. The categories created with the answers given for the Covid-19 perceptions of the participants who had Covid-19 in their families and those who did not have Covid-19 are shown in Table 7.1.

Table 7.1 Metaphors, Categories and Frequency Values of Covid-19 Perceptions Used by Those Who Have Covid-19 and Who Did Not Have Covid-19 in Their Family

'COVID-19' Perception Categories			Damaging	Associated with Other Diseases	Infectiousness	Deadly	Isolating	Ambiguity	Immunity	Social order	Total
Has anyone in your family had COVID-19? Category Usage According to the	YES	f	4	16	5	5	3	5	2	1	41
		%	9,76	39,02	12,20	12,20	7,32	12,20	4,88	2,44	100
	NO	f	4	24	9	9	4	6	0	3	59
		%	6,78	40,68	15,25	15,25	6,78	10,17	0,00	5,08	100

3.2 'SCHOOL IN COVID-19 PROCESS' PERCEPTIONS OF PARTICIPANTS WITH COVID-19 (CORONAVIRUS) IN THEIR FAMILIES

Considering the answers given by those who had Covid-19 in their family for the perception of "School in the Covid-19 Process", the participants stated that the school was abandoned, dangerous, and had a high risk of contagiousness during the Covid-19 process. Compared to the answers of those who did not have Covid-19 in their families, participants who had Covid-19 in their families find the school more abandoned and dangerous. Besides, participants who did not have Covid-19 in their families found the school unsafe, more contagious than those who had it. At the same time, finding it safe revealed a contradictory situation in the answers. The categories formed by the responses given by the participants who had Covid-19 in their families and those who did not have Covid-19 for the perception of "School in the Covid-19 Process" are shown in Table 7.2.

Table 7.2 Metaphors, Categories, and Frequency Values Related to School Perceptions in the Covid-19 Process by Those Who Have Covid-19 and Those Who Have Not.

'DURING COVID-19 PROCESS SCHOOL Perception Categories			Abandoned	Infectious	Helpless	Education	Safe	Fear	Dangerous	Total
Is Anybody In Your Family With COVID-19? Category Usage According to the Answers Given to the Question	YES	f	15	5	3	3	3	0	12	41
		%	36,59	12,20	7,32	7,32	7,32	0,00	29,27	100
	NO	f	15	12	4	3	10	4	11	59
		%	25,42	20,34	6,78	5,08	16,95	6,78	18,64	100

DISCUSSION AND CONCLUSION

1- THE PERCEPTIONS OF TEACHERS ABOUT COVID-19

When teachers' most produced metaphors for COVID-19 are examined in general, most of the metaphors for the Covid-19 outbreak are negative. The teachers associate Covid 19 with the disease and lethality feature because they have negative thoughts about Covid-19.

The study shows that teachers mainly produced metaphors that can evaluate Covid-19 in the category of "Resembling Other Diseases". This is because when the symptoms of the Covid-19 virus announced by WHO (2020) are examined, it is seen that metaphors developed similar to their symptoms such as "fever, dry cough, sore throat" are compared to other diseases such as flu and cancer in terms of the course and symptoms of the disease.

The most frequently produced metaphors in the category of "*Infectiousness*" are germ, adhesive, and flu. With these metaphors, teachers emphasize that the Covid-19 virus spreads rapidly. Considering the specified number of cases, while 50 days were required for the first 100,000 cases, it took 13 days for the second 100,000 cases to be reported worldwide, and this period gradually decreased (Özatay and Sak, 2020). At this point, Karcioğlu (2020) emphasized that the disease spreads through human transmission, and infected individuals spread the disease rapidly to the environment.

In the category of "*Damaging*", the flu-pneumonia and bronchitis metaphors were primarily produced. The teachers focus on the damage caused by the Covid-19 virus to the human body to justify their metaphors in this category. Studies show that the Covid-19 virus harms the respiratory tract (Gülbahar and Gök-Metin, 2020; Sandalcı, 2020).

The most produced metaphor in the "*Fatal*" category is Azrail. Teachers focused on the lethal effect of Covid-19 in the metaphors they created in this category. According to the data published by WHO (WHO) (2020) on January 2, 2021, it was reported that a total of 1.8 million people died in the world due to Covid-19, and this number was stated to be higher than the number of deaths caused by 'sars' and 'mers' diseases (Karcioğlu, 2020).

The most frequently produced metaphors in the category of "*Uncertainty*" are an unfamiliar situation, self-escape, and little grain of sand. In the metaphors they created, the teachers focused on the unknown causes of the Covid-19 virus, its treatment that could not be found, and the tension it arouses in person. It can be said that this is due to the rapid changes in the minds of individuals, with the rapid delivery of different ideas about the disease and unjustified information by the media.

In the category of "*Social Order*", war, an economic and social mirror, warning metaphors were created. The teachers emphasized the impact of the Covid-19 virus on society with the metaphors and justifications they made (Güngör, 2020). In his research, he stated that the epidemic that increased due to the human failure to fulfill its responsibility to nature and the effect of globalization was the Covid-19 epidemic.

When the reasons for the loneliness and prison metaphors created in the "*Isolating*" category are examined, the findings show that the Covid-19 virus keeps people away. To avoid infecting more people, the Ministry of Health and the World Health Organization emphasized the necessity of not going outside unless required. Again, the social isolation process has been initiated all over the world. The teachers also carried out the education process from their houses and were physically confined to homes. All this closure and contamination process overlaps with the metaphors and justifications of the teachers.

They associated Covid-19 with immunity in the justifications of the immune filter and flu metaphors created in the "*Immunity*" category. Jawhara (2020) found that individuals with weak immune systems have a high risk of developing complications related to SARS-CoV-2. (as cited in Acar Tek and Koçak, 2020). The teachers think that individuals with robust immune systems of the Covid-19 virus are less affected by the disease.

In the literature review, there was no study on the metaphorical perception of Covid-19 on teachers that we could compare the study; however, when the similar studies of Arı and Kevser (2020) named Metaphoric Perceptions of Secondary School Students towards Covid-19 were examined, it was seen that the most used metaphor category was "Contagiousness". The most significant difference between these two studies is that the teachers associate Covid-19 with more "other diseases", while the students emphasize the contagious feature of the virus. The possible reason for this is that, compared to children, teachers have more knowledge and experience about diseases, and they associate it with Covid-19.

In the literature review, again, when compared with the results of Saatçi and Aksu (2020)'s research to determine the coronavirus perceptions of undergraduate international students in our country through metaphor; the concept of coronavirus was expressed in negative categories,

similar to the one in this study, but the innovation category, which was created differently, was a positive category and this was expressed as an opportunity and a new beginning.

TEACHERS' PERCEPTIONS OF SCHOOL IN THE COVID-19 PROCESS

Looking at the metaphors produced regarding the school concept in the Covid-19 process: the findings show that the teachers' perceptions of school are negative. The most produced metaphor related to school perception is the "*Danger Zone*" metaphor, which has many reasons such as crowded schools and the spread of the virus in-crowd and indoors.

In the study, the teachers produced metaphors related to the school, mainly in the category of "*Abandonedness*" during the Covid-19 process because schools were shut down during the epidemic process, the absence of classes, and the transfer to distant education.

In the study, the most frequently produced metaphors under the category of the "*Dangerous*" are "Dangerous Zone", "Epidemic point / Virus nest". This can be the long time spent at school and the thought that the measurements taken are insufficient.

In the study, the most frequently produced metaphors under the category of the "*Infectious*" is the "Dangerous zone", which is the idea that the spread of the virus will be higher as a result of the increase in the contact of students and teachers as a result of the high number of schools and the time spent together.

The findings show that the most frequently produced metaphors under the category of "*Safe*" are "House", "Safe area," and "Unbroken stone". The metaphors produced here are positive, unlike the others, and the idea is that the school is safer than the street and many other environments.

Produced metaphors related to the idea of helplessness are dominant in all metaphors within the scope of the "*Desperate*" category.

In the study, the most used metaphor in "*Education*" is "House" because the lessons are taught from home through EBA and various other platforms.

The most used metaphor in the "*Horror*" category is "Torture". The possible reason for this is the inability to touch children due to the precautions taken while the schools are open and the inability to express their love when they are closed.

In the literature review, no similar study was found on the perception of school in the Covid-19 process. When the metaphorical perception studies about the school are examined, in Ozdemir and Akkaya's (2013) study, four of ten categories created by teachers and students about school were negative, and six were positive. When the findings are evaluated in general, students and teachers had a negative attitude towards school; Örüçü (2014) and Saban (2008) found that they generally had a positive perception of the school concept.

HAVING A MEMBER WITH COVID-19 DISEASE IN THE FAMILY

In this part, teachers who answered "Yes" and teachers who answered "No" to the question of whether there is any Covid-19 in their family are compared and discussed.

When metaphors of these two groups were compared, it was seen that there is a meaningful difference only under the category of "ambiguous". They had similar results under the other categories.

As a result of the comparison of the metaphor categories they created regarding the perception of school in the Covid-19 process; those who answered "Yes" found the process more dangerous than others, and those who said "No" found the school safer, found the virus more contagious and found the process more frightening. Other categories had similar rates.

The findings show that the teachers have also been psychologically affected by this epidemic worldwide since 2019. The transfer to distant education, which many teachers did not experience before, the inadequacy in this field, the differentiation of communication with the students in the virtual environment, and the necessary equipment (internet, computer, tablet, etc.) causes many anxieties and stress situations due to the losses experienced both in their

families and in their families. However, from the metaphors produced, it can be concluded that the teachers have the correct information about the process due to the similar illness processes that they or the people around them had and their effects experienced according to the study groups compared.

SUGGESTIONS

Considering that teachers' perceptions may change in the following pandemic process, especially when making decisions about schools after vaccination, it is recommended to repeat this study using more comprehensive sample groups and in-depth interview techniques such as face-to-face or focus group work. After the pandemic, teachers' needs can be investigated to get rid of the effects of the process faster, and seminars and psychological support activities can be carried out accordingly.

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SOCIAL ANXIETY, DEPRESSION, COPING SELF-EFFICACY, AND COPING STRATEGIES AMONG COLLEGE STUDENTS

Abstract: The transition to college and its associated social challenges could trigger social anxiety and depression among young college students. There is a paucity of literature relating coping self-efficacy, coping strategies, social anxiety and depression. The current study aims to fill this gap by finding the contributions of gender, coping self-efficacy (CSE), and coping strategies onto the levels of social anxiety and depression among college students. It also aims to find race-ethnicity differences, considering students' level of social anxiety and depression. One hundred and fifty-eight students were recruited from the undergraduate psychology subject pool at a northeastern university. The Liebowitz Social Anxiety Scale, Diagnostic Inventory for Depression, Coping Self-Efficacy Scale and Brief COPE were used to measure the study variables. A one-way ANOVA and simultaneous multiple linear regression analyses were conducted to examine data. There were no significant race-ethnicity differences in social anxiety, depressive symptom severity, psychosocial impairment, and quality of life. However, gender and self-blame significantly predicted social anxiety; substance use, behavioral disengagement, and self-blame significantly predicted depressive symptom severity; and social support CSE significantly predicted psychosocial impairment. Gender, dysfunctional coping strategies and social-support CSE were significantly associated with social anxiety and depression among college students. The results have important implications for treatment intervention and outreach by college counseling personnel.

Keywords: college students, social anxiety, depression, coping self-efficacy, coping strategies

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INTRODUCTION

The transition from high school to college to pursue undergraduate studies is often a socially challenging circumstance for young adults. While some move to a different city, others move across states or even countries to attend college. This presents students with a significant change in social setting that could trigger or precipitate social anxiety disorder. Unfortunately, social anxiety disorder often goes unrecognized. As recent research suggests, the college population needs greater awareness of the symptoms and consequences of social anxiety disorder (Coles et al., 2015). Due to the enervating nature of social anxiety, it is not surprising that research illustrates that depression is often comorbid with social anxiety disorder (Garcia-Lopez et al., 2016; Ohayon & Schatzberg, 2010). Such comorbidity is likely to exacerbate the symptoms of social anxiety, especially if the student does not seek professional help. The present study explores social anxiety disorder and depression in undergraduate students and how they cope as measured by Coping Self-Efficacy (CSE) and coping strategies.

SOCIAL ANXIETY

Social anxiety disorder is characterized by a heightened anxiety of social situations (American Psychiatric Association (APA), 2013). Social anxiety disorder has a wide age of onset (ages 11 to 80) and is a risk factor for developing depressive and substance abuse disorders (Stein & Stein, 2008). Researchers have found that comorbidity between social anxiety disorder and depressive disorders is substantial (Garcia-Lopez et al., 2016), and that social anxiety disorder is characterized by clinically significant psychosocial impairment (Belzer & Schneier, 2004; Dalrymple & Zimmerman, 2007).

In terms of gender differences, Xu et al. (2012) stated that the lifetime prevalence of social anxiety disorder was higher in women (5.67%) when compared to men (4.20%). Furthermore, women with social anxiety disorder experience greater distress and have a more clinically severe presentation of their symptoms than their male counterparts (Asher & Aderka, 2018; MacKenzie & Fowler, 2013). Male college students who reported similar rates of use of alcohol as women, appear to drink in positive situations to enhance positive emotions, whereas women drink in negative situations to cope with negative emotions (Norberg et al., 2010). Hence, social anxiety could be a risk factor for alcohol use in college women, but it may serve as a protective factor for college men. Among undergraduate students with social anxiety, heavy situational drinking could be caused by both the desire to cope with negative affect as well as to avoid social scrutiny (Terlecki & Buckner, 2015). Literature also revealed that social anxiety does not predict social support seeking, and that coping strategies do not predict social anxiety (Wright et al., 2010).

Regarding racial differences, social anxiety was reported to be lower in White American college students and higher amongst Hispanic American and Asian American college students (Lesure-Lester & King, 2004). Being Native American was found to have increased risk for developing social anxiety (Grant et al., 2005). Compared to non-Hispanic Whites, social anxiety disorder was found to be directly related to suicidal ideation and attempts in Latino population (Rapp et al., 2017).

A review of literature revealed that multiple researchers examined how social anxiety relates to quality of life. Research suggested that social phobia was associated with significant impairments in the mental health, social functioning, and home and family domains related to quality of life (Olatunji et al., 2007) and fears of negative and positive evaluation were linked to lower levels of quality of life (Dryman et al., 2016).

Although mental health awareness has steadily been on the rise, studies prove that there is still room for significant improvement. Coles et al. (2015) conducted a study in college students to study their recommendations for anxiety disorders and their results revealed that the lowest rates of help-seeking recommendations were made for generalized anxiety disorder and social

anxiety disorder. This indicates a significant necessity for increasing mental health awareness among college student populations. Finally, research indicates that individuals with social anxiety disorder have an unemployment rate that is greater than the rate of patients with other anxiety disorders and that undergraduate students with social anxiety disorder experience significant disabilities in work, social, and family aspects of life which in turn lower their quality of life (Hakami et al., 2018; Moitra et al., 2010). Such findings imply that awareness, prevention, and treatment of social anxiety disorder is paramount, as individuals with social anxiety disorder are expected to work despite the debilitating nature of their symptoms.

DEPRESSION

Depression, usually known in its most common form as Major Depressive Disorder, is characterized by a pronounced dulled mood, sadness, hopelessness and inactivity for more than two weeks at a time (5th ed.; DSM-5; APA, 2013). Ibrahim et al. (2013) found that the mean prevalence rate of depression among university students was 30.6% - a markedly higher rate when compared to the general population. Literature revealed contrary findings in terms of racial differences and depression among college students. While some state that there is a marked difference between race-ethnicities (Sümer et al., 2008), others do not (Herman et al., 2011; Lund et al., 2014).

Several empirical studies have concluded that depressive symptoms occur more commonly in females when compared to their male counterparts. Boggiano and Barrett (1991) suggested that higher depression levels in female college students may be attributed to failing to achieve goals of positive, intimate relationships that they idealized, being worried about attractiveness and having body image concerns. Additionally, Dixon and Kurpius (2008) concluded that women reported greater depression, stress and mattering. Other research (Villatte et al., 2013) demonstrated that within first-year college students, the second most important variable contributing uniquely to depressive symptoms was a high level of anxiety and the fifth most important was being a female.

In addition, studies explored how psychosocial impairment and quality of life are related to depression levels. There appears to be an inverse association between college students' quality of life and depression (Abdel-Khalek, 2010) and women are more inclined to have higher levels of depression and a lower quality of life (Bonsaksen, 2012). Aalto-Setälä et al. (2002), reported in their study that 10% of the young adults that they examined reported depression with associated psychosocial impairment. Female students reported significantly higher levels of psychosocial impairment compared to male students (Luna & MacMillan, 2015).

A large body of literature is available on the relation between coping strategies and depression. Depression seems to predict social support-seeking and coping strategies do not predict depression (Wright et al., 2010). Furthermore, the three most prominent coping domains reported by men for depression were "promote traditional masculinity", "promote flexible masculinity" and "social concealment and minimization" (Spendelov, 2015). When compared to controls, individuals with major depressive disorders employed maladaptive strategies (especially avoidant behaviors) or dysfunctional coping strategies (Gore-Felton et al., 2006; Hu et al., 2013; Ziarko et al., 2014).

In Hispanic immigrants, it was found that problem-focused and active-coping were positively related to depression, and that problem-focused coping accounted for more variance in depression when compared to active-coping (Cobb et al., 2016). In a Turkish study, female students used more approach-oriented coping whereas male students used more avoidant-oriented coping and those who used low levels of both these coping strategies were reported to have higher levels of depression symptoms (Ongen, 2006). The gender differences were attributed to women endorsing affiliative, help-seeking behaviors as compared to men. Additionally, the author explained that men may interpret help-seeking behaviors as failing and

that minimization of problems gives them a false sense of control over their lives, thus leading them to resort to avoidant coping strategies.

COPING SELF-EFFICACY

Coping self-efficacy (CSE) is the belief in one's ability to appropriately manage stressful situations (Chesney et al., 2006). Literature shows that there have been numerous studies conducted with college students aimed at studying their CSE.) Research illustrated that Chinese nursing undergraduate students had CSE that helped them cope with stressful research projects (Zhang et al., 2016) and that CSE significantly predicts academic stress in Hispanic college students (Watson & Watson, 2016). Finally, MacNeil et al. (2012) found that students entering college with an avoidance coping style and a low coping self-efficacy are more prone to developing disordered eating habits, especially if they are experiencing associated stress.

Literature suggests that coping self-efficacy is related to depression and social anxiety. Kwasky and Groh (2014) revealed that in young college women, higher levels of depression was associated with lower levels of CSE. As per Thomasson and Psouni (2010), severity of social anxiety and associated impairment were related to low self-efficacy and this relation was partially mediated by dysfunctional coping strategies. Finally, they suggested that low self-efficacy may lead to greater levels of dysfunctional coping strategies in social anxiety and that employing dysfunctional coping strategies may in turn increase the levels of impairment associated with social anxiety. In a sample of people with low vision, it was found that lower acceptance levels and higher helplessness levels were both associated with lower problem-focused CSE, which subsequently increased levels in depressive symptom severity (Sturrock et al., 2016).

COPING STRATEGIES

Coping is the ability to manage the perceived discrepancy between situational demands and individual resources, which evolves with a person's maturity, are dynamic, and are subject to change (Sarafino & Smith, 2011). An adaptive coping style aims at tolerating or adjusting to the stress by maintaining a positive self-image and a healthy relationship with the surrounding environment (Morrison & Bennett, 2006). A multicultural European study revealed that, among university students, stress levels were negatively correlated with positive coping styles, social support, self-esteem, and university satisfaction (Lyrakos, 2012). Additionally, problem-focused coping strategies appear to be the most commonly used coping strategies by university students to efficiently combat stress (Amiri et al., 2015).

Conversely, negative coping styles refer to strategies used by individuals that may momentarily relieve them from their stress in an unhealthy manner (Sarafino & Smith, 2011). Thamby Sam et al. (2016) found that, in a group of pharmacy students, an increase in stressors was associated with an increase in negative coping strategies such as self-blame, substance use, and denial. found that university students endorsing more perfectionism also endorsed higher levels of immature coping styles, especially men (Zhang & Zhao, 2010; Park et al., 2010).

In terms of gender differences in coping strategies, there appears to be no significant differences between men and women in the use and efficacy of coping strategies (Cronqvist et al., 1997). However, male students, across all age groups, reported using significantly higher than average use of avoidance coping strategies than female students (Cabras & Mondo, 2018; Hung-Bin Sheu & Sedlacek, 2004).

Regarding race-ethnicity differences, African American adolescents used more diversions, self-reliance, spiritual support, close friends, demanding activities, solving family problems, and relaxation more frequently than Caucasian adolescents (Chapman & Mullis, 2000). Furthermore, African Americans were more open to seeking help whereas Asian Americans tended to use avoidant coping strategies (Hung-Bin Sheu & Sedlacek, 2004).

Cooper et al. (2008) explained the results of a study exploring coping strategies, anxiety, and depression, by classifying the 14 subscales in Brief COPE into three groups – dysfunctional

coping strategies, problem-focused coping strategies, and emotion-focused coping strategies. The authors found that employing emotion-focused strategies prevented caregivers from developing anxiety in the long run. The classification system used in this study will be further utilized in the discussion section of this study.

PURPOSE OF THE STUDY

As illustrated above, there is a body of literature demonstrating the relation between depression and CSE, and numerous studies have examined the relation between coping strategies and social anxiety disorder and depression. However, there is a dearth of research concerning the relation among these four variables. The current research study aims to fill this gap so that higher education institutions can design psychological outreach and intervention programming more effectively.

The purpose of this study was to determine associations between social anxiety, depression, coping self-efficacy, and coping strategies among a group of college students. An additional purpose was to identify how race-ethnicity might be associated with these study variables. Based on the literature review, the following research questions were formulated: 1) How do the variables of gender, coping self-efficacy and coping strategies predict social anxiety and depression among college students? 2) What are the race-ethnicity differences among students considering the study variables?

METHOD

SAMPLE

One hundred and fifty-eight college students, 40.5% whom identified themselves as male and 59.5% as female, participated in this study. The ages of the students ranged from 18 years to 32 years, with 96.8% of the participants falling in the range of 18-25 years of age ($M = 19.57$, $SD = 2.08$). Freshmen constituted 57% of the sample, sophomores 22.8%, juniors 8.9%, and seniors 10.8%. In the matter of participants' race-ethnicity, 53.8% of the participants identified themselves as European Caucasian, 25.3% as Asian/Pacific Islander, 7% as Black African, 7% as Other, 4.4% as Latino/Latina, and 2.5% as Middle Eastern.

DATA COLLECTION

We emailed undergraduate students in the psychology subject pool enrolled at a northeastern U.S. college campus the link to our anonymous survey. We included two validation questions in the survey to ensure that the participants were not arbitrarily answering the survey questions. When the data collection closed for the current study, the total number of participants was 186. However, after cleaning the data and excluding participants who had missing data on all or most of the items and/or failed to answer both of validation questions as per the instructions, the final sample included 158 students.

MEASURES

SOCIAL ANXIETY

The Liebowitz Social Anxiety Scale (Liebowitz, 1987) was used to measure the presence and degree of social anxiety among students. The scale consists of 24 social situations. Fear and avoidance are both measured in these situations on a 0-3 Likert-type scale, ranging from "none" to "severe" for fear, and "never" to "usually" for avoidance. Sample items include "Going to a party", "Speaking up at a meeting" and "Resisting a high-pressure salesperson". A total score, including all the item scores, is calculated, and higher scores indicate higher levels of social anxiety. The internal consistency for this scale, as measured by Cronbach's alpha, was found to be .95. This is supported by internal consistencies established in earlier studies that ranged from .81 to .98 (Beard et al., 2011; Heimberg et al., 1999), thereby suggesting a high reliability

for this scale. Concurrent validity was well-established by Beard et al. (2011), and convergent and discriminant validity were well-established by Heimberg et al. (1999).

DEPRESSION

The Diagnostic Inventory for Depression (DID, Zimmerman et al., 2004) was used to assess the level of depression in the students. The DID has three subscales – symptoms (consisting of symptom severity), psychosocial impairment, and quality of life. Higher scores on these subscales indicate higher levels of depression. The first subscale of symptom severity assesses for symptom criteria of major depressive disorder. Each item has five statements arranged in the order of increasing severity. An item score of 0 in this subscale indicates no disturbance, 1 indicates subclinical severity, and scores of 2 or more represent presence of depression symptoms. The items on the psychosocial impairment subscale (e.g. “During the past week how much difficulty have symptoms of depression caused in your usual daily responsibilities”) were rated on a 5-point Likert-type scale ranging from 0 indicating “no difficulty” to 4 indicating “extreme difficulty”. Items on the quality-of-life subscale (e.g. “During the past week how satisfied have you been with your relationships with your friends”) were rated on a Likert scale ranging from 0 representing “very satisfied” to 4 representing “very dissatisfied”.

All three subscales demonstrated high levels of internal consistencies – symptoms (.91), psychosocial functioning (.89) and quality of life (.90). Similar Cronbach’s alphas were found in the scales in the current study – symptom severity (.87), psychosocial impairment (.87), and quality of life (.91), suggesting high levels of internal consistencies. The validation study (Zimmerman et al., 2004) found that the test-retest reliability coefficients were 0.91 for symptoms, .82 for psychosocial functioning and .78 for quality of life demonstrating a high reliability. Convergent and discriminant validity were also well-established in the validation study for the symptom subscale.

COPING SELF-EFFICACY (CSE)

The Coping Self-Efficacy Scale (CSES; Chesney et al., 2006) was used to assess students’ level of coping self-efficacy. The scale consists of 26 items and is rated on an 11-point Likert-type scale, ranging from 0 (indicating “cannot do at all”) to 10 (indicating “certain can do”). The possible scores resulting from this scale range from 0 to 286 with higher scores indicating greater levels of CSE. Sample items include “When things aren’t going well for you, how confident are you that you can talk positively to yourself” and “When things aren’t going well for you, how confident are you that you can make unpleasant thoughts go away”. The three subscales recognized in the CSES are use problem-focused coping, stop unpleasant emotions and thoughts, and get support from family and friends. Reliability was well-established in the current study. Cronbach’s alpha was found to be .93 for problem focused CSE, .91 for stopping unpleasant thoughts and emotions, .80 for social support CSE and .96 for the total score of CSE. These values suggest high levels of internal consistencies for the scale and are supported by previous research (Watson & Watson, 2016). Chesney et al. (2006) established validity of the CSES by finding that test-retest correlations ranged from .40 to .80 (significant at $p < .005$), providing evidence for the scale’s test-retest reliability. Predictive and convergent validity were appropriately established by Colodro et al. (2010) and Chesney et al. (2006), respectively.

COPING STRATEGIES

We used the Brief COPE (Carver, 1997) to determine the type of coping strategies students employ. The scale is comprised of 28 items and 14 subscales. The items are measured on a 4-point Likert-type Scale, ranging from (1) “I haven’t been doing this at all” to (4) “I’ve been doing this a lot”. Sample items include “I’ve been giving up trying to deal with it” and “I’ve been getting help and advice from other people”. In the validation study (Carver, 1997), Cronbach’s alphas ranged from .50 to .90, for the various scales, with only three of them falling below .60, which indicated strong internal consistencies. These values are consistent with the

Cronbach's alphas for the current study wherein they ranged from .50 to .95. In this study, we excluded from analyses the two scales that fell below .60: self-distraction (.50) and acceptance (.54). Cooper et al. (2008) established strong test-retest reliability (across two time periods; after one year and after two years), convergent validity and concurrent validity in their study.

DATA ANALYSIS

The data were analyzed in three steps. First, a descriptive analysis was conducted to define the sample based on demographic characteristics. Then, an ANOVA was performed to explore race-ethnicity differences amongst students based on social anxiety and depression. Finally, separate multiple linear regression analyses were performed to determine the role of gender, coping self-efficacy and coping strategies in predicting social anxiety and depression. Gender was dummy coded so that it could be entered into the regression analyses.

FINDINGS

GROUP DIFFERENCES

A one-way ANOVA analysis was conducted to examine race-ethnicity differences considering students' level of social anxiety and depression. Results illustrated that there were no significant differences found between the various race-ethnicity identities and social anxiety, depressive symptom severity, psychosocial functioning, and quality of life.

REGRESSION ANALYSIS

To answer the first research question, the variables of gender, coping strategies and coping self-efficacy scales were entered together as predictors of the four criterion variables in four separate multiple linear regression analyses. The criterion variables included social anxiety, depressive symptom severity, psychosocial impairment, and quality of life. Analyses revealed that problem-focused CSE was excluded from all the regression models since it failed to meet the assumption of multicollinearity (tolerance levels were .000). This indicates that it independently predicted the same amount of variance as another variable in the regression model, hence its prediction was redundant.

The first model (Table 1) with predictor variables being gender, coping strategies, and CSE, accounted for 47% of the variance in social anxiety ($F(18, 121) = 6.74, p < .001$). The significant independent predictors of social anxiety were gender ($\beta = .34$) and self-blame ($\beta = .21$), when all other variables were controlled for. Gender was the stronger predictor of the two.

Table 1. Summary of simultaneous multiple linear regression analysis of gender, coping strategies, and coping self-efficacy predicting social anxiety

Variables	Social Anxiety		
	<i>B</i>	<i>SEB</i>	β
Gender	19.63	4.18	.34**
Active Coping	-.77	1.45	-.05
Denial	3.39	1.93	1.34
Substance Use	-3.09	1.58	-.15
Emotional Support	-.49	1.80	-.03
Instrumental Support	.57	1.80	.32
Behavioural Disengagement	-.44	1.66	-.02
Venting	.04	1.53	.002
Positive Reframing	.37	1.41	.02
Planning	2.13	1.61	.14
Humour	-.18	1.00	-.01
Religion	-.56	1.06	-.04
Self-blame	3.08	1.37	.21*
Stopping Emotions CSE	.25	.32	.17
Social Support CSE	-.13	.43	-.05
Total CSE	-.30	.16	-.50

R^2	.47		
C	62.10		
F	6.74, $p < .001$		

Note. C = Constant, B = Unstandardized Beta Coefficient, SEB = Standard Error of Beta, β = Standardized Beta Coefficient

* $p < .05$, ** $p < .01$

Analyses related to depressive symptom severity (Table 2), revealed that a significant amount of variation (58%) can be explained by the regression model with gender, coping strategies, and CSE as the predictors ($F(18, 124) = 11.16, p < .001$). When all other variables were controlled for, substance use ($\beta = .20$), behavioural disengagement ($\beta = .34$), and self-blame ($\beta = .23$) coping strategies were found to be significant predictors of depressive symptom severity, with behavioural disengagement being the strongest predictor.

Table 2. Summary of simultaneous multiple linear regression analysis of gender, coping strategies, and coping self-efficacy predicting depressive symptom severity

Variables	Symptom Severity		
	B	SEB	β
Gender	1.79	1.22	.09
Active Coping	-.14	.43	-.03
Denial	.38	.58	.05
Substance Use	1.37	.47	.20**
Emotional Support	.33	.54	.06
Instrumental Support	-.38	.55	-.08
Behavioural Disengagement	2.15	.48	.34**
Venting	-.52	.45	-.09
Positive Reframing	.80	.41	.15
Planning	-.31	.49	-.06
Humour	.39	.29	.08
Religion	.25	.31	.06
Self-blame	1.16	.41	.23**
Stopping Emotions CSE	-.07	.09	-.14
Social Support CSE	-.18	.13	-.19
Total CSE	.01	.05	.07
R^2	.58		
C	.22		
F	11.16, $p < .001$		

Note. C = Constant, B = Unstandardized Beta Coefficient, SEB = Standard Error of Beta, β = Standardized Beta Coefficient

* $p < .05$, ** $p < .01$

In the third regression analysis (Table 3), scores on psychosocial impairment were entered as the dependent variable and gender, coping strategies, and CSE were entered as the predictor variables. This model was significant and accounted for 43% of the variance in psychosocial impairment scores ($F(18, 62) = 2.97, p = .001$). When the other variables were controlled for, only social-support CSE ($\beta = -.57$) was found to significantly predict psychosocial impairment.

Table 3. Summary of simultaneous multiple linear regression analysis of gender, coping strategies, and coping self-efficacy predicting psychosocial impairment

Variables	Psychosocial Impairment		
	<i>B</i>	<i>SEB</i>	β
Gender	2.11	1.11	.21
Active Coping	-.09	.44	-.03
Denial	-.20	.48	-.05
Substance Use	.28	.41	.08
Emotional Support	.08	.51	.03
Instrumental Support	.35	.47	.14
Behavioural Disengagement	.70	.41	.21
Venting	-.55	.40	-.18
Positive Reframing	.50	.39	.19
Planning	-.45	.44	-.17
Humour	-.32	.26	-.14
Religion	.38	.27	.17
Self-blame	.48	.39	.17
Stopping Emotions CSE	-.16	.09	-.64
Social Support CSE	-.26	.12	-.57*
Total CSE	.08	.05	.76
R^2	.43		
<i>C</i>	3.64		
<i>F</i>	2.97, $p = .001$		

Note. *C*= Constant, *B*= Unstandardized Beta Coefficient, *SEB*= Standard Error of Beta, β = Standardized Beta Coefficient

* $p < .05$, ** $p < .01$

In the final analyses (Table 4), scores on quality of life were entered as the dependent variable with gender, coping strategies, and CSE being entered as the predictor variables. This model was found to be significant ($F(18, 60) = 6.18, p < .001$) and accounted for the highest variance (61%) when compared to the other three regression models. No significant predictors were found in this model.

Table 4. Summary of simultaneous multiple linear regression analysis of gender, coping strategies, and coping self-efficacy predicting quality of life

Variables	Quality of Life		
	<i>B</i>	<i>SEB</i>	β
Gender	-2.49	1.42	-.16
Active Coping	-.73	.55	-.17
Denial	.57	.63	.10
Substance Use	-.93	.52	-.18
Emotional Support	.14	.64	.03
Instrumental Support	-.08	.59	-.02
Behavioural Disengagement	-1.00	.52	-.19
Venting	.52	.52	.11
Positive Reframing	-.39	.49	-.10
Planning	.47	.55	.11
Humour	.44	.34	.13
Religion	-.51	.34	-.15
Self-blame	-.92	.53	-.21
Stopping Emotions CSE	.04	.12	.10
Social Support CSE	.11	.16	.16
Total CSE	.04	.06	.25
R^2	.61		
<i>C</i>	21.86		
<i>F</i>	6.18, $p < .001$		

Note. C= Constant, B= Unstandardized Beta Coefficient, SEB= Standard Error of Beta, β = Standardized Beta Coefficient

* $p < .05$, ** $p < .01$

DISCUSSION AND CONCLUSION

The primary aim of the current research study was to determine interactions between social anxiety, depression, coping self-efficacy, and coping strategies amongst college students. An additional purpose was to identify how race-ethnicity might be associated with these study variables.

Results demonstrated that gender, coping strategies and CSE, together as a model significantly predicted social anxiety. More specifically, results revealed that gender and the use of self-blame as a coping strategy significantly predicted higher social anxiety levels in college students, when all other variables were controlled. Compared to self-blame, gender was the stronger predictor of social anxiety levels. Female students reported higher social anxiety levels when compared to male students, which is in line with previous literature (Asher & Aderka, 2018; MacKenzie & Fowler, 2013; Xu et al., 2012). This holds important clinical implications for college campuses. College counseling personnel and related mental health professionals could work toward educating college students on how being a female and using self-blame as a coping strategy are significant risk factors as they could lead to higher levels of social anxiety. Mental health interventions especially designed to increase acceptance, self-compassion and mindfulness could be adopted while working with female college students, who tend to experience more chronic stressors during the school year, to overcome social anxiety and using self-blame as a coping strategy (Kroshus et al., 2021; Smeets et al., 2014; Stefan et al., 2018). In addition, multiple studies state that social anxiety predicts the onset of depressive disorders either by itself or via mediating variables (Grant et al., 2014; Kessler et al., 1999; Stein & Stein, 2008). This calls for an increased focus in preventing and treating social anxiety, by college counseling personnel, which could also prevent the development of mood disorders (Kessler et al., 1999). Interventions aimed at improving self-compassion levels and utilizing mindfulness-based stress reduction (MBSR) programs could help with successful transitions into college life and lower social anxiety (Kroshus et al., 2021; Stefan et al., 2018).

Results in this study also demonstrated that gender, coping strategies and CSE, together as a model significantly predicted depressive symptom severity. Higher levels of substance use, behavioral disengagement, and self-blame coping strategies predicted higher levels of depressive symptom severity in college students. Although there is limited research that states that coping strategies are not associated with depression (Wright et al., 2010), most of the existing literature suggests that results of the current study are in line with previous studies (Gore-Felton et al., 2006; Hu et al., 2013; Ziarko et al., 2014).

Hence, based on the current study it could be suggested that college counseling personnel could promote awareness in college students about how dysfunctional coping (e.g., behavioral disengagement and substance use) could relate to depressive symptoms. In addition, clinicians who work with college students with depressive symptoms should steer them towards healthier coping strategies such as self-compassion and mindfulness since this could in turn reduce self-judgment and isolation which have been found to increase depression (Smeets et al., 2014; Sosya & Wilcomb, 2015). Thus, these results inform prevention efforts as well as therapeutic interventions for college campuses.

In relation to the variable of psychological impairment, higher levels of psychosocial impairment were predicted by lower levels of social support CSE. In terms of outreach programs that college counseling personnel may conduct, students could be made aware that they might experience higher levels psychosocial impairment, if they do not believe in their ability to cope with the help of their social supports. In addition, college counseling personnel

could inform college students regarding the role of getting help from friends and family (social support CSE) in the prevention of psychosocial impairment. Such information might motivate college students to be more socially engaged on and off-campus, improve psychosocial functioning levels and increase quality of life. College counseling personnel could also design or implement interventions related to teaching self-compassion and time-management skills since they have been found to increase life-satisfaction and connectedness (Smeets et al., 2014). Finally, additional results demonstrated that there were no significant racial differences in social anxiety, depressive symptom severity, psychosocial impairment, and quality of life despite earlier research stating the contrary (Grant et al., 2005; Lesure-Lester & King, 2004; Rapp et al., 2017; Sümer et al., 2008). This may have been a function of the comparatively smaller sample size in the current study and because distribution of race-ethnicity identities was skewed in that European Caucasians constituted 53.8% of the sample.

LIMITATIONS AND FUTURE DIRECTIONS

The current study has a number of strengths, including its contribution to the limited literature exploring coping and coping self-efficacy among college students and how they relate to social anxiety and depression. Other significant strengths include the prevention and treatment implications based on the results. Despite the aforementioned strengths, it is important to address limitations in the current study that warrant future research. First, in terms of methodological limitations, the current study was correlational and cross-sectional. Although such a design has scientific benefits, future research could be designed in a way to assess the variables longitudinally or to draw causal relations.

Additionally, self-report measures were exclusively used in the current study. Therefore, future research could attempt to explore the relations among the current study variables through alternate methods of data collection such as structured interviews. Furthermore, since a non-clinical sample was used in the current study, results could potentially vary if studies exclusively used clinical samples of social anxiety disorder and major depressive disorder. The lack of significant racial differences in social anxiety, depressive symptom severity, psychosocial impairment, and quality of life, in the present study, could be addressed by intentionally including a larger and more diverse sample of college students in replication studies. Regarding gender diversity, since the current study only included male and female participants, future studies may target a larger sample where they will have a large enough group of participants who may identify themselves as non-binary, as these individuals may have a different set of experiences as compared to people who identify their gender as a binary concept.

A final point we want to indicate is that the data in the current study were collected before COVID-19. As we know from recent publications (Active Minds, 2020; Ezarik, 2021), students went through a different set of challenges with 20% of college students stating that their mental health significantly deteriorated during the course of the pandemic. Considering the increasingly stressful college campus circumstances since the pandemic, emerging/increasing mental health issues, and COVID-19 possibly changing people profoundly in terms of their worldview all support our recommendation to examine these variables post-covid, and emphasize the study's importance to guide more proactive, gender-specific, and culturally relevant mental health services.

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A CEFR BASED EVALUATION OF B1+ LEVEL PREPARATORY PROGRAM AT A TURKISH STATE UNIVERSITY: THE APPLICATION OF THE FOREIGN LANGUAGE SKILLS SCALE

Abstract: Despite the centrality of the Common European Framework of Reference for Languages (CEFR) in language teaching and assessment, studies investigating its learning outcomes in language program evaluations are quite scarce. This paper aims to evaluate the effectiveness of a modular English preparatory school program through the Foreign Language Skills Scale. The research sample consists of 357 preparatory school students having attained B1+ level of proficiency in the program. The results revealed that while the language program designed to be in line with the CEFR guidelines, in general, serves for the needs of the students, there are still some discrepancies between the learning outcomes of B1+ and opinions of students about their competencies, especially in listening sub-skills.

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INTRODUCTION

Program evaluation is the process of gathering information for judging decisions alternatives (Stufflebeam, 1971, p.4) to make new decisions or further revisions about the program. Hopkins (1989, p.14) defines it as a systematic description of education objectives or assessment of their merit or worth.

The purpose of program evaluation can be twofold; it can either improve the program, which is defined as formative evaluation, or reflect if a program should be continued, which is known as summative evaluation. The former one, as Scriven (1991) indicates, is used to gather and share information for program improvement by identifying problematic aspects whereas the latter one is applied at the end of a program to get information about program's success (Worthen, 1990). Scriven (1991) and Worthen, (1990) pointed out that program evaluation should be conducted regularly by using one of these methods, identifying whether students are meeting the learning objectives and leading to the necessary changes. In this respect, program evaluation in education is both a central and challenging task, and foreign language instruction is no exception (Lynch, 1990).

Once intensive foreign language instruction into the Turkish education system was introduced, a number of studies have attempted to evaluate language teaching programs (Erdem, 1999; Gerede, 2005; Topçu, 2005; Güllü, 2007; Karataş, 2007; Üstünlüoğlu et al, 2012). The common aim of these studies concerning language program evaluations is to investigate whether there is a match between what is desired for the program and the actual state of the program along with learners' level of skills and knowledge (Üstünlüoğlu et al, 2012). In the Turkish context, the demand for English in higher education is increasing, which, in turn, necessities intensive English programs being either compulsory or voluntary because either the medium of instruction in some universities is in English or some courses are offered in English (Arslan, 2020). From this aspect, preparatory programs' role is crucial to help students attain a proficiency level in English so that they can follow their courses in English effectively, which also makes it important to evaluate if preparatory schools serve for this aim or not (Coşkun, 2013; Ekşi, 2017).

It is in this context that the present study aims to investigate the effectiveness of an English preparatory school program by applying Foreign Language Skills Scale (Arslan, 2020), which can be used to maintain a comprehensive overview of the process of teaching language skills in the light of the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001), in an intensive modular preparatory program at a Turkish state university.

THE CEFR

The CEFR consists of communicative language activities and strategies as well as a set of communicative language competences for which descriptors were developed in the Swiss research project (North, 2000; North & Schneider, 1998). The project revealed the existence of the six levels plus mid-parts of the scale which came to be known as plus levels. As North (2007, p. 3) suggests:

Between what can be described as the criterion level for A2 and the criterion level for B1 there was found to be a plus level. The same was the case between levels B1 and B2 (B1+) and between levels B2 and C1 (B2+). Such plus levels were characterized by a stronger performance in relation to the same features found at the criterion level, plus hints of features that became salient at the next level.

To date, the CEFR has been noted to have a major influence on assessment (Jones & Saville, 2009; Coste, 2007; Fulcher, 2008). The CEFR, which has been set out to be a framework for the elaboration of language syllabi or examinations, was noted by all countries to be most useful for the planning and development of curricula as well as tests and certification (North, 2007).

On the other hand, its impact within the classroom environment was noted to be less because it is found difficult to understand (Jones & Saville, 2009). Therefore, assessment of language teaching programs is crucial not only for the administrators but also for the English language practitioners to get a clear understanding and feedback on the process.

In Turkey, the Turkish Ministry of National Education and the Higher Education Council adopted the CEFR as a guide for their foreign language teaching policies. Thus, in order to meet the criteria established by the CEFR, the education system including primary, secondary and higher education was reconstructed. With respect to higher education, which is the focus of the present study, the medium of instruction at many universities in Turkey is English and the number is increasing day by day (Kirkgöz, 2005), which, in turn, make it necessary for the universities to offer intensive English programs for their students. Despite the centrality of these programs, when the implementation of the CEFR in higher education is examined, it can be seen that some preparatory programs do not match with the aims of the CEFR and not all of them are grounding their applications on the basis of the principles of the CEFR (Kınsız & Aydın, 2008; Gökdemir, 2010) and that there is a conflict between the CEFR goals and the realities of Turkish higher education (Peaci, 2015). The present study aims to examine whether there is such kind of a mismatch in the Preparatory Program at the School of Foreign Languages at Pamukkale University by taking CEFR learning outcomes into consideration.

RESEARCH STUDIES IN LANGUAGE PROGRAM EVALUATIONS IN TURKEY

Although the idea of language program evaluation is not new, the way it is conducted and theorized has changed over the years. In the Turkish context, program evaluation in the preparatory programs at universities has become increasingly important in the last two decades (Üstünlüoğlu et al, 2012). One of the earliest studies regarding the program evaluation was conducted by Erdem (1999). In the study, the curriculum of Middle East Technical University was investigated, and it was found that a more student-centered program and improvements in in-service training were necessary. Another study conducted at the same university by Topçu (2005) revealed that there was a significant difference between the opinions of teachers and students when the curriculum and objectives of the Basic English Department were examined. A similar study by Gerece (2005) at Anadolu University examined the previous and new curricula of the Preparatory Program and significant improvements were found in meeting the students' language needs. Karataş (2007) evaluated the English instruction program at Yıldız Teknik University by examining the syllabus and the results showed that the teachers had negative opinions towards the program when its effects on students' listening, speaking and grammar knowledge were concerned. By analyzing the effectiveness of the preparatory program at Osmangazi University, Özkanal and Hakan (2010) found that the students were satisfied with the program; however, they also indicated that students' academic English needs should be taken into account while developing the program. In another study, Üstünlüoğlu et al. (2012) investigated the effectiveness of the curriculum at Izmir University of Economics, School of Foreign Languages and the results indicated that students had difficulty in tasks requiring higher order thinking skills. Coşkun (2013) evaluated the existing language program of a state university and he found that except the ones prepared for the speaking course, materials were sufficient. On the other hand, teachers believed that materials were not effective enough to serve for their students' needs. In his study conducted at Çanakkale Onsekiz Mart University, Tekin (2015) examined the program of ELT/ELL preparatory classes and found that majority of the students were satisfied with the program except for its physical conditions and added that students had difficulty in communicate skills. Lastly, in their longitudinal study, Efeoğlu et al. (2018) evaluated the language program of the preparatory program of ELT department at Yıldız Teknik University and the results indicated that almost all participants found the re-evaluation of the previous program effective.

All the studies discussed above tried to examine the effectiveness of language programs in terms of course materials, curriculum, assessment, activities and teaching objectives in general; yet there is only one study conducted to develop a scale assessing the success level of language learners in both language skills and core English course as described in the CEFR. In his study, Arslan (2020) developed the Foreign Language Skills Scale (FLSS) by focusing on the descriptors of the CEFR including A1, A2, B1, and B1+ levels; however, there is no evaluation of any preparatory school program through the use of the scale since it has been currently developed. Therefore, being the first of its kind, the study aims to fill this gap in the literature by evaluating B1+ level program at an English Preparatory School in a Turkish State University.

AIM OF THE STUDY

The present study seeks to examine the success of learners from the level of B1+ in accordance with the learning outcomes of the CEFR; and thus, evaluating the language program of the preparatory school by using FLSS (Arslan, 2020). To achieve these aims, the following research questions are addressed;

When students having attended B1+ module are considered;

1. What are their overall opinions about their learning outcomes in four language skills in relation to their current level of English proficiency?
2. What are their opinions about their learning outcomes in the relevant sub-skills of each of the four language skills in relation to their current level of English proficiency?
3. What are their opinions about the contribution of Core English to their language development in the four skills?
4. What are their overall opinions about their learning outcomes in four language skills in relation to their genders?
5. What are their overall opinions about their learning outcomes in four language skills in relation to their ages?

METHOD

RESEARCH MODEL

The methodology of this study was survey research. Creswell (2015) mentioned that the survey research design enables researchers to describe population characteristics, values, attitudes or opinions both qualitatively and quantitatively through the studies applied on the sampled units that were selected from the population itself. Survey research may use a variety of data collection procedures with the most common being questionnaires and different type of interviews. In his study, Arslan (2020) used this research model as a scale development study to depict population tendencies, attitudes or opinions.

CONTEXT OF THE STUDY

The evaluated program is B1+ level English preparatory program in the School of Foreign Languages at Pamukkale University in Turkey in the 2020-2021 academic year. Students are from different departments such as International Trade and Finance, English Language Teaching, English Language and Literature, Textile Engineering and Business Administration, where the medium of instruction is in English in either all or in some selected courses. The preparatory program is based on a modular system where, at the beginning of the academic year, students are placed to the relevant level according to their level of English proficiency based on the placement exam. The programs of different levels in each module are designed to be in line with the Common European Framework of Reference for Languages (CEFR) guidelines, including A1, A2, B1, and B1+ levels. An entire academic year consists of 4

modules, each lasting 8 weeks and 192 hours in total. In a given module, the weekly program includes courses such as listening (2 hours), speaking (3 hours), writing (5 hours), reading (5 hours) and core language (9 hours). Students are supposed to attend 2 modules at least since the opening module of the year starts from B1 level and they are supposed to complete the program at B1+ level.

SAMPLE

The study was conducted during the Fall and Spring Term of 2020-2021 academic year. Convenience sampling method was used as a sampling method in this study. Convenience sampling is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study. Seer (2015) also used this method by claiming that the participants were already attending the foreign language preparatory program and they were easy to reach for research purposes. In line with his study, the present study applied the same sampling method by considering participants' availability and accessibility because they were also attending the program already.

DATA COLLECTION

PARTICIPANTS

The data was comprised of 357 students studying at the preparatory school at Pamukkale University., with 163 female and 194 male students. Table 1 demonstrates the descriptive statistics related to the demographic variables.

Table 1. Descriptive statistics related to the demographic variables of B1+ students

Variable	Category	N	%
Gender	Female	163	45.6
	Male	194	54.1
Age	18	130	36.7
	19	106	29.6
	20	80	22.4
	21	21	5.8
	Other	20	5.5
Faculty Type	Education	31	8.6
	Science and Letters	86	24.0
	Economics and Administrative Science	184	51.7
	Engineering	56	15.7

Table 1 shows that while the ages of the participants vary, the majority are between the ages of 18-20; and they are from four different faculties. All students involved in the study had experienced at least two modules in the program since during the initial module students from the highest level of proficiency started from B1 module depending on their level of entry to the program. Thus, every student having completed B1 module successfully and attended B1+ module was asked to complete the questionnaire just before taking their final exam in B1+ module in the 2020-2021 academic year.

FOREIGN LANGUAGE SKILLS SCALE

Foreign Language Skills Scale (FLSS) developed by Arslan (2020) was used to collect the quantitative data during the study. FLSS consists of 27 items and 5 factors named by examining the contents of the items gathered under five factors. There were eight items in the first factor named *writing skills*. There were five items in each of the factors named *speaking skills*, *listening skills* and *reading skills*. In addition, there were 4 items in the fifth factor named *core English*. The scale items were designed to be scored as 4-point Likert-type items; namely, (1) Completely Disagree, (2) Disagree, (3) Agree, and (4) Completely Agree. The lowest possible score from this scale was 27, while the highest was 108.

Arslan (2020) tested the validity and the reliability of the scale with sample of 326 preparatory school students for the Exploratory Factor Analysis and 350 preparatory school students for the

Confirmatory Factor Analysis. Confirmatory and Exploratory Factor Analysis results supported 27 items and 5 factors named by examining the contents of the items gathered under these five factors. There were eight items in the first factor named *writing skill*. There were five items in each of the factors named *speaking skill*, *listening skill*, and *reading skill*. In addition, there were 4 items in the factor named *core English* and gave the best validity result model (together ($\chi^2/sd = 1.893$ RMSEA=.049; GFI=.89; AGFI=.86; CFI= .95; NNFI=.90; RFI=.89).

In this study, validity and reliability results of the FSLL and 5 factors were calculated by the researcher on 357 preparatory school students. For the Validity of the scale, the fit indices calculated after the confirmatory factor analysis process were $\chi^2 / Sd = 1.92$; RMSEA = .042; GFI = .92; AGFI = .88; NFI = .92; NNFI = .92; CFI = .94; IFI is .90 and RFI is .93.

Reliability of the test or scale is one of the important indices that is related to whether or not a measurement instrument provides the consistent and sensitive results in times of repeated application (Buyukozturk, 2002; Baykul, 2000). Arslan (2020) indicated that the Cronbach's Alpha reliability coefficients of the factors related to the FLSS were as 0.913 for Reading, 0.879 for Listening, 0.838 for Speaking, 0.834 for Writing and 0.853 for Core English. The Cronbach's Alpha value for the whole scale was 0.957.

In this study, Cronbach's Alpha reliability coefficients of the factors and whole scale were also calculated. The results showed that the Cronbach's Alpha reliability coefficients of the factors about FLSS were as 0.875 for Reading, 0.833, for Listening, 0.863 for Speaking, 0.895 for Writing and 0.911 for Core English. The FLSS Cronbach's Alpha value for the whole scale was 0.944.

DATA ANALYSIS

In order to examine the research questions, the data obtained from the samples were uploaded into the SPSS 22.00 software program and analyzed. First, Descriptive Statistics was used for the first three research questions. The lowest and highest means scores for each item and domains were calculated and interpreted based on the characteristics of the items and domains. Next, for the last three research questions the extreme values were controlled before the analysis and the assumptions about the analyses were tested. As a result of tests of normality, it was found that the data fits a normal distribution, and the values of skewness and kurtosis were between +2 and -2 (George & Mallery, 2010). Therefore, independent samples t-test and One Way ANOVA were used for comparison of the groups. For the Post Hoc procedure in One Way Anova, Tukey's HSD was used to identify the source of the mean differences among groups. The effect size for independent samples t-test and One Way Anova results were calculated with Cohen's d. Cohen (1988) suggested that $d = 0.2$ be considered a 'small', 0.5 represents a 'medium' and 0.8 a 'large' effect size.

FINDINGS

OVERALL EVALUATION

Data were collected using a questionnaire named the Foreign Language Skills Scale (FLSS). Mean and standard deviations for the five factors and overall results of the FLSS are given below in Table 2.

Table 2. Mean and standard deviation of the overall evaluation

Factors	N	Mean	Sd
Reading Skills	357	3.25	.49
Listening Skills	357	3.03	.56
Speaking Skills	357	3.10	.54
Writing Skills	357	3.21	.55
Core English	357	3.23	.63
Overall Evaluation	357	3.17	.45

In regard to the first research question, the results in Table 2 reveal that students are satisfied with the improvement in their language skills in general (overall evaluation mean: 3,17). However, they see themselves as more competent in “Reading Skills” and less competent in “Listening Skills”, with mean scores of 3,25 and 3,03, respectively.

FACTORS

READING SKILLS

“Reading Skills” is the first factor of the FLSS and it is represented by five questions. Among the items belonging to the “Reading Skills” in the questionnaire, it can be seen in Table 3 that item 2, “*I can answer questions related to a reading text*”, has the highest mean whereas item 1, “*I can guess the meaning of words I do not know in a reading text*” has the lowest mean in the questionnaire. Thus, with respect to the second research question, it is found that students evaluate themselves as more successful in skimming and scanning, and less successful in deducing the meaning from context which are the subskills of reading.

Table 3. Mean and standard deviation of the Reading Skills

Item No	Item	N	Mean	Sd
1	I can guess the meaning of words I do not know in a reading text.	357	3.18	.58
2	I can answer questions related to a reading text	357	3.34	.58
3	When answering a question about a reading text, I can easily find the section related to the question	357	3.28	.64
4	can understand the main idea of a text I read	357	3.19	.68
5	I can deduce from a text I read	357	3.24	.62
Overall	Reading Skills	357	3.25	.49

LISTENING SKILLS

“Listening Skills” is the second factor of the FLSS and it is comprised of five questions. Table 4 shows that with respect to the items of the “Listening Skills” in the questionnaire, item 10, “*During the listening process, I can catch phrases such as ‘the door of the room’, and ‘students in the class’*”, has the highest mean while item 6, “*I can take notes when somebody speaks*”, has the lowest mean among all the items in the questionnaire. Therefore, concerning the second research question, the results indicate that among the subskills of listening students have more positive opinions in dictation and more negative opinions in note-taking.

Table 4. Mean and standard deviation of the Listening Skills

Item No	Item	N	Mean	Sd
6	I can take notes when somebody speaks.	357	2.90	.72
7	During the listening process, when I am asked, I can catch the details such as who, where, and when,	357	3.08	.67
8	I can understand the main idea of any conversation I listen to.	357	3.07	.71
9	I can deduce the meaning of a word I do not know from the context when I listen to a conversation	357	2.86	.75
10	During the listening process, I can catch phrases such as ‘the door of the room’, and ‘students in the class’.	357	3.23	.68
Overall	Listening Skills	357	3.03	.57

SPEAKING SKILLS

“Speaking Skills” is the third factor of the FLSS and it contains five questions. As shown in Table 5, among the items in the “Speaking Skills” part, item 15, “*I can express personal information about myself*”, has the highest mean; on the other hand, item 13, “*I can communicate with native speakers of English*”, has the lowest mean in the questionnaire. Hence, regarding the second research question, it can be seen that students evaluate their competency higher in giving personal information but lower in being able to interact when speaking subskills are concerned.

Table 5. Mean and standard deviation of the Speaking Skills

Item No	Item	N	Mean	Sd
11	I can answer any question when somebody asks me.	357	3.14	.62
12	I can communicate with non- native speakers of English.	357	3.02	.73
13	I can communicate with native speakers of English.	357	2.93	.75
14	I can participate in a conversation.	357	3.01	.72
15	I can express personal information about myself.	357	3.38	.61
Overall	Speaking Skills	357	3.10	.55

WRITING SKILLS

“Writing Skills” is the fourth factor of the FLSS and it includes eight questions. When the items in “Writing Skills” of the questionnaire are taken into account, it is found that item 19, “*I can write coherent texts*”, has the highest mean as seen in Table 6.

Table 6. Mean and standard deviation of the Writing Skills

Item No	Item	N	Mean	Sd
16	I can write sentences with meaning relations such as cause-effect, contrast, and comparison.	357	3.23	.68
17	I can write a paragraph	357	3.13	.70
18	I can express my feelings and thoughts in writing	357	3.28	.65
19	I can write coherent texts.	357	3.36	.63
20	I can enrich the text I write by using conjunctions	357	3.08	.71
21	I can use examples, quotes, or statistics to support my ideas when I write a paragraph.	357	3.28	.67
22	I can write the sections of a paragraph such as topic sentence, supporting sentences, and concluding sentence.	357	3.15	.74
23	I can rewrite a given sentence with the same meaning.	357	3.19	.78
Overall	Writing Skills	357	3.21	.55

On the other hand, item 20, “*I can enrich the text I write by using conjunctions*”, has the lowest mean in the questionnaire. Consequently, in regard to the second research question, the results reveal that students feel more competent in writing coherently and less competent in enriching texts by conjunctions.

CORE ENGLISH

“Core English” is the fifth factor of the FLSS and it consists of four questions. As for the items in the “Core English” part of the questionnaire, Table 7 presents that item 26, “*My writing skill has improved*”, has the highest mean whereas item 24, “*My speaking skill has improved*” and item 27, “*My listening skill has improved*” have the lowest mean in the questionnaire. Thus, with respect to the third research question, the results show that students think Core English course contributed more to their development in writing skill while it has less contribution in their speaking and listening skills.

Table 7. Mean and standard deviation of Core English

Item No	Item	N	Mean	Sd
24	My speaking skill has improved.	357	3.14	.76
25	My reading skill has improved	357	3.30	.72
26	My writing skill has improved.	357	3.32	.72
27	My listening skill has improved	357	3.14	.75
Overall	Core English	357	3.23	.63

VARIABLES

GENDER

Table 8 shows descriptive statistics for average FLSS scores for the female and the male group. Independent-samples t-test results illustrated that there was a significant difference between the female and the male groups in terms of overall evaluation [$t_{(355)} = 4,559$, $p < .05$, $r = 0.16$],

Reading Skills [$t_{(355)} = 2,853, p < .05, r = 0.04$], Listening Skills [$t_{(355)} = 2,032, p < .05, r = 0.07$], Speaking Skills [$t_{(355)} = 2.650, p < .05, r = 0.09$], Writing Skills [$t_{(355)} = 5,458, p < .05, r = 0.19$], and Core English [$t_{(355)} = 4.548, p < .05, r = 0.16$]. The results shown in Table 3.7 reflect that female students have higher mean scores than male students. Hence, it can be argued that the FLSS scores of the participants are affected by gender variable. It can be understood that female students are more satisfied with the B1+ preparatory program when compared to male students.

Table 8. Independent Samples t-Test Results Regarding FLSS Scores of Gender

Variable	Group	n	M	SD	t	p
Reading	Female	163	3.30	.50	2.853	0.004
	Male	194	3.20	.48		
Listening	Female	163	3.07	.61	2.032	0.042
	Male	194	2.99	.51		
Speaking	Female	163	3.15	.56	2.650	0.008
	Male	194	3.05	.52		
Writing	Female	163	3.32	.52	5.458	0.000
	Male	194	3.11	.55		
Core	Female	163	3.33	.58	4.548	0.000
	Male	194	3.13	.65		
Overall	Female	163	3.24	.45	4.559	0.000
	Male	194	3.09	.43		

AGE

In regard to the FLSS overall score, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 19, 20, 21 and other ages (Table 9). In addition, mean score of 19-year-old students is significantly higher than the ages of 20, 21 and other ages. These results demonstrated that this difference is to the favor of the 18- and 19-year-old students. In other words, 18- and 19-year-old students' evaluations are meaningfully more positive than those of the students from the other age groups. No significant difference was found among the students from other age groups.

Table 9. One-Way ANOVA Results Regarding FLSS Scores of Age

Variable	Group	n	M	SD	F	p	Difference
Overall	18 year-olds	130	3.27	.40	12.523	0.000	1 – 2;
	19 year-olds	106	3.19	.44			1 – 3;
	20 year-olds	80	3.02	.47			1 – 4;
	21 year-olds	21	3.04	.42			1 – 5;
	Others	20	2.97	.48			2 – 3;
Reading	18 year-olds	130	3.35	.46	8.131	0.000	2 – 5;
	19 year-olds	106	3.24	.47			1 – 2;
	20 year-olds	80	3.12	.53			1 – 3;
	21 year-olds	21	3.11	.46			1 – 4;
	Others	20	3.16	.47			
Listening	18 year-olds	130	3.12	.51	11.103	0.000	1 – 2;
	19 year-olds	106	3.09	.57			1 – 3;
	20 year-olds	80	2.85	.57			1 – 5;
	21 year-olds	21	2.93	.56			2 – 3;
	Others	20	2.74	.52			2 – 5;
Speaking	18 year-olds	130	3.19	.46	10.187	0.000	1 – 2;
	19 year-olds	106	3.16	.55			1 – 3;
	20 year-olds	80	2.92	.54			1 – 5;
	21 year-olds	21	2.97	.72			2 – 3;
	Others	20	2.91	.59			2 – 5;
Writing	18 year-olds	130	3.29	.50	5.503	0.000	1 – 3;

	19 year-olds	106	3.23	.57			1 – 5;
	20 year-olds	80	3.10	.54			
	21 year-olds	21	3.15	.56			
	Others	20	3.01	.62			
Core	18 year-olds	130	3.39	.53			
	19 year-olds	106	3.21	.66	11.922	0.000	1 – 2; 1 – 3; 1 – 4; 1 – 5; 2 – 4;
	20 year-olds	80	3.08	.62			
	21 year-olds	21	2.94	.65			
	Others	20	3.01	.74			

1=18 year-olds; 2=19 year-olds; 3=20 year-olds; 4=21 year-olds; 5= Others

With respect to the reading skills, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 19, 20 and 21. These results demonstrated that this difference is to the favor of the 18-year-old students. In other words, 18-year-old students' evaluations are meaningfully more positive than those of the students from 19-, 20- and 21-year-old students. No significant difference was found among the students from the other age groups.

As for the listening skills, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 20 and other age groups. In addition, 19-year-old students' mean score is significantly different and higher than 20 and other age groups. In other words, 18- and 19-year-old students' evaluations are meaningfully more positive than those of the students from 19 and other age group. No significant difference was found among the students from other age groups.

In regard to the speaking skills, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 20 and other age groups. In addition, 19-year-old students' mean score is significantly different and higher than 19 and other groups of ages. In other words, 18- and 19-year-old students' evaluations are meaningfully more positive than those of the students from 20 and other age groups. No significant difference was found among the students from other age groups.

With respect to the writing skills, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 20 and other age groups. In other words, 18-year-old students' evaluations are meaningfully more positive than those of the students from 20 and other age groups. No significant difference was found among the students from other age groups.

For Core English, Tukeys' HSD demonstrated that mean score of 18-year-old students is significantly higher than the ages of 19, 20, 21 and other age group. In other words, 18-year-old students' evaluations are meaningfully more positive than those of the students from 19 and other age groups. In addition, 19-year-old students' mean score is significantly higher than the mean score of 21-year-old students. No significant difference was found among the students from other age groups.

DISCUSSION AND CONCLUSION

To begin with, the results of the quantitative data indicate that, in general, the modular system designed to be in line with the Common European Framework of Reference for Languages (CEFR) guidelines serves for a high-quality language program for the students enrolled in the preparatory school at Pamukkale University since B1+ students performed a high level of agreement in the acquisition of all language skills. This can be because these students went through at least two modules, namely B1 and B1+. In these modules both skill courses and core English course include lots of communicative tasks and integrated skills activities and the syllabi include fostering more challenging subskills such as note-taking, deducing meaning

from context, and inferencing. Thus, in general, considering that they are exposed to such kind of activities 24 hours a week and for at least 2 modules, they might have a sense of achievement by having practiced these skills again and again.

The findings also show that while students generally find themselves competent in all four language skills at the end of the B1+ module, they feel themselves most confident in the reading skills. This finding is in parallel to Tekin's (2015) study stating that most of the students see themselves as competent in reading skills. One important finding of the study is that in reading skills, guessing the meaning of words from context and getting the main idea of a text seem to be the subskills students do not feel satisfied as much as the other ones. This can stem from the fact that while studying on their own, students can directly conduct their dictionaries and do not force themselves to get the meaning by making use of contextual clues. It is also possible that because of the heavy syllabus teachers are supposed to cover each week, they may not spend enough time on practicing general strategies, recognition and interpretation of specific context clues or feedback.

The second skill students see themselves as more competent is writing skills. Contrary to these findings, Tekin's (2015) study revealed that 68% of the participants perceived themselves as insufficient in writing skills. This difference might be since his participants were all from ELT and ELL departments and the expectations of those students can be higher than the preparatory students of other departments. It is also possible that since those students from language departments were separately placed in the preparatory program, their syllabus might include different genres with challenging tasks which can negatively affect students' perceptions about their competencies. On the other hand, participants of the present study are from various departments placed in the same class and the syllabus is common regardless of their departments which means that there is not a separate and more challenging writing syllabus for ELT and ELL students. The present study also revealed that, in writing skills, there remains some inadequacies among students in enriching a text by using conjunctions.

Another important finding concerns the speaking skills in that students seem to have a relatively low number of competencies in communicating with both native speakers and non-native speakers of English and participating in a conversation. This finding of the research matches up with Tekin's (2015) study having found that speaking skills seem to be one of the most problematic skills based on participants' perceptions. This finding is also in parallel to Özkanal & Hakan's (2010) study stating that while 83,7% of the students perceived speaking skills as very important, only 31,7% thought that their level of language skills is good. In his study, Coşkun (2013) also found that the skill least frequently focused on in the class is speaking skills. Possible reasons for these consistent findings can be three-fold; firstly, the language programs do not focus on and foster speaking skills by placing more communicative activities in their syllabi and implementing them in the class by decreasing teacher talk and increasing student talk; secondly, as Coşkun (2013) suggested, the materials are not sufficient enough to foster their speaking skills; and finally it is also probable that students do not force themselves to use English in the classroom environment because they are afraid of making mistakes and they do not feel secure about it.

The most prominent discrepancy is between the learning outcomes of B1+ module related to listening skills and the opinions of students about their competencies in the skill since the results signal students' relevant inadequacy in listening skills, especially in deducing the meaning of an unknown word in a conversation and note-taking skills. In his study, Tekin (2015) also found that half of the participants see themselves as insufficient in listening skills. Overall, these findings are in accordance with the findings reported by Özkanal & Hakan (2010) in which students suggested that for the program to be more effective listening skills should be more actively conducted by having more emphasis on note-taking skills.

Finally, students' opinions about the contribution of Core English to their language development in four language skills point out the effectiveness of the course in their language development in each skill. Students' positive opinions about the course can stem from the fact that Core English materials and the coursebook used in the course include integrated skills with various activities from the language skills and students have more chance to practice them as the Core English course takes up two days with nine hours a week.

IMPLICATIONS

The present study was carried out as an evaluation of B1+ level program at an English Preparatory School in a Turkish State University by applying Foreign Language Skills Scale (Arslan, 2020) to maintain a comprehensive overview of the process of teaching language skills in the light of the CEFR learning outcomes. The study revealed the necessity of placing more focus on fostering listening skills by increasing the use of different language activities in the class which are designed to serve for these purposes. Moreover, the English Preparatory Program should place different types of activities such as long public talks, a-2-minute talk, individual and group presentations, communicative activities, and design different implementations like speaking clubs to contribute to the students' sense of achievement in speaking skills.

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AN ANALYSIS OF TURKISH AND RUSSIAN TEACHERS' OF ENGLISH APPROACHES TO EFFECTIVE INSTRUCTIONAL STRATEGIES

Abstract: The purpose of this study was to determine teachers' approaches to Marzano's effective instructional strategies (MEISs), as defined by Marzano, Pickering and Pollack (2001) in the secondary schools in Turkey and Russia and tell whether they differ or not. In this study survey research - one of the quantitative approaches – was carried out. The participants for the study were 54 teachers of English in Turkey and 40 teachers of English in Russia. "The Effective Instructional Strategies Questionnaire" and an open-ended questionnaire were used to gather data. Data was generated utilizing content analysis and non-parametric Mann-Whitney U test. The results related to the first and second research questions revealed that there were partial differences between Turkish and Russian teachers' approaches to Marzano's nine effective instructional strategies and to usage of these strategies. Turkish teachers place less importance than Russian teachers on such strategies as summarizing and note taking, homework and practice, generating and testing hypothesis. As to Russian teachers, they do not espouse strategies in the category of non-linguistic representations as much as Turkish teachers do. The results of the study showed that Turkish and Russian teachers' approaches and the usage of the strategies differ.

Keywords: English teaching, effective teaching, Marzano's effective instructional strategies, teachers in Turkey and Russia

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INTRODUCTION

In the era when technology and information develop so fast the importance of teaching foreign languages increases more and more. Y generation is people who have started using technology actively, but Z generation is people who grow up and develop themselves integrated with technology and the Internet. The Internet and technology provide access to the unlimited information. People in different countries continually generate information interactively and share this information online. Shared information is mostly in English, the language that is used as the international language and accepted globally as the common language between people all over the world.

On the other hand, the more information resources we have, the more difficult it is to choose the proper information we need from this information plethora, and it requires unique skills. The only way to get rid of information pollution is to learn English properly and use it correctly. Foreign language learning improves analytical thinking skills, not just exploring the world.

According to the researches, individuals who master more than one language are more likely than unilingual individuals to exhibit superior skills in controlling executive functions; focusing, planning, setting up a strategy, coding and processing of information, determining the next step in successive tasks (Bialystok, 2011). Starting foreign language instruction in elementary school also positively affects children's achievements in mathematics and reading in their mother tongue (Stewart, 2005). It is also essential to know English for the desired employment in the future.

In Turkey and Russia as in many countries besides teaching of mother tongues the first and second foreign languages are taught at schools, English is taught as the first foreign language. The histories of the education systems in Turkey and Russia are similar in many aspects. The reforms of Mahmud II (1808-1839) have many common features with the reforms made in the period of Peter I (1682-1725) in Russia. In both countries, education systems experienced the process of gaining experience and getting closer to Europeans (İvanov, 2000). In the 20th century, when the republics were established, state leaders brought reforms in the fields of secondary and higher education to improve the country, economy and nations. In the 20th century in Turkey and Russia attention was given to teaching English. Looking at the foreign language education in the two countries, neither has reached a high level. Both countries at the European borders in Eurasia have tried to apply European experience but have not got closer to the European countries leading in English education (EPI, 2017). This situation can have different causes. The fact that European languages are closer to English in origin and structure affects the process. In recent years, several changes have been made in the education system and training programs in Turkey and Russia. However, the desired results have not been reached yet.

In Turkey, despite the importance given by the Ministry of Education to English education, the desired success has not been achieved. "... it is assessed that despite the resources and the effort that has been spent, the efficiency cannot be obtained at the desired level. Traditional language teaching habits that have been ongoing for a long time, deficiencies in planning foreign language education and the methods, activities, materials, and inadequacies or mistakes in measuring and evaluating them can be shown as the reasons" (Işık, 2008, s.15).

Turkey, according to the English Proficiency Index has a "very low" level in terms of gaining skills in English, while Russia has a "low" level (EPI, 2017). When the literature is searched, it is seen that various studies have been made on the troubles related to foreign language teaching (Acat& Demiral, 2002; Çelebi, 2006; Demirel, 1990; Haznedar, 2010; Işık, 2008; Karahan,

2007; Karal & Berigel, 2006; Özer & Korkmaz, 2016; Svalova, 2011). According to Demirpolat (2015), it is not possible to link the failure of foreign language teaching to a single cause, but many factors create this situation in connection with each other.

In summary, the reasons for the failure of foreign language teaching are as follows:

- Shortcomings in foreign language teacher training system,
- Inadequate in-service training,
- The teachers who do not know the culture of the language they teach,
- Lack of practice in measurement-evaluation,
- The inadequacy of hardware and training materials,
- Crowded classes,
- Inadequate methods,
- Not having a common philosophy about foreign language teaching,
- No supervision of foreign language teaching process,
- Low motivation and negative attitudes of students,
- Inaccuracies in the methods, techniques and strategies used by teachers,
- Teachers who do not give necessary importance to the development of their listening and speaking skills.

Choosing appropriate methods and techniques to ensure learning and achieve learning objectives is among the responsibilities of a teacher in the teaching process. During the course, the teacher can apply various methods. The effective teacher will be aware of which teaching strategies are more successful and productive. Within the school organisation, teachers have essential responsibilities as leaders of the classroom, to develop schooling and education, and to educate students in accordance with expectations (Can, 2004, p.111). As in other fields, the role of the teacher in foreign language teaching is critical, and the fact that the strategies used in the lessons are effective or not affects the whole education-training process, the motivation and attitudes of the students.

If a teacher is effective it affects the success of students directly (Darling-Hammond, 2000; Jordan, Mendro, & Weerasinghe, 1997; Sanders & Rivers, 1996), effective teachers use effective instructional strategies. Teachers make strategy choice according to their perceptions, content and pedagogical knowledge (Izrik, 2005 and Shulman, 1987, quoted in Diego, 2012, p.3); thus it is believed that teachers' approaches to effective teaching strategies directly affect the success of students. One of the essential factors in the teaching process are teachers and the methods and strategies used by the teachers.

Effective instructional strategies are methods used by a teacher, methods involved in the student learning process and conferring specific learning goals. There are different examples of effective teaching strategies given by different researchers, such as direct and indirect teaching, cooperative learning, self-directed learning, problem-solving, research-based teaching, role play, writing, effective thinking and asking questions (Moore, 2005; Killen, 2006; Burden ve Byrd, 2007; Borich, 2014). In 2001, Marzano, Pickering and Pollock examined the results of researches on effective teaching and, as the result of the meta-analysis, put together the results of the researches and arranged them according to the effect sizes. The categories of instructional strategies that affect students' achievements are listed in Table 1 according to the effect sizes.

Table 1. *Marzano's Effective Instructional Strategies* (Marzano, 2008, p.11)

Category	Ave. Effect Size (ES)	Percentile Gain	No of ESs	Standard Deviation (SD)
Similarities and Differences	1,61	45	31	0,31
Summarizing and Note Taking	1,00	34	179	0,50
Reinforcing Effort and Providing Recognition	0,80	29	21	0,35
Homework and Practice	0,77	28	134	0,36
Non-Linguistic Representations	0,75	27	246	0,40
Cooperative Learning	0,73	27	122	0,40
Setting Objectives and Providing Feedback	0,61	23	408	0,28
Generating and Testing Hypothesis	0,61	23	63	0,79
Questions, Cues, and Advance Organizers	0,59	22	1,251	0,26

The effect size expresses the increase and decrease in the success of the test group in terms of standard deviation units. The number of ESs refers to the number of examined studies. As the result of the meta-analysis conducted by Marzano and his team, nine very effective teaching strategy categories, as shown in Table 1, have emerged. These effective teaching strategies are called Marzano's effective instructional strategies. The work of Marzano and his colleagues combines the positive experiences of many researchers to reveal their most effective results.

While just one study has been conducted on Marzano's effective instructional strategies and teaching of English in Turkey (Altunöz, 2017), there are no studies at all in Russia (DSDL, 2017, RSL, 2017). When the current research literature is reviewed, it is seen that no studies regarding the approaches of English teachers' to Marzano's effective instructional strategies, especially the comparative analysis of the approaches of teachers in Turkey and Russia experiencing similar difficulties in foreign language teaching have been done yet. As the result of the review of the research literature on foreign language teaching this study was designed to determine whether English teachers working in Turkish and Russian schools use Marzano's Effective Instructional Strategies or not and the reasons for it. Problems in teaching foreign languages need to be examined regarding approaches to effective instructional strategies of teachers who are ones practising one-to-one as the most crucial part of teaching and learning process.

PURPOSE OF THE STUDY

One of the variables of assessment in foreign language teaching is effective teaching strategies that teachers use. As a result of the meta-analysis by Marzano, nine (9) effective teaching strategies were introduced that could make teaching effective. The purpose of this study is to compare the approaches of English teachers working in Turkish and Russian schools to Marzano's effective instructional strategies, which of them they use and why.

RESEARCH QUESTIONS

In this study, the approaches of English teachers in secondary schools to effective instructional strategies were explored.

1. Do approaches to Marzano's effective instructional strategies differ among teachers of English working in Turkey and teachers of English working in Russia?

2. What are opinions on the usage of Marzano's effective instructional strategies (usage levels, usage reasons and methods of application) of teachers of English working in Turkey and teachers of English working in Russia?

RESEARCH DESIGN

In this study, a combination of qualitative and quantitative research was applied. We used both a survey and open-ended questions collecting data to understand contradictions between quantitative results and qualitative findings.

PARTICIPANTS

The participants for the study were teachers of English working at private and state secondary schools in Sahinbey and Sehitkamil areas in Gaziantep in Turkey and schools located in Moscow and St. Petersburg in Russia. The demographic information of the participants is shown in Table 2.

Table 2. The demographic information of the participants

		Turkey		Russia	
		f	%	f	%
Number of the schools		21	%100	30	%100
Type of the school	State	18	%85,71	30	%100
	Private	3	%14,29	0	0
Gender	Female	40	%74,07	37	%92,5
	Male	14	%25,93	2	%5
	Not determined	0	0	1	%2,5
Graduated from	Department of education at a university	33	%61,11	5	%12,5
	Arts & Sciences	15	%27,78	25	%62,5
	Institute of Education	0	0	0	0
	Master	2	%3,7	0	0
	Other	3	%5,56	10	%25
	Not determined	1	%1,85	0	0
Experience	1-5 years	26	%48,15	2	%5
	5-10 years	11	%20,37	11	%27,5
	10-15 years	5	%9,26	6	%15
	15-20 years	9	%16,67	3	%7,5
	20 years and more	2	%3,7	17	%42,5
	Not determined	1	%1,85	1	%2,5
Age	20-30	26	%48,15	5	%12,5
	30-40	19	%35,19	14	%35
	40-50	8	%14,81	6	%15
	50 and more	0	0	15	%37,5
	Not determined	1	%1,85	0	0

Purposive sampling was used to reach the participants working at secondary schools in Russia. Purposeful sampling involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Cresswell & Plano Clark, 2011). We relied on our own judgment when choosing members of population to participate in the study. We tried to reach English teachers who work in secondary schools finding them randomly at schools and on social media. All of the teachers who filled in and returned the questionnaire became a part of the study group of this study. As seen in Table 2, there is an average age difference between Turkish and Russian participants.

DATA COLLECTION INSTRUMENTATION

Data collection was broken up into two phases: The Effective Instructional Strategies Questionnaire prepared by Diego (2012) and an open-ended questionnaire by Altunöz (2017) was used to collect data.

THE EFFECTIVE INSTRUCTIONAL STRATEGIES QUESTIONNAIRE

The Effective Instructional Strategies Questionnaire is a scale using a 4-point Likert scale-response alternatives scored from 1 to 4. The questionnaire consists of 6 questions about demographic and 40 questions on effective instructional strategies. The reliability coefficient was calculated as .85. In Diego (2012) the Cronbach alpha reliability ranged from $\alpha=.48$ to $\alpha=.92$ with a median alpha of $\alpha=.61$. The sub-dimensions of the questionnaire and the number of items are shown in Table 3. This questionnaire was applied in English.

In this study the Cronbach alpha coefficients were calculated for the reliability analysis of the sub-dimensions of the questionnaire and ranged from $\alpha=.52$ to $\alpha=.77$: Identifying Similarities and Differences – $\alpha=.56$, Summarizing and Note-taking – $\alpha=.53$, Reinforcing Effort and Providing Recognition – $\alpha=.60$, Homework and Practice – $\alpha=.51$, Non-linguistic Representations – $\alpha=.76$, Cooperative Learning – $\alpha=.68$, Setting Objectives and Providing Feedback – $\alpha=.73$, Generating and Testing Hypotheses – $\alpha=.77$, Questions, Cues, and Advanced Organizers – $\alpha=.67$.

Table3. The Effective Instructional Strategies Questionnaire Sub-dimensions and Distribution of the Items

Effective Instructional Strategy	Number of items
Summarizing and Note Taking	5
Reinforcing Effort and Providing Recognition	4
Questions, Cues, and Advanced Organizers	4
Similarities and Differences	4
Homework and Practice	4
Non-Linguistic Representations	4
Cooperative Learning	4
Setting Objectives and Providing Feedback	6
Generating and Testing Hypothesis	5
Total number of items	40

The questions in the Effective Instructional Strategies Questionnaire are as follows:

Questionnaire Sample (Diego, 2012)

Statements	1 Strongly disagree	2 disagree	3 agree	4 Strongly agree
1. Assigning in-class and homework tasks that involve comparison is an effective instructional strategy.				

THE OPEN-ENDED QUESTIONNAIRE

The open-ended interview form used by Altunoz consists of 30 questions and aims to determine whether teachers use Marzano's nine effective instructional strategies, the reasons and if they are trained about effective instructional strategies or not, and what is effective teaching according to them. In the questionnaire, they were asked whether they used effective instructional strategies or not, how they used them, and why they did or did not use them.

DATA COLLECTION

The Effective Instructional Strategies Questionnaire was implemented in the fall semester of the 2017-2018 academic year in the schools previously determined by the researcher in Şahinbey and Şehitkamil districts of Gaziantep.

The open-ended questionnaire was also implemented to the department leaders in the same schools. Schools were visited by the researcher several times, and the questionnaires were distributed individually to the teachers. The number of English teachers attained at their posts is 54. As the department leaders of the three schools did not agree to fill out the open-ended questionnaire, the researcher obtained 18 open-ended questionnaires filled by department leaders from 21 schools.

At the same time, teachers from Russia were reached on the Internet, the effective instructional strategies questionnaire and the open-ended questionnaire were applied. The open-ended questionnaire was applied to 6 teachers from Russia.

DATA ANALYSIS

In the analysis of the data, firstly information about the questionnaire data will be provided, and then the information about the open-ended questionnaire data will be presented.

SURVEY DATA

The total score calculation for the subscales of the scale was performed first. Then, a Shapiro-Wilk normality test was conducted to check the suitability of each sub-dimension for parametric tests. Since the significance level in all sub-dimensions is smaller than 0.05, it is decided that scale scores do not have a normal distribution and it is decided to use non-parametric tests. The Mann-Whitney U test was conducted because the variable of the country where teachers worked had two values. The average and interval calculation were made separately for each item and module according to the countries. Table 4 below is used for the mean range comparison.

Table 4. Intervals of Average Values and Comments

Average Lower Value	Average Upper Value	Comment
1,00	1,75	Strongly Disagree
1,76	2,50	Disagree
2,51	3,25	Agree
3,26	4,00	Strongly Agree

THE OPEN-ENDED QUESTIONNAIRE DATA

Other data from the study were collected via a questionnaire consisting of open-ended questions and analysed using the content analysis technique. Content analysis is a specific and systematic interpretation that can be controlled by clearly defining boundaries and directions. The purpose of the content analysis is to reveal the common aspects of multiplexed textual content; from this point of view, content analysis is a generalising approach. The content analysis takes the right way from quantitative towards qualitative terms in the light of the fact that qualitative and quantitative stages of meanings or meaning structures complement each other (Gökçe, Türkdoğan, 2012, p. 317).

The open-ended questionnaire was applied to the department leaders of 24 schools (18 Turkish and 6 Russian), and the department leaders answered 27 questions. There is a total of 9 modules related to the views of department leaders on effective instructional strategies. The modules, the questions in the open-ended questionnaire are the same as Marzano's 9 effective instructional strategies: Similarities and Differences, Summarizing and Note Taking, Reinforcing Effort and Providing Recognition, Homework and Practice, Non-Linguistic Representations, Cooperative Learning, Setting Objectives and Providing Feedback, Generating and Testing Hypothesis, Questions, Cues, and Advance Organizers. The content analysis resulted in 3 themes: 'Usage level', 'Usage reason' and 'Application level'. There are ten categories for the theme.

In the free coding, 205 codes were produced first. Then the codes were re-grouped under the themes and categories. Theme and category and sample code definitions are given in Table 5.

Table 5. Theme, Category and Code Definitions Table

Theme	Category
Reason	Learner Contains examples on reasons offered by teachers where codes related with learners. <i>"Students learn well"</i> <i>"Because it is an effective method for students"</i>
	Learning Contains examples on reasons offered by teachers where codes related with learning process. <i>"Provides learning.."</i> <i>"Useful for estimation and case study"</i>
	Content Contains examples of reasons offered by teachers where codes related with lesson structure and content. <i>"writing'e faydalı olduğunu düşündüğüm için"</i> <i>"eski ve yeni kelimeleri bilgileri bir biri ile bağlantıları olsun diye"</i>
	Skill Contains examples of usage reason offered by teachers where codes related to gaining skills. <i>"support thinking"</i> <i>"It gains an independent effort"</i>
Application	General Approach Contains examples offered by teachers as general approach. <i>"When the subjects are too general I want them to make it together"</i> <i>"In the home environment they can finish activities that we can't complete at the lesson due to the time limitation"</i>
	Methods and Techniques Contains examples offered by teachers at the methods and techniques level. <i>"At the end of each unit, the students work by taking note of the words they have just learned in their own vocabulary"</i> <i>"Group play, competition"</i>
	Activity Contains examples offered by teachers at the activity level <i>"We talk about the difference between already and yet, or the similarities and differences of similar patterns in English and Russian."</i> <i>"go to the park. He goes to the park. First of all, I will guide students to explain the difference, then explain the details myself."</i>
Usage level	Yes Codes indicating that teachers use the strategies <i>"Yes, I use."</i>
	Partially Codes indicating that teachers use the strategies partially <i>"Sometimes"</i>
	No Codes indicating that teachers do not use <i>"I don't use."</i>

Two weeks later, the codes were looked over, and as a result, 190 codes remained. The code reliability was calculated as $(190/205) = 93\%$,

FINDINGS

The findings were organised and analysed within the context of two research questions. In the presentation of the findings, findings from the survey data were first presented, followed by findings from the open-ended questionnaire data. In the survey findings, headings were presented in the context of the research questions.

FINDINGS RELATED TO THE FIRST RESEARCH QUESTION

FINDINGS RELATED TO DIFFERENCES IN APPROACHES TO EFFECTIVE INSTRUCTIONAL STRATEGIES OF TEACHERS IN TURKEY AND RUSSIA

Mann-Whitney U test was conducted to determine whether the country where teachers work (Turkey or Russia) affects their approaches to MEIS or not.

Table 6. Mann-Whitney U Test According to Teachers' Duty Countries

Lower dimension	Country	n	Rank Order	Total Ranking	U	z	p
<i>Similarities and Differences</i>	Russia	40	46,71	1868,50	1048,50	-0,244	0,808
	Turkey	54	48,08	2596,50			
Summarizing and Note Taking	Russia	40	50,76	2030,50	949,50	-1,009	0,313
	Turkey	54	45,08	2434,50			
<i>Reinforcing Effort and Providing Recognition</i>	Russia	40	47,40	1896,00	1076,00	-0,031	0,975
	Turkey	54	47,57	2569,00			
Homework and Practice	Russia	40	55,08	2203,00	777,00	-2,346	0,019*
	Turkey	54	41,89	2262,00			
<i>Non-Linguistic Representations</i>	Russia	40	39,61	1584,50	764,50	-2,438	0,015*
	Turkey	54	53,34	2880,50			
Cooperative Learning	Russia	40	47,90	1916,00	1064,00	-0,124	0,901
	Turkey	54	47,20	2549,00			
<i>Setting Objectives and Providing Feedback</i>	Russia	40	48,06	1922,50	1057,50	-0,173	0,863
	Turkey	54	47,08	2542,50			
Generating and Testing Hypothesis	Russia	40	52,99	2119,50	860,50	-1,692	0,091
	Turkey	54	43,44	2345,50			
<i>Questions, Cues, and Advance Organizers</i>	Russia	40	50,05	2002,00	978,00	-0,792	0,429
	Turkey	54	45,61	2463,00			

* $p < 0,05$

According to the results of Mann-Whitney U test conducted to determine whether there is any difference in the approach scores to MEIS according to the teachers' having Turkish or Russian nationality status; there is a difference in "Homework and Practice" and "Non-Linguistic Representations" sub-dimensions. Russian teachers' approach scale scores are higher in "Homework and Practice" sub-dimension, whereas Turkish teachers' scale scores are higher in "Non-Linguistic Representations" sub-dimensions. In other words, the countries where the teachers' work have some influence on the teachers' approach to MEISs.

FINDINGS RELATED TO THE SECOND RESEARCH QUESTION

The open-ended questionnaire was used in this research to determine teachers' of English usage levels of MEIS, usage reasons and views on how they applied these strategies. Content analysis was conducted to analyse the data obtained from this questionnaire.

Modules are used to present these findings. In each module, the data were presented according to the general themes and codes, and then the comparative data were presented according to the countries where the teachers worked and the status of having taken teaching methods training or not.

GENERAL FINDINGS RELATED TO THE USAGE OF SIMILARITIES AND DIFFERENCES STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 7. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (24)
	Partially	0
	No	0
Reason	Learner(5)	Learner (5)
	Learning(20)	Learning (15) Facilitating learning (3) Reinforcing learning (2)
	Content(11)	Content (11)
	Skill(2)	Skill (2)
Application	General Approach (13)	General Approach (13)
	Methods/Techniques (2)	Methods and Techniques (2)
	Activity (10)	Activity (10)

All of the participants use the "Similarities and Differences" module. Most of the usage reasons were presented in the learning category. When the application theme was examined, it was seen that most of the examples were presented at the general approach level. Two of the teachers did not determine their status of extra training.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF SIMILARITIES AND DIFFERENCES STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 8. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extratraining	Got extra training
Number of persons	18	6	10	12
Usage Level				
Yes	18	6	10	12
Reason				
Skill	2	0	0	2
Content	9	2	7	4
Learner	3	2	2	3
Learning	12	3	4	9
Application				
Activity	8	2	3	6
General Approach	8	5	6	6
Methods-Techniques	2	0	0	1

Although all teachers stated that they used the module when they presented the reasons for use, some of the Turkish teachers declared that they preferred to use it because of skill development, but Russian teachers did not give any reasons for this. Teachers who did not receive any specific training offered more reasons at the content level, while trained teachers offered more reasons at the learning level. In other words, teachers who did not receive any training attached importance to the content and those who received training on the topic gave more importance to the learning process. While almost all of the Russian teachers stated the form of usage, they presented examples at the level of general approach, only half of the Turkish teachers presented any examples in this subject. Teachers who received training provided examples at the level of activity and general approach, whereas teachers who did not receive extra training mainly offered examples at the level of general approach.

GENERAL FINDINGS RELATED TO THE USAGE OF SUMMARIZING AND NOTE TAKING STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 9. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (18)
	Partially	Partially (3)
	No	No (3)
Reason	Learner (14)	Learner(11)
	Learning (17)	Being useful (7) Permanence (3)
	Content (9)	Content (8) Not important (1)
	Skill (0)	
Application	General Approach (3)	General Approach (3)
	Methods/Techniques (3)	Methods Techniques (3)
	Activity (13)	Activity (13)

18 teachers stated that they used, three teachers partially used and three teachers did not use the "Summarizing and Note Taking" module. Most of the reasons were presented in the learning category. In the content category, an expression such as "It teaches to distinguish what is important and what is not important" was presented as a positive reason besides those who indicated that they did not use the category because it was insignificant. An equal number of codes were used at the method-technique and general approach levels, while mostly activity-level usage examples were provided for the application-based examples.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF SUMMARIZING AND NOTE TAKING STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table10. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of persons	18	6	10	12
Usage Level				
Yes	12	6	9	7
No	3	0	1	2
Partially	3	0	0	3
Reason				
Content	3	6	5	3
Learner	13	1	6	7
Learning	15	2	6	10
Application				
General Approach	2	1	1	2
Methods-Techniques	3	0	1	2
Activity	6	7	7	5

All of the teachers who said that they did not use this category or partially used were Turkish. Five Russian teachers from six gave six reasons in the content category, while only three of 18 Turkish teachers gave reasons for the content. The Turkish teachers offered more reasons for learner and learning categories. While the Russian teachers mostly kept the topic of learning in the foreground, the Turkish teachers kept the learner and learning phenomenon in the foreground. On the other side teachers who got some education on the topic offered more reasons for learning, while those who did not get any extra training focused on content and learners. No differentiation was observed in the code distributions at the application level.

GENERAL FINDINGS RELATED TO THE USAGE OF REINFORCING EFFORT AND PROVIDING RECOGNITION STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 11. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (22)
	Partially	Partially (1)
	No	
Reason	Learner (23)	Learner (10) Motivation (10)
	Learning (17)	Affective dimension (9) Increase success (7)
	Content (1)	Content (1)
Application	General Approach (10)	General Approach(10)
	Methods-Techniques (11)	Methods-Techniques (11)
	Activity (0)	

In the "Reinforcing Effort and Providing Recognition" module, 22 teachers stated that they used the strategy while one teacher declared using it partially and one teacher did not answer the question. In the reason theme, most of the codes were produced in the learner category. When this category was examined in detail, it was seen that ten codes were directly related to learners and ten to motivation of the learners. The teachers did not use expressions at the level of activity while using expressions in general approach and methods-techniques categories.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF REINFORCING EFFORT AND PROVIDING RECOGNITION STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 12. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
Yes	16	6	9	11
Partially	1	0	1	0
Reason				
Learner	21	2	8	15
Learning	11	6	8	5
Content	0	1	1	0
Application				
General Approach	7	3	7	3
Methods-techniques	8	3	3	8

When we examined the usage level of the "Reinforcing Effort and Providing Recognition " module regarding country and education level, we saw that one teacher who was Turkish and got no extra training used the strategy partially. In the usage reason theme the Russian teachers expressed two codes related to learners, the Turkish teachers 21 times used codes related to this category. When the learning category was examined, it was clear that the Turkish teachers used more expressions about success, whereas the Russian teachers used more codes on affective dimension and importance of the process.

GENERAL FINDINGS RELATED TO THE USAGE OF HOMEWORK AND PRACTICE STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 13. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (20)
	Partially	Partially (3)
	No	No (1)
Reason	Learning (24)	Repetition (8) Reinforcement (5) Useful (2)
	Learner(4)	Learner (2)
	Skill (3)	
	Content(2)	
Application	General Approach (12)	General Approach (1) Repetitive homework (9)
	Methods-Techniques	Methods techniques (9)
	Activity	Activity (7)

When the level of usage was examined in the "Homework and Practice" module it was seen, that 20 teachers stated that they used the strategy, while three teachers indicated that they used partially, and one teacher indicated not using it. At the usage reasons level, most of codes were generated in the learning category. Reasons for reinforcement and repetition were brought into the forefront by the teachers. In the application theme at all three levels, numbers of extracted codes were close to each other.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF HOMEWORK AND PRACTICE STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 14. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
Yes	14	6	8	10
No	1	0	1	0
Partially	3	0	1	2
Reason				
Learning	20	4	9	13
Total positive codes	15	4	6	11
Total negative codes	5	0	2	3
Reason				
Learner	2	2	2	2
Skill	2	1	2	1
Content	1	1	2	0
Application				
General Approach	4	6	5	5
Methods-techniques	5	4	4	4
Activity	6	1	3	4

In the "Homework and Practice" module all of the Russian teachers stated that they used the strategy while three of the Turkish teachers stated that they partially used it and one did not use

it. In the usage reasons, Turkish teachers used five negative expressions for the learning category, whereas the Russian teachers did not use negative codes.

GENERAL FINDINGS RELATED TO THE USAGE OF NON-LINGUISTIC REPRESENTATIONS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 15. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (23)
	Partially	Partially (1)
	No	0
Reason	Learning (17)	Permanence (8) Easy recall (3) Facilitation (3)
	Learner(4)	Useful (1) Motivation (1)
	Content(3)	Content (2) Real life conditions(1)
	Skill (3)	Skill (2) Effective communication (1) Creativity (1)
Application	General Approach	General Approach (1)
	Methods/Techniques (17)	Imitation-acting out (8) Methods-techniques (4)
	Activity (10)	Activity (5) Physical movement (4)

When the level of usage of the "No-Linguistic Representations" module was examined it was seen, that 23 teachers stated that they used the strategy, one teacher indicated using it partially. In the reasons theme, most of the codes were determined in the learning category. In this category, permanence, easy recall and facilitation codes were expressed most of all. In the skill category, the teachers expressed that they used it because of an expectation of an increase in creativity and communication skills. When the application examples were examined, it was seen that most of the codes were produced at the methods-techniques level. In this category, most of the examples were presented on imitation-acting out.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF NON-LINGUISTIC REPRESENTATIONS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 16. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
Yes	17	6	10	11
Partially	1	0	0	1
Reason				
Learning	16	6	9	11
Skill	3	0	1	2
Learner	3	1	2	2
Content	2	1	2	1
Application				
General Approach	1	0	0	0
Methods-Techniques	14	3	6	11
Activity	3	7	6	4

When the reasons for the "Non-Linguistic Representations" module were examined, it was determined that most of the codes were used in the learning category. In the learning category, the permanence code was expressed most of all and mainly by the Turkish teachers. An equal number of codes was expressed in teacher training dimension. While the Russian teachers were on easy recall code, Turkish teachers focused on facilitation.

GENERAL FINDINGS RELATED TO THE USAGE OF COOPERATIVE LEARNING STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 17. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (21)
	Partially	Partially (3)
	No	
Reason	Learner(12)	Cooperation (7)
	Learning (11)	Learning (3) Easy learning (3)
	Skill (11)	Gaining skills (6)
	Content(0)	
Application	General Approach	General Approach (2)
	Methods-Techniques (19)	group assignment (7) Methods Techniques (5) Out-of-class activities (4)
	Activity	Activity (5)

When the usage level of the "Cooperative Learning" module was examined, it was seen, that 21 teachers indicated that they used the strategy and three teachers said that they used it partially. When the categories for usage reason were examined, it was determined, that most of the codes were produced in the learner category. In this category, the code of cooperation was at the forefront. It was noteworthy that the teachers did not say a word to justify content in this module.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF COOPERATIVE LEARNING STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 18. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
Yes	16	5	8	12
Partially	2	1	3	0
Reason				
Learner	10	2	5	6
Learning	9	2	4	6
Application				
General Approach	1	1	1	1
Methods-techniques	10	4	5	7
Activity	3	2	1	4

In the "Cooperative Learning" module two Turkish teachers and one Russian teacher indicated that they used the strategy partially. All of the teachers who indicated that they used the strategy partially were teachers who had not got any extra training on the topic. The Turkish teachers produced codes predominantly in the learner and learning categories; the Russian teachers expressed relatively more codes in the skill category.

GENERAL FINDINGS RELATED TO THE USAGE OF SETTING OBJECTIVES AND PROVIDING FEEDBACK STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 19. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (23)
	Partially	Partially (1)
	No	
Reason	Content(14)	Measurement (7) Content (4) Linking to everyday life (3)
	Learner(12)	Learner (10)
	Learning (9)	Learning (8)
	Skill (1)	Skill (1)
Application	General Approach (7)	General Approach (4)
	Methods/Techniques (3)	Methods-Technique (2) Lesson preparation (1)
	Activity (9)	Activity (6)

Examining the levels of usage in the " Setting Objectives and Providing Feedback " module showed that 23 teachers used the strategy, while one teacher used it partially. Regarding usage reasons, most codes were produced in the content category. In this category, the measurement code was in the foreground.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF SETTING OBJECTIVES AND PROVIDING FEEDBACK STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 20. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
Yes	18	5	9	12
Partially	0	1	1	0
Reason				
Content	10	4	6	7
Learner	12	2	6	8
Learning	7	3	8	2
Skill	1	0	0	1
Application				
General Approach	6	1	3	4
Methods-techniques	1	2	2	1
Activity	7	2	2	6

In the "Setting Objectives and Providing Feedback" module, one Russian teacher who had got no extra training declared that used the category partially. When the usage reasons were examined, it was seen that only the Turkish teachers mentioned codes of linking with everyday life in the content category. Other codes in the content category had relatively similar distributions. In the learning category, the Turkish teachers used relatively more expressions.

GENERAL FINDINGS RELATED TO THE USAGE OF GENERATING AND TESTING HYPOTHESIS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 21. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Yes (18)
	Partially	Partially (2)
	No	No (2)
Reason	Skill (13)	Problem-solving skill(3) Skill (3) Analysing (2) Thinking skill (2)
	Content (9)	Content (3) <i>There is no area for an application (2)</i>
	Learning (6)	Learning (2)
	Learner (2)	Learner (1) Not to adjust memorizing (1)
Application	General Approach(1)	General Approach (1)
	Methods-Techniques (13)	Guess (8)
	Etkinlik (4)	In-class activity (2)

In the "Generating and Testing Hypothesis" module, 18 teachers stated that they used the strategy, two teachers said that they used partially and two teachers declared that they did not use it. When the usage reasons theme was analysed, it was indicated that most of the codes were produced in the skill category.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF GENERATING AND TESTING HYPOTHESIS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 22. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of persons	18	6	10	12
Usage Level				
Yes	13	5	8	10
No	1	1	1	1
Partially	2	0	1	1
Reason				
Skill	7	6	7	6
Content	6	3	3	6
Learning	6	0	2	4
Learner	2	0	0	2
Application				
General Approach	1	0	1	0
Methods-Techniques	8	5	4	9
Activity	4	0	2	2

The teachers who stated that they did not use the "Generating and Testing Hypothesis" module were both Turkish and Russian and also those who had got some training on the topic and not. Teachers who indicated that they used partially were Turkish. In the usage reasons theme, the Russian teachers expressed proportionally much more codes in the skill category than the Turkish teachers did. The code for thinking skills was only mentioned by Russian teachers. The research homework was also given as an example only by the Russian teachers. Examples at activity level were mentioned by Turkish teachers.

GENERAL FINDINGS RELATED TO THE USAGE OF QUESTIONS, CUES, AND ADVANCE ORGANIZERS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 23. Theme, Category and Code Distributions

Theme	Category	Codes
Usage Level	Yes	Evet (21)
	Partially	Partially(2)
	No	
Reason	Content(13)	Relating to previous information (10)
	Learner(9)	Learning preparation (2) Enjoyable (2)
	Learning (7)	Importance of control (2) Facilitating learning (2)
	Skill (7)	Supporting link building (2) Supporting thinking (2)
Application	General Approach (8)	Giving cues (5) Foreknowledge (2)
	Methods/Techniques(5)	Methods-techniques (5)
	Activity (1)	Activity (1)

In the " Questions, Cues, and Advance Organizers " module, 21 teachers said they used the strategy, and two teachers stated that they partially used it. In the reason theme, most of the codes were determined in the content category. The code of foreknowledge was expressed ten times. The teachers also mentioned repetition of content and spiral system. It is also the codes that are expressed by the teachers that the content is repeated and the spiral system. At the application level in the general approach category, most of the codes were about giving cues.

FINDINGS RELATED TO DIFFERENCES IN THE USAGE OF QUESTIONS, CUES, AND ADVANCE ORGANIZERS STRATEGY BY TEACHERS OF ENGLISH WORKING IN TURKEY AND RUSSIA

Table 24. Distribution of Codes by Country and Training Status

	Turkey	Russia	Got no extra training	Got extra training
Number of Persons	18	6	10	12
Usage Level				
	Yes	16	5	9
Partially	1	1	1	1
Reason				
	Content	12	1	5
	Learner	7	2	4
	Learning	5	2	3
	Skill	6	1	3
Application				
	General Approach	6	2	2
	Methods-Techniques	0	5	5
	Activity	1	0	0

In the "Questions, Cues, and Advance Organizers " module the distribution of the teachers who partially used the category was equal according to the country where they lived and their education level. The code of relating to previous information was expressed nine times by Turkish teachers, but only once by Russian teachers in the content category at the reason level. The only example at the level of activity was voiced by the teacher who was Turkish and trained.

DISCUSSION AND CONCLUSION

Both the Turkish and Russian teachers had similar levels of usage in the answers given to the questions on the "Similarities and Differences" strategy, and they were at the level of "I agree". Altunöz (2017) stated that the strategy observed in the lessons was quite extensively used. Diego's (2012) study found that teachers working in real and virtual learning teaching environments had similar positive views on the strategy of identifying similarities and differences. According to the findings obtained from the open-ended questionnaire both the Turkish and the Russian teachers stated that they used the strategies they presented most of all the example of providing learning as the reason. The examples of the content category that were given were about describing similarities and differences between different languages or between different linguistic structures on the same level.

According to the survey responses, the teachers in the two countries stated that they considered the "Summarizing and Note Taking" strategies to be effective. In the study of Altunöz (2017), it was seen that two of the teachers observed never applied this strategy. In Diego's (2012) study, it was seen that teachers working in the virtual environment rated the Summarizing and Note strategy lower than teachers working in traditional classrooms. According to the open-ended questionnaire, all the teachers who stated that they did not use or partially used Summarizing and Note Taking strategies were Turkish. Turkish teachers who had negative thoughts about this strategy presented such reasons as making students disinclined, students' inadequate levels. The similar reason for not using was also found in the research of Altunöz (2017). As a result of the research conducted with the students in Kara's (2016) study, it was concluded that "despite the fact that some students with low achievement levels were found to have some difficulties in some strategies" the usage of MEISs by a teacher made the course more comprehensible, the students increased their success and thinking levels, and the strategies had positive effect on the students motivation and attitudes. It can be considered that the fact that Russian teachers' pay more attention to the Summarizing and Note Taking strategy originates from the fact that the tradition of using this strategy actively in Russia has not changed over the last century (Krupskaya, 1960; Matusevich, 2012).

Compared to the Russian teachers, the Turkish teachers are more convinced that Reinforcing Effort and Providing Recognition through charts and rubrics and using particular symbols are more effective. On the contrary, we can see that the Russian teachers believe more than the Turkish teachers that Reinforcing Effort and Providing Recognition using real prizes and compliments is more effective. The reasons for these differences may be related to cultural differences. In the answers to the open-ended questionnaire, the Turkish teachers give examples of the usage reasons giving particular importance to a learner. At the same time, while the Turkish teachers have provided more reasons for success, the Russian teachers have expressed more reasons for emotional dimension and importance of the learning process. Altunöz (2017) observed in her study that the teachers did not hold this strategy in the foreground, whereas the students emphasised especially this strategy.

We can see that the Russian teachers are more convinced that applying skills, assigning homework for main in-class activities and explaining the purpose of homework is effective, whereas the Turkish teachers have shown more positive attitudes towards various forms of feedback on all assigned homework. This suggests that Russian teachers do not agree that providing feedback on homework is effective. In the study of Altunöz (2017), it was observed that the teachers often applied only the Practice part from this strategy category. When the answers of the department leaders were examined, it was seen that some of the Turkish teachers

did not use this strategy or used it partially. The teachers who had a negative approach towards this strategy category emphasised that these strategies could reduce students' love to school and that home environment is not proper for learning. It can be said that the Russian teachers think that Homework and Practice are an integral part of the learning process, whereas the Turkish teachers hesitate on this issue. In Russia assignment of homework with the purpose of practising and repetition, the knowledge and skills learnt at schools and students' independent work on their own have always been kept in the foreground by secondary and high school teachers (Mikelson, 1940; Sillaste and others, 2013; RFSES, 2014).

It is an effective strategy for the Turkish and Russian teachers to ask students to prepare graphical organisers representing content according to the answers to the questions about the "Non-Linguistic Representations" strategy. However, the Turkish teachers are more likely to believe that asking students to make physical models students, to draw pictures or pictographs or to act out content is an effective instructional strategy. A similar result was reached in the study of Altunöz (2017), the observed teachers preferred painting and kinesthetic activities in their lessons. The department leaders referring to the implementation section mentioned most of all imitation and acting out examples. Mostly the Turkish teachers have advocated permanence. While the Russian teachers stated that the strategy could make it easy to remember, the Turkish teachers emphasised that non-linguistic representations facilitate learning and gained skills as well. The findings of Diego's study (2012) also support the fact that most teachers espouse the Non-Linguistic Representations strategy.

The teachers in Turkey and Russia think that the "Collaborative Learning" strategy is effective. We can see that they strongly agree that organising students into formal and informal cooperative learning groups when appropriate are effective and agree that organising students in homogeneous or heterogeneous ability groups when appropriate are effective instructional strategies. The examples of application given by the Turkish and Russian teachers are close to each other. Competition management was only mentioned by the Turkish teachers. However, in the study of Altunöz (2017), it was observed that the teachers did not assign any tasks based on a collaborative process, but only individual tasks. In Diego's (2012) study, it was found that teachers working in virtual environments gave less importance to this strategy than teachers working in traditional classrooms. The findings of this study show that both Turkish and Russian teachers have declared that they use the Cooperative Learning strategy.

The Turkish and Russian teachers show a high level of belief in the effectiveness of using student-led feedback. While the Russian teachers are more convinced that criterion-referenced feedback is effective, the Turkish teachers are more convinced that providing specific feedback on student progress towards learning goals is effective. Altunöz (2017) observed that because of limited lesson time and the full classes there were some difficulties in using the strategy of providing individual feedback, but one of the two teachers who participated in the study informed the students about the goals. So as it is seen the teachers in Turkey are more likely to emphasise feedback towards learning goals, while teachers in Russia give more importance to criterion-referenced feedback. This situation may be caused by the fact that classes in Russia are in general not so crowded as they are in Turkey. In addition the fact that because of the high average age of most of the Russian teachers who make up the study group they were not considered to study setting learning goals as a teaching strategy during the period when they had their undergraduate education, but just in recent years, Russia has been targeting to set learning goals in the learning process can be another reason for the Russian teachers' attitude towards the Setting Objectives and Providing Feedback strategy. The example of linking to everyday life has only been expressed by Turkish teachers. The teachers in both countries

demonstrate positive attitudes to the Setting Objectives and Providing Feedback strategy, and that supports Marzano's (2008) idea, that this strategy can be effective in different educational environments and for different student profiles.

The Turkish and Russian teachers strongly agree that it is effective to engage students in projects that involve generating and testing hypotheses through problem-solving tasks and agree that engaging students in projects that involve generating and testing hypotheses through systems-analysis tasks are an effective instructional strategy. The Russian teachers strongly agree that engaging students in projects that involve generating and testing hypotheses through decision-making tasks and research are effective strategies, whereas the Turkish teachers agree with that. It seems that Turkish teachers are more convinced that engaging students in projects that involve generating and testing hypotheses through invention are not effective. The Russian teachers talked about guessing in their examples more than the Turkish teachers did. Research as homework was also given as an example only by the Russian teachers. It is seen that the teachers observed in Altunöz's (2017) research did not apply this strategy at all in their lessons. In the Diego (2012) study, it was found that different field teachers used this strategy differently: Mathematics and Science teachers compared to Social science and English teachers gave more importance to Generating and Testing Hypothesis strategy, the possible reason is specialities of the fields.

Both the Turkish and Russian teachers are firmly convinced that it is effective to use Questions, Cues, and Advance Organizers strategies to give students an opportunity to think on and organise the content. In the study of Altunöz (2017), it was also observed that the teachers used this strategy category actively. According to the findings of this research, it is understood that the teachers think that it is useful to give clear clues to students to make a direct connection between new information and what they have seen before. However, compared to the Turkish teachers, the Russian teachers are more likely to believe that it is effective to use questions to elicit inferences and to use analytic questions that analyse errors, construct support and analyse perspectives. The Turkish teachers presented more examples of the necessity of linking old and new knowledge than Russian teachers did. Entertainment was expressed as an example only by Turkish teachers and teachers who got no extra training.

In summary, it can be said that the Turkish teachers give less importance to the Summarizing and Note Taking, Homework, Generating and Testing Hypothesis strategies compared to the Russian teachers. The Russian teachers less emphasise Non-linguistic representations strategy than the Turkish teachers do. Besides, the examples and reasons presented for the Cooperative Learning, Setting Objectives and Providing Feedback, Questions, Cues, and Advance Organizers strategies have shown some difference:

- Compared to the Russian teachers, the Turkish teachers attach more importance to the fact that the content should be related to real life contexts. It can be said that it is vital for Turkish teachers to associate lessons with everyday life by adopting learning objectives and motivating them.
- The Turkish teachers give particular importance to learners while presenting reasons for using the strategies. Based on this data, it can be said that the Russian teachers embrace less the student-centred approach than the Turkish teachers do.
- As distinct from the Russian teachers when the Turkish teachers talked about language teaching, they did not give even an example of the culture of the target language. Learning a foreign language means acquiring a new foreign culture. Language is an

integral part of the culture. Language and culture exist together. To use a foreign language naturally, it is essential to know the culture as it is in the native language.

SUGGESTIONS

On the basis of the findings in the research our major suggestions are as follows:

- More efficient results can be obtained if English teachers in Turkey attach more importance to such strategies as homework, research tasks, summarizing and generating hypotheses.
- English teachers in Turkey should embrace the culture, literature and history that English is intertwined with as they are inseparable. It's important to organize foreign language lessons with activities based on the cultural content.
- Studies examining foreign language teachers' approaches to effective instructional strategies can be conducted with larger samples in different regions.
- As we see in the examples provided by the respondents the grammatical structure and features of the language are often seen as the ultimate goal in foreign language teaching that's why it is important to examine strategies and techniques that will enable students to use language as a tool naturally.

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THE DETERMINATION OF PRIORITY SKILLS IN INCLUSIVE CLASSROOMS BASED ON THE VIEWS OF PRIMARY TEACHERS

Abstract: It is important for students with special needs to acquire some skills in inclusive classes. Therefore, basic skills should be determined by teachers working in inclusive classes and it should be ensured that students with special needs transform these skills into behaviors. This study aims to determine the priority skills in inclusive classrooms based on the views of primary teachers. Moreover, the current study focuses on the methods and techniques used during the acquisition of these skills, reveals the problems experienced in the process, offers solutions for these problems. A case study, one of the qualitative research designs, was employed in the current study. The criterion sampling method, one of the purposeful sampling methods was used to determine the study group. Seven teachers working at primary schools in Nevşehir province participated in this study. The data were collected with semi-structured interview questions and analyzed by content analysis technique using an inductive approach. The findings of the study showed that the most important skills that should be acquired in inclusive classes are self-acquaintance, communication, and empathy.

Keywords: Inclusive education, empathic skill, students with special needs.

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INTRODUCTION

Inclusive education is an ambitious and comprehensive concept that theoretically deals with all students. Inclusive education is an approach aimed at presenting school culture for all students. In other words, inclusive education refers to the acceptance of all students by school staff, student participation in various fields of activity, and the increasing achievement of students (Booth, Ainscow, Black-Hawkins, Vaughan & Shaw, 2000; Kalamvouka, Farrell, Dyson & Kaplan, 2005). Through this approach, those students with special needs are given similar educational opportunities sharing the same educational environment with their peers. Therefore, students with special needs and those with no special needs share their educational experiences and learn new things from each other (Frankel, 2004). Apart from this sharing and learning, it is aimed that students have some skills, and these skills are included in the curriculum. In this context, the skills which students with special needs and students with no special needs studying in inclusive classes should acquire should be given importance and priority. Especially, students with special needs face many problems in school environments (Kuçuker & Cifci-Tekinarslan, 2015) and some studies reveal that students with special needs are less accepted and more rejected (Koster, Pijl, Nakken and Houten, 2010). In some studies, it is stated that students with special needs exhibit more aggressive behavior and disturb the classroom environment (Papoutsaki, Gena, & Kalyva, 2013). This situation causes students with special needs to lag behind their peers even more in social relations and results in a widening of the gap between students with special needs and their normally developing peers, first in academic studies and then in professional life (Avcioglu, 2001). For this reason, an educational and friendship environment that supports the social achievements of all children should be presented to children (Odom, 2000) and educational environments should be supported with social skills (McClelland & Morrison, 2003). For this reason, skills are included in education programs. In the educational program and guide for the basic education life sciences and social studies courses [Ministry of National Education (MoNE), 2005] skills are defined as the ability of an individual to do work easily and competently, continuously in an appropriate learning and teaching environment as a result of an individual's intellectual and behavioral effort based on his readiness. In this sense, skills in the curriculum are described as the abilities designed to be acquired, developed, and transferred to life in the learning process. Major social courses at Turkish schools are life sciences and social studies. These courses are very significant for students to acquire certain skills. In Turkey, the educational programs of these courses were developed in the years 2005, 2015, and 2018. In these educational programs there are fifty-two major skills which are to be acquired by students: active listening and discussion, research, research thinking skills, using information and communication technologies, geographical inquiry and location analysis, using geographic data, conflict management, environmental literacy, environmental awareness, having multiple perspectives, perception of change and continuity, balanced nutrition, digital literacy, nature conservation, economic literacy, critical thinking, empathy, financial literacy, entrepreneurship, observation, the use of maps, map literacy, legal literacy, communication, cooperation, recognition of stereotypes and prejudices, the use of evidence, making decisions, career awareness, the use of resources, self-protection, self-knowledge, personal care, location analysis, obeying the rules, media literacy, spatial perception, recognition of national and cultural values, self-control, self-management, political literacy, health-care, reasoning, problem-solving, social participation, drawing and interpreting tables, graphics and diagrams, speaking and writing Turkish correctly, creative thinking, innovative thinking, time management and perceiving time and chronology. It is significant that all students should acquire these skills in inclusive classrooms. Liasidou (2012) states that inclusive education is an educational approach to improve the behavior of students who have difficulty in terms of acquiring such skills. Therefore, priority skills should

be determined by teachers working in inclusive classes, and these skills should be turned into behavior among the students with special needs.

Research suggests that inclusive students whose social and communication skills are not developed generally have academic underachievement and exhibit various problem behavior (Gresham, 1986; Guralnick, 1990; Kabasakal, Girli, Okun, Çelik & Vardarlı, 2008; Myles, 2003; Wang, 2009; Zirpoli & Melloy, 1997). Metin (2018) argues that through inclusive education social skills of all students can be improved and socialized including communication, cooperation, sharing, respect for differences, and following the rules. Therefore, the following question should be answered: Which skills should the students acquire in order to increase their academic success, solve their social problems and eliminate their problem behaviors in inclusive classrooms?

When the literature is reviewed, no direct research has been found on which skills should be gained to students studying in inclusive classrooms. On the other hand, classroom teachers may come across students with special needs and teach them in inclusive classrooms. The data reported by the MoNE for the school year 2018-2019 indicate that there are 1.260 students with special needs in pre-school institutions. The number of primary school students with special needs is 115.556. the total number of such students is 116.816 at these levels of education (MoNE, 2019). Through this study, it is thought that determining the priority skills to be acquired by the students studying in the inclusive classes will contribute to the educational programs and the success of the inclusive education practices. For this reason, in this study, it is aimed to determine the priority skills in in inclusive classrooms based on the views of primary teachers. In line with this aim the study attempts to answer the following research questions:

- What are the views of the classroom teachers working in inclusive classrooms about primary skills?
- What are the reasons for teaching such primary skills to students in inclusive classrooms?
- Which methods, techniques, and activities should be employed in order to make students in inclusive classrooms acquire the primary skills?
- What are the major problems that arise during the skills teaching in inclusive classrooms?
- What are the suggestions of the classroom teachers about these problems that arise during the skills teaching in inclusive classrooms?

METHOD

The following includes the information about the model of the study, participants, data collection tools, data collection procedure and data analysis.

RESEARCH MODEL

This study was designed with the case study design out of qualitative research approaches aimed at providing the researcher with detailed and in-depth data collection, direct learning of the participants' individual perceptions, experiences, and perspectives, and understanding and explaining the current situations (Patton, 2014). Case study analyzes one or more cases in a holistic way with factors such as environment, time, individual, event, and process. Since the situations are different, there are no generalizations of the results. However, it is expected that the results obtained in relation to a situation have been formed by examples and experiences for understanding similar situations (Yıldırım & Şimşek, 2018). Further, case studies try to explore, and do not compare. The researcher tries to define categories of events and behaviors rather than testing hypotheses or proving relationships (Hancock & Algozzine, 2006). Therefore, in this study, a case study was used to better understand the subject, to look at what happened in the real environment, and to identify the contextual themes.

RESEARCH PARTICIPANTS

The participants of the study are classroom teachers who teach inclusive students. The participants have worked at primary schools in the Nevşehir province of Turkey. Criterion sampling, which is one of the purposive sampling methods, was used to collect the data of the study. Criteria used to identify the participants are as follows: (1) being a classroom teacher, (2) having at least five years teaching experience, (3) teaching at least one inclusive student, and (4) teaching inclusive students at least for one semester. School administrators were called by phone to learn whether or not any inclusive student was at school. To select the participants of the study, seven public primary schools in Nevşehir province were visited and information about the eligible classroom teachers was taken from the school administrators. Then interviews were made with these teachers and, in the end, seven teachers accepted to take part in the study. Of them one is male and six are females.

DATA COLLECTION TOOLS

In this study, the interview method was preferred. Because the interview method gives the opportunity to ask in-depth questions and to ask questions again about incomplete or incomprehensible answers. Therefore, it was thought that the interview method would be advantageous and the data were collected using the “Semi-structured interview form” which was developed by the authors. In the development of the form, the related conceptual framework was analyzed and five interview items were developed. This draft form was analyzed by four field experts (two academics with Ph. D. degree in classroom education and two academics with Ph. D. degree in special education). The feedback of the field experts did not require any change on the interview items. Then in a pilot study, the form was administered to two classroom teachers to analyze the intelligibility of the items. The participants of the pilot study indicated that the items were proper, and therefore, no modification was made on the items.

PROCEDURE AND DATA ANALYSIS

The study was conducted during the school year of 2019-2020 in Nevşehir. The data collection was completed between 6 January 2020 and 17 January 2020. The data were examined using the content analysis of which the major goal is to reveal concepts and principles that can account for the data collected. The data summarized and interpreted in descriptive analysis are subjected to a deeper processing in content analysis, and concepts and themes that cannot be noticed with a descriptive approach can be discovered as a result of this analysis. The data collected should be first conceptualized and organized based on these concepts to develop the themes that account for the data (Yıldırım & Şimşek, 2018). First, the voice recordings were transcribed. To establish the reliability of the study 25% of the transcribed data were listened to by the authors and a special education academic. Interrater reliability is found to be 100%. The formula developed by Miles and Huberman (1994) was used to calculate the reliability of the study. $\text{Reliability} = \text{Agreement} / (\text{Agreement} + \text{Disagreement})$ According to the calculation made, the reliability of the study was found to be over 90%. The fact that this rate is over 90% indicates that the study is reliable (Miles & Huberman, 1994).

Coding was made, and the codes were categorized into themes. For each of these themes, direct quotations from the statements of the participants were employed. All these produced themes and subthemes of the study. These themes and codes were analyzed by a field specialist on special education and another one on classroom teaching. As a result of this analysis, a total of five themes was developed which were all mutually agreed upon.

FINDINGS/RESULTS

The findings of the study are given as follows:

SKILLS TO BE ACQUIRED BY THE STUDENT

Table 1 indicates the participants' views on the skills to be acquired by the students in inclusive classes. As seen in Table 1, the participants stated the skills that should be acquired in inclusive classes under 3 sub-themes. These are the skills in the life sciences courses studies, the skills in the social studies course, and the skills in both programs. Among these sub-themes, the skill of self-knowledge is the highest frequency in the life sciences courses studies; empathy is the highest frequency skill in the social studies course and communication skill is the with the highest frequency skill in both programs.

Table 1. Skills to be Acquired by Students in Inclusive Classes

Sub-themes	Codes	Quotations	Participants	N
Skills included in the educational programs of the Life Sciences course (2018)	Skills of self-knowledge	K2: "For me the skills self-knowledge and self-care are very significant and also, skills to use Turkish correctly and efficiently ..."	K2, K3, K4, K5, K8	5
	Self-care skills	K2: "For me the skills self-knowledge and self-care are very significant and also, skills to use Turkish correctly and efficiently ..."	K2, K7, K8	3
	Skills to follow the rules	K3: "Communication skills, self-knowledge skills, critical thinking, cooperation, skills to follow the rules."	K3, K5, K7	3
	Self-protection skills	K4: "For instance, empathy skills, communication skills, self-knowledge skills and self-protection skills are all important."	K4, K8, K7	3
	Trouble-solving skills	K5: "I would like to teach these skills. Trouble-solving skills ..."	K5, K4	2
	Skills to recognize national and cultural values	K4: "For instance, problem-solving skills and health-care skills are important. In addition, skills to recognize national and cultural values, it is also important..."	K4	1
	Self-management skills	K2: "For me, skills to use Turkish correctly is important, and also, self-management skills, these are the skills that we should teach them."	K2	1
	Skills to use resources	K7: "I think the ability to comply with the rules of society, the ability to use natural resources effectively and empathy skills."	K7	1
	Time management	K7: "Keeping up! I think the ability to stand alone is up to you. To be happy in life, to be able to use time. "	K7	1
	Health-care skills	K4: "For instance, problem-solving skills and health-care skills are important. In addition, skills to recognize national and cultural values, it is also important ..."	K4	1
Skills included in the educational programs of the Social Studies course (2018)	Empathy skills	K4: "For instance, empathy skills, communication skills these are very important ..."	K4, K5, K6, K7, K8	5
	Problem-solving skills	K4: "It may be problem-solving skills, for instance, health-care skills are also significant."	K4, K7, K8	3
	Critical thinking skills	K3: "Communication skills, self-knowledge skills, critical thinking, cooperation, skills to follow the rules."	K3, K7	2

	Interpreting tables, graphics and diagrams	K2: "Believe me, they were painting with a larger surface when they first arrived; now inclusive student can also do the following: can draw the eye in detail, draw the apple of the eye, or the leaves and branches of a tree in detail and show me them in color."	K2	1
	Speaking and writing Turkish correctly	K2: "For me, skills to use Turkish correctly is important, and also, self-management skills, these are the skills that we should teach them."	K2	1
	Environmental literacy skills	K7: "Personal care and environment, being sensitive to the environment ..."	K7	1
	Thinking skills	K7: "The most important one is the skills of thinking which should be improved."	K7	1
Skills included in both programs	Communication skills	K2: "For me communication skill is very significant."	K2, K3, K4, K5, K8	5
	Cooperation skills	K3: "Communication skills, self-knowledge skills, critical thinking, cooperation, skills to follow the rules."	K3, K5	2
	Observation skills	K2: "They learn something about life. I showed them how to fold a dress. He did it well. I asked him to hang out the laundry. And he also did it well."	K2	1
	Research skills	K6: "Particularly research skills."	K6	1
	Skills to adapt to change and continuity	K7: "There are significant skills such as environmental literacy, adapting to changes, most importantly"	K7	1

REASONS FOR ACQUISITION OF THE SKILLS BY THE INCLUSIVE STUDENTS

Table 2 presents the reasons given by the participants for the acquisition of the skills by the inclusive students.

Table 2. Reasons for Acquisition of the Skills by the Students in Inclusive Classes

Sub-themes	Codes	Quotations	Codes of teachers	N
Students with special needs	Communication-related reasons	K3: "When we talk he generally answers, but during the courses he does not generally try to say something about the course. If there is any noise, it makes him uncomfortable."	K2, K3, K4, K5, K8	5
	Being aware of his characteristics	K3: "Self-knowledge, children may improve themselves if they are aware of their capacity.."	K3, K4, K6, K8	4
	Dealing with the problems	K8: "If they acquire the problem-solving skills, they can much more easily solve the problems they face in the classroom with their friends."	K4, K7, K8	3
	Improving academic achievement	K6: "But unfortunately, our academic problem-solving skills are particularly weak. We still deal with it. We have not solved it completely."	K3, K6	2
	Safety	K7: "We have to ensure our security as a nation, family and state in every respect."	K7, K8	2
	Making his own decisions	K7: "Thinking skills, it is need for them not to be manipulated by others. They should use their own thinking. In regard to reasoning..."	K7	1
	Making effort	K3: "They should make attempts to do something themselves or with their friends."	K3	1

	Not staying behind	K3: "As I said, they have difficulty obeying the rules. Because they don't understand and perceive rules. For example, we are finishing a physical activity then move on to another activity but they are lagging behind. they perceive slowly. Firstly, I evaluate them individually and their learning speed."	K3	1
	Self-confidence	K3: "They generally begin to read or write late. But I want them to feel that I could do that, I could read and write. I try to make them to feel in this way."	K3	1
	Being beneficial to themselves	K2: "When they acquire such skills these skills will be beneficial for them in their later life."	K2	1
	Expressing the views and emotions	K3: "For instance, these two inclusive students do not attempt to answer any question in life sciences course. It is important for them to express their views."	K3	1
Students with no special needs	Empathy	K4: "if they acquire the empathy skills, they may use these skills whenever they come across a problem with others and they may think their positions. Such skills also useful in judging the students with special needs."	K4, K5, K8	3
	Perspectives towards inclusive students	K8: "They can understand which problems the inclusive students may come across and they become much more tolerant to the students with special needs."	K3, K8	2
	Support	K5: "There should be cooperation between him (inclusive student) and other students in courses.."	K5, K6	2
	Not to mock	K3: "Whenever this student (inclusive student) does something different, I try not to provide an opportunity for the other students to say something about his behaviors."	K3	1
	Not to discriminate	K6: "For instance, they thought that I was not in the classroom. They hanged their pictures on the wall except for the picture of the inclusive student."	K6	1
All students	Cooperation	K6: "Cooperation, during group activities the other students help the inclusive student."	K3, K5, K6	3
	Not breaking the order in the classroom	K3: "I warn the other students, They do not follow all of the class rules."	K3, K5	2
	Efficient use of time	K7: "If they use time efficiently they would be more successful."	K7	1
	Improving commitment to national culture and history	K4: "Not only for children with problems, we can go further once we know our national culture and history."	K4	1

As can be seen in Table 2 the participants suggested some reasons for the acquisition of the skills by the students. These are grouped into three categories: reasons for students with special needs, reasons for students with no special needs, and reasons for all students.

METHODS AND TECHNIQUES USED FOR SKILL EDUCATION IN INCLUSIVE EDUCATION

Table 3 presents the views of the participants concerning the methods and techniques that should be used for skill education in inclusive education.

Table 3. Methods and Techniques Be Used for Skill Education in Inclusive Education

Sub-themes	Codes	Quotations	Participants	N
Individual study	Assigning tasks	K2: "I try to give them an opportunity to say their views, I think that assigning tasks to them makes them more motivated."	K2, K3, K5	3
	Active participation	K3: "I attempt to make them talk about their feelings. I think that very short speeches in the front of the class are very beneficial for these students."	K2, K3	2
	One-to-one study	K2: "I sit next to them and spend time with them, I should work one-to-one with them."	K2	1
Using active learning strategies	Brainstorming	K4: "I ask myself what should I do? How can I solve it? We create different solutions by brainstorming."	K4, K7	2
	Station technique	K3: "I employ the station technique It allows them to do something and creates cooperation among the students."	K3	1
	Use of video recordings	K6: "I generally employ examples, videos, and other materials."	K6	1
	Use of materials	K6: "I generally employ examples, videos, and other materials"	K6	1
The use of the role-playing method	Learning through doing	K2: "Teaching the child to tie a shoe, we should show it to them, they should do it themselves."	K2, K5	2
	Animation	K5: "We also use them in lessons, which are valid for self-knowledge and problem. We tell them, we play, we deal with drama."	K5	1
	Gamification	K5: "I use gamification to teach the topics."	K5	1
Drama methods	Dramatizing	K4: "These include lectures and examples, in other words, I use dramatizing."	K4, K5, K8	3
	Embodiment	K5: "Given that the students are very young we use concrete things; I use gamification to teach the topics."	K5	1
Case study	Giving examples from daily life	K4: "These include lectures and examples, in other words, I use dramatizing."	K4, K6, K7	3
	Analysis of cases	K8: "I frequently use drama and case analysis as methods."	K8	1
Lectures	Lectures	K6: "I use narration technique using sampling and videos, materials to improve their skills to express themselves and to use grammatical sentences."	K4, K5, K6	3
Teamwork	Teamwork	K6: "I employed group work method."	K6	1
Using discussion	Mutual discussion	K7: "Debate. I use mutual debate. I give them a topic or an idea to discuss and want them to discuss it."	K7	1

As can be seen in Table 4 the participants reported mostly the individual study as a method that can be used in skills education in the inclusive education context. They mentioned less teamwork and discussion methods in this regard.

PROBLEMS EXPERIENCED DURING THE SKILLS EDUCATION IN INCLUSIVE CLASSROOMS

Table 4 presents the views of the participants in regard to the problems experienced during skills education in inclusive classrooms.

Table 4. Views of the Participants in Regard to the Problems Experienced During the Skills Education in Inclusive Classrooms

Sub-themes	Codes	Quotations	Teachers	N
Problems related to students with special needs	Academic underachievement	K3: "When they do not something or understand something late I have difficulty. For those who understand late I develop activities at the level of first grade."	K2, K3, K5, K6	4
	Discipline problems	K4: "I have some problems since he does not sit or pay attention to the topics we study. Therefore, I always have to warn him.."	K3, K4, K5	3
	Aggressiveness	K2: "I felt that he was aggressive... The other students began to complain about him, but I stopped their complaints. They said "he said bad things to me or he hit me!"	K2, K5, K7	3
	Indifference to the courses	K3: "He opens, closes, scribbles, writes and draws on his book. For instance, he unnecessarily goes to his cabinet, takes some materials or put them there."	K3, K5	2
	Low self-confidence	K6: "Lack of self-esteem is very high in such children (inclusive students) (at least it is valid for my inclusive students in the classroom)."	K6, K8	2
	Distracting other students	K5: "The student often interrupts my lesson. Since we are in the small classes, this situation is a big problem for us, because there is small age group in the class. For example, the attention of the children is ten minutes. If the lesson is sabotaged or interrupted, the lesson may be very unproductive. This causes time to pass inefficiently and this is very disturbing."	K4, K5	2
	Communication problems	K2: "I experienced such problems. For instance, some parents are divorced so I could not manage to communicate with them."	K2, K8	2
	Problems in classroom management	K5: "These students (inclusive students) interrupt the courses. I warn him, but nothing changes."	K3, K5	2
	Attention deficit	K3: "Some of my students experience attention deficit."	K3, K5	2
	Other problems	K4: "For example, this hearing-impaired child, sometimes his hearing aid is broken. So he cannot hear anything in the courses." K8: "His speech is incomprehensible. If I did not understand what he said, he became embarrassed and did not want to speak again, and he did not say the same sentence again."	K4, K8	2
	Being a negative model for other students	K5: "For example, some other students (students with normal development) want to act like they (inclusive students). Some other students in the classroom want to act like him. For instance, they do not want to do homework like him or they do not want to involve in the course like him."	K5	1
Problems related to other students in the classroom	Reactions	K4: "The friend next to him does not understand the lessons because of what he did in the lesson (because of the noise). He interrupts the courses."	K3, K4, K8	3
Problems related to teachers	Lack of experience in teaching students with special needs	K3: "Let me say something for my autistic student at first. I had a lot of difficulty in dealing with him until I understood his characteristics and got to know the child. I have never had an autistic student before."	K3	1

	Inability to allocate time to students with special needs	K6: "Because I have only six-hour class time. Within this period I should care for other students and for this child."	K6	1
Problems related to parents	Inability to cooperate with the family	K7: "For instance, I assign a paragraph homework. The child did not finish this assignment. If he would do it, it would be better. Parents did not support this assignment. Parents did not answer my calls. They did not talk to me when we met."	K7	1
	Acceptance by parents	K7: "I only have problems with the parents. Because they cannot accept the problems of their children"	K7	1
Problems related to physical setting	Crowded classrooms	K5: "For example, my first-class literacy program is very dense, and the classroom is very crowded ..."	K5	1

Table 4 shows that the participants consider the students with special needs as the reasons for the problems experienced in skills education in inclusive classrooms. Table 4 also indicates that they also reported such problems which are resulted from other students, teachers, and parents. They reported fewer problems due to the physical environment of classrooms or schools.

SUGGESTIONS OF THE PARTICIPANTS IN REGARD TO THE PROBLEMS IN SKILLS EDUCATIONS IN INCLUSIVE CLASSROOMS

Table 5 presents the suggestions of the participants in regard to the problems experienced in skills education in inclusive classrooms. The most frequent suggestions of the participants are as follows: Educational adaptations (8) and increasing students' interests and motivations (7).

Table 5. Suggestions of the Participants in Regard to the Problems in Skills Educations in Inclusive Classrooms

Sub-themes	Codes	Quotations	Codes of the participants	N
Educational adaptations	Individualized education	K2: "Better, one-to-one care helped us solve the problems with the child a little more."	K2, K6, K7, K8	4
	Studies in line with their performance level	K8: "Some of his friends were wondering why I prepared him easy and different questions in exams and why I prepared more difficult exam items for them. "	K3, K6, K8	3
	Repetition	K2: "During the learning process there should repetitions. They need such repetitions of the topics at hand."	K2	1
Improving student interest and motivation	Support in the classroom	K6: "At the second grade I praised the student. I told him "you can do that, you can do it perfectly." When he brought me anything I said: "you are amazing!"	K3, K6, K8	3
	Using reinforcers	K4: "I try to solve such problems sometimes through rewards and sometimes through punishment."	K4	1
	Using visuals	K2: "As I stated earlier I make and topics much more concrete and enrich through visual materials ..."	K2	1
	Making the topics concrete	K2: "As I stated earlier I make and topics much more concrete and enrich through visual materials..."	K2	1
	Effective communication	K2: "As I stated earlier the background of the students is very significant. When they tell me about it they become comfortable which makes it possible for us to communicate."	K2	1

Making students active	Active participation in courses	K3: "I try to make him more active in the courses. I try to make him read the question and briefly answer it."	K3, K8	2
	Assigning tasks	K3: "I talked to him in the breaks and assigned him some takes which helped me to solve the problem. I asked him to put my books on the table and made him vice head of the class."	K3	1
Using behavior modification strategies	Warning	K3: "For instance, during the course he enters into the cabinet. While sitting he always does something. I handle it with eye contact, but as soon as he gets up, the whole class is distracted. "	K3, K5	2
	Punishment and reward	K4: "I try to solve such problems sometimes through rewards and sometimes through punishment."	K4	1
Taking support	Taking support from the parents	K2: "But we solved much of such problems through talking to his parents and to him."	K2	1
	Making the students aware of the inclusive students	K8: "Other students should definitely acquire empathy and a sense of compassion. They should also be taught to respect individual differences."	K8	1
Classroom management	Classroom control	K3: "Because I lose control of the classroom. The other students laugh as she runs, then they like this situation, then she runs more because they all laugh."	K3, K5	2

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The findings of the study indicate that the participants consider the following skills as ones to be acquired by students in inclusive classes: Self-knowledge skills, thinking skills, self-care skills, communication skills, self-protection skills, empathy skills, ability to follow rules, skills to deal with problems, decision-making skills, research skills, the ability to use Turkish correctly and effectively, creative thinking skills, self-management skills and problem-solving skills. Therefore, the findings of the study support the previous findings: The social skills of individuals with special needs are lower than their peers, so ensuring social acceptance and social cohesion of these students is important in terms of improving their personal development, self-management, and social life skills (Akalin, 2015; Orhan, 2010; Metin, 2018; Wang, 2009; Yekta, 2010). Research suggests that with the increase of the communication skills of students with special needs, the development of their self-management skills can be achieved through social interaction, where they can solve problems and it can contribute positively to the educational process (Avcılar, 2010; Eliçin & Yıkmış, 2015; Metin, 2018; Şahin, 2017). Empathy skills can eliminate or reduce problems making the other students in the inclusive classroom have less selfish behavior and understand each other's feelings and thoughts correctly. Therefore, empathy is one of the skills in the inclusive education context. Through empathy, students with special needs may not be subject to negative attitudes by their peers in the inclusive classroom such as exclusion and contempt. It also improves peer education. If students' empathic tendencies are well-developed, they tend to be fair, peaceful, tolerant, and respectful (Bahar, 2018; Dökmen, 2005; Rehber, 2007; Rogers, 1983; Sarmusak, 2011).

The findings of the study indicate that there are common skills in the courses of life sciences and social studies. Participants reported that communication skills and cooperation skills are common skills and primary in the courses of life sciences and social studies. It can be said that these skills are important for inclusive education. Since, cooperation skill is a skill that can contribute to the learning of the individual, and is an indispensable social interaction tool for

inclusive classes. Cooperation teaching is seen as one of the techniques that help students to be active in the learning environment and increases the level of success in the classroom (Gürgür, 2005; Gürgür, 2012; Mastropieri & Scrugg, 2001). On the other hand, skills such as cooperation and communication are social skills. In some studies in the literature (Miller, Lane, & Wehby, 2005; Pavri & Monda-Amaya, 2001), it is stated that the social skills of students with special needs should be supported as much as their academic skills in primary school inclusive classes. It is also stated that primary school teachers should teach social skills as they teach academic skills (Gresham & Elliott, 1987; Williams & Reisberg, 2003). Therefore, the findings of this study overlap with the findings of some previous studies in the literature. The participants argue that students in inclusive classrooms should first acquire the empathy skills which are contained in the educational program of social studies courses. One of the major goals of inclusive education is to improve the development of students with special needs. Cüceloğlu (1998) argues that the person who knows himself is aware of the experiences in his outer and inner world. These individuals are aware of how the people around them affect them and know how they affect the people around them. Students with special needs have more social interaction in inclusive environments compared to disaggregated environments (Kwon, Elicker & Kontos, 2011). Buysse, Goldman & Skinner (2002) argue that inclusive environments provide more opportunities for the development of friendships, social and communication skills. Individuals must actively engage with other individuals as social beings. Understanding each other and interaction is key to succeeding healthy communication, especially in systems based on the human factor such as school. In this regard empathy is a very significant concept (Yılmaz-Bingöl & Uysal, 2015). The empathic approach of students increases both academic achievement and social interaction success (Parchomiuk, 2019). The findings of the study suggest that priority should be given to activities and games that significantly improve the empathy skills, communication skills, and self-knowledge skills of students in inclusive classrooms.

The participants argued that particularly students with special needs should acquire the skills in contrast to other students. The participants also argued that students with no special needs should also acquire some skills like empathy, supporting the students with special needs, having positive attitudes towards the students with special needs, avoiding mocking and discrimination towards the students with special needs. Therefore, empathy is one of the significant skills for the peers of the students with special needs. It is a prerequisite for them to understand the social, academic, and affective characteristics of inclusive students and to be tolerant towards them. In addition, one of the major problems observed in inclusive classrooms is the acceptance of students with special needs by their peers with no such needs (Batu, 2000).

In regard to the methods and techniques used in skills education in the context of an inclusive classroom, it is found that the participants mostly used the individual study and less used the group study and debate. The preference of individual study methods in skill education is a positive situation for students with special needs. The findings of the study indicate that the participants frequently use drama and case study methods in skills education. It can be said that the preference of these methods as well as individual study methods in skills education is a suitable and desired practice in terms of the quality of education in the inclusive classes. Because drama is based on the principle of equality (Erdogan, Arslantas, & Kurnaz, 2018), and case study is based on finding solutions with the participation of students to problems that are encountered or likely to be encountered in life (Gozutok, 2017). It can be stated that especially drama method is an important method for the social development of every child with and without special needs. In addition, the drama method is frequently used and recommended in teaching social skills to children with and without special needs (Akın, 1993; Freeman, Sullivan & Fulton, 2003; İpek, 1998; Kocayörük, 2000; Miller, Rynders & Scleinen, 1993). On the other hand, it is stated that the use of appropriate learning principles enables effective and efficient

program development and is effective in teaching social skills (Avcıoğlu, 2001; Lamar-Dukes & Dukes, 2005; Sugai & Lewis, 1996; Sucuoğlu & Çifci, 2001). Therefore, it can be argued that the teachers who participated in the study have the necessary knowledge about methodology in regard to skill education and that they take into account the characteristics of the inclusive classroom while using these methods.

Concerning the problems experienced in the inclusive classroom, it is found that such problems are mostly related to the students with special needs. However, inclusive education directly addresses those students with deficiency in certain areas. Inclusive education is carried out to overcome the educational disabilities of students with special needs. In addition, individuals with special needs differ significantly from their peers in terms of their individual characteristics and educational competencies for various reasons (Decree Law on Special Education, 1997). Therefore, it is a matter of controversy to see this situation as a problem. The problem that teachers consider as a discipline problem is actually the problem behaviors that students with special needs exhibit. This problem is very significant and should be taken into consideration. As a matter of fact, problem behaviors negatively affect students' lives in different ways and prevent them from participating in ongoing education and learning activities. In other words, students with problem behaviors cannot benefit from teaching and learning activities at maximum levels (Chandler & Dahlquist, 2002). However, it should be noted that problem behaviors are not specific to students with special needs and do not arise only due to the children's disability. The findings of the study show that there is also a problem stemming from the students with no special needs. It is as follows: "reactions." The participants also reported problems stemming from themselves. These problems are found to be as follows: "lack of knowledge and skills about inclusive education and not being able to allocate the necessary time for the students with special needs." The participants also reported the following problems which are related to the parents: "lack of cooperation with parents and the parents' unwillingness to accept the status of their children." They reported another problem that is stated to be related to the physical environment of the classrooms: "crowded classrooms." The findings of the study are consistent with the previous findings. There are studies examining the relationship between teacher behaviors in inclusive classes and problem behaviors of students in these classes (Kim & Hupp, 2005; Scott, Alter & Hirn, 2011; Stichter, Lewis, Whittaker, Richter, Johnson & Trussell, 2009; Wallace, Anderson, Bartholomay & Hupp, 2002). For instance, Scott, Alter & Hirn (2011) analyzed the behaviors of more than 1200 students in inclusive classrooms through observations. They found that the students spend 39% of their time on active learning, spend 42% of their time on passive learning and spend 13% of their time on nonlearning tasks. These results call to mind the competence of teachers in classroom management and their knowledge and experience in inclusive classrooms. The findings of this study indicated that teachers could not spare time for students with special needs. This is a negative situation for the success of inclusive education. Otherwise, most students may engage in off-task behavior or teaching may take place in a passive manner. The findings of the study also indicate that when students do negative behavior their feedback is negative and that teachers criticize the student behaviors and frequently warn them. In addition, it is stated that the arrangements made in the classroom environment, the seating arrangements for the students, the physical conditions of the classes (the size of the classes, the number of students), the features of the course tools and equipment used, the educational programs and the teachers and administrators are all significant in the occurrence of problem behaviors (Westwood, 1997). However, for whatever reason, problem behaviors should be effectively managed, and prevention and intervention strategies should be used effectively. As a matter of fact, teachers suggest activating the educational process, using behavior change strategies and making students active.

The participants mostly suggested that “the teaching and learning process should be active and student interest and motivation should be improved” to avoid such problems in inclusive classrooms. Therefore, suggestions of this research for skill training in inclusive classes should be taken into consideration. However, it is necessary to gain knowledge and skills about effective classroom management strategies for teachers working in inclusive classes. In addition, in order to assist the teacher in solving the problems experienced in inclusive classes, it is important to provide in-class support elements through visual materials. The effective communication skills of the teacher can increase the interest and motivation of the students.

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PSYCHOMETRIC EVALUATION OF THE TURKISH VERSION OF THE COVID-19 INDUCED ANXIETY SCALE AND PROTECTIVE BEHAVIORS TOWARDS COVID-19 SCALE

Abstract: The purpose of the present study was to adapt COVID-19 Induced Anxiety Scale (CIAS) and Protective Behaviors towards COVID-19 Scale (PBCS) into Turkish language, and to investigate their psychometric properties. 593 adults participated in the study. Data were collected through CIAS and PBCS as well as The Fear of COVID-19 Scale (FCS). Cronbach alpha (α) and McDonald's Omega (ω) coefficients were utilized for reliability of the Turkish forms of the scales, and validity of the scales was tested with exploratory factor analysis, confirmatory factor analysis and criterion validity. The analysis showed that α and ω reliability coefficients of both scales were over .70. The results of exploratory and confirmatory factor analyses revealed that CIAS had a single factor structure while PBCS had three dimensions as indicated in original forms of the scales. Significant and positive relationships were also found between the scores obtained from CIAS and PBCS and fear scores. To conclude, Turkish forms of CIAS and PBCS were proved to be valid and reliable tools to measure severity of COVID-19 induced anxiety through CIAS and individuals' protective behaviors towards COVID-19 through PBCS.

Keywords: COVID-19, Protective Behaviors, Induced Anxiety, Scale

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INTRODUCTION

COVID-19 infection, which was emerged in Wuhan city of China and turned into a global outbreak, poses a serious threat on individuals' physical and mental health (Canady, 2020; Holmes et al., 2020; Moghanibashi-Mansourieh, 2020; Pancani et al., 2020). The results of survey research conducted on large samples demonstrated that psychopathological symptoms were observed in 53% (Wang et al., 2020) up to 70% (Tian et al., 2020) of individuals. Furthermore, depression and anxiety symptoms are more frequently experienced when compared to other mental health problems (Ahmed et al., 2020; Wang et al., 2020).

Anxiety symptoms observed during COVID-19 outbreak were intended to be examined in the research conducted in different countries and various populations. In those research, prevalence and levels of generalized anxiety (Arpacioğlu et al., 2021; Ebrahimi, Hoffart, & Johnson, 2020; Huang, & Zhao, 2020; Weilenmann et al., 2020) and state anxiety (Germani, et.al, 2020; Kaparounaki et al., 2020) symptoms were frequently investigated. Additionally, researchers focused on the depression, stress (Bitan et al., 2020; Yılmaz-Karaman & Yastıbaş; Zhang et al., 2020), post-traumatic stress disorder (Liu et al. 2020), anger and sleeping problems (Lee et al., 2018) accompanied by anxiety.

Anxiety and Depression Association of America (ADAA, 2020) reported that an increase was observed in generalized anxiety level besides COVID-19 related specific anxiety level in population during COVID-19 pandemic. Fear and concern about infection, fears related to economic outcomes, compelling self-control, attempt to seeking assurance, xenophobia and traumatic stress symptoms are among the novel coronavirus anxiety symptoms (Nikčević, & Spada, 2020). Such fears might be conceptualized as experiences derived from the interaction of physical, interpersonal, cognitive and behavioral traits (Schimmenti et al., 2020). COVID-19 anxiety that individuals experience about their own behaviors and others' behaviors in different areas and various rates (Grover, et al., 2020) has a significant relationship with professional position, age, being a parent and work environment (Saricam, 2020).

COVID-19 induced anxiety significantly affect individuals' social attitudes (Lee, 2020). Intense stress, state of uncertainty and complex flow of information which appear in outbreak times lead individuals to develop some behavior patterns about the outbreak. Protective behaviors that are legally made compulsory in some circumstances (Republic of Turkey Ministry of Health, 2020) might enable to prevent pandemic diseases with non-pharmacological methods and bring those diseases under control. Protective behaviors could be discussed under three headings as preventive, avoidant, and management of disease behaviors (Bish, & Michie, 2010). Preventive behaviors incorporate hygiene precautions (such as handwashing, closing mouth while coughing and cleaning surfaces), wearing masks and being vaccinated. Avoidant behaviors involve avoiding being in crowded environments, obeying quarantine rules and avoiding travelling by public transport. Management of disease behaviors include using the required medicine or receiving help from a professional. The research that investigated people's adaptation to protective behaviors during COVID-19 pandemic demonstrated that misinformation and disinformation were particularly strong predictors (Faasse, & Newby, 2020; Mya et al., 2020). It was also found that people at risk group (i.e. the elderly, the chronically ill), women, and highly educated people did better in adapting to protective behaviors (Bish, & Michie, 2010). Nonetheless, men and 18-29-aged group were reported to adapt to protective behaviors at lesser degrees (Faasse, & Newby, 2020). It was concluded that the more individuals had anxiety and perception of risk, the more meticulously they showed protective behaviors (Van der Pligt, 1996), which led to an increase through the trust placed in the authority and reliable information campaigns (Bish, & Michie, 2010).

THE PRESENT STUDY

Several measurement tools were developed to examine the emotional effects of COVID-19. Ahorsu and colleagues (2020) focused on the symptoms of coronavirus specific fear with Fear of COVID-19 Scale developed by themselves. The validity and reliability studies of that scale were conducted in many different languages (Bitan et al., 2020; Harper et al, 2020; Sakib et al., 2020; Soraci et al., 2020) including Turkish language (Bakioğlu, Korkmaz, & Ercan, 2020; Satıcı et al., 2020) in a short while. Besides, scale development studies called “coronaphobia” (Asmundson & Taylor, 2020) were carried out and those scales were adapted to Turkish culture, as well (Arpacı, Karataş, & Baloglu, 2020). Studies also existed on the novel coronavirus induced anxiety alongside the symptoms of fear and phobia. For instance, Lee (2020) intended to develop a clinical diagnosis tool by focusing on the physical symptoms arising from anxiety in the five-item Coronavirus Anxiety Scale. Whereas several researches investigated the effects of COVID-19 on behaviors -particularly people’s behaviors for protecting themselves during the pandemic – by utilizing short answer questions, Riad and colleagues (2020) developed the Protective Behaviors towards COVID-19 Scale.

As of May 2021, the number of patients is 5.139.485 and the number of deaths is 45.186 due to COVID-19 in Turkey (Republic of Turkey Ministry of Health, 2021). Furthermore, the number of the infected and dead individuals is still increasing. This case poses a serious threat on individuals’ psychological adaptations, thereby emphasizing the importance of examining the emotional and behavioral effects of coronavirus on individuals in Turkey and developing measurement tools for that purpose or adapting the tools used in different cultures into Turkish language. The present study seeks to adapt COVID-19 Induced Anxiety Scale (CIAS) and Protective Behaviors towards COVID-19 Scale (PBCS) into Turkish language and to investigate their psychometric properties.

METHOD

STUDY GROUP

593 adults participated in the present study. 250 participants (Female=175, Male=75) were randomly assigned for conducting Exploratory Factor Analysis (EFA) and 343 participants (Female=223, Male=120) were selected for employing Confirmatory Factor Analysis (CFA) out of the same dataset. Individuals between the ages of 17 and 73 participated in the study. While the average age for EFA sample is 31.81, it is 32.84 for the CFA sample. Some of the characteristics of the participants are summarized in Table 1.

Table 1. Demographic Characteristics of the Participants

Factor	Variable	EFA		CFA	
		f	%	f	%
Gender	Female	175	70	223	65
	Male	75	30	120	35
Level of Education	High School or	25	10	24	7
	Undergraduate	225	90	319	93
Marital Status	Single	154	61.6	177	51.6
	Married	96	38.4	166	48.4
Being A Parent	Yes	81	32.4	143	41.7
	No	169	67.6	200	58.3
Having a Family Member or Relative at Risk Group	Yes	151	60.4	247	72
	No	99	39.6	96	28
Having Lost Anyone due to COVID-19	Yes	17	6.8	21	6.1
	No	233	93.2	322	93.9
Age		Min-Max. (Mean, SD)		Min-Max. (Mean, SD)	
		17-22 (31.81, ±11.10)		18-73 (32.84, ±10.47)	

DATA COLLECTION INSTRUMENTS

1. PERSONAL INFORMATION FORM (PIF)

PIF was designed by the researchers to obtain demographic information of the participants. PIF included questions on age, gender, level of education, marital status, being a parent, having lost anyone due to COVID-19, and having a family member or relative who is at risk group for outbreak.

2. COVID-19 INDUCED ANXIETY SCALE (CIAS)

Developed by Riad et al. (2020), CIAS is intended to measure anxiety felt against specific COVID-19 related situations such as going outside home, having contact with people coming from the affected areas and having clinical symptoms. As a 5-point Likert scale (1= "Totally disagree" and 5= "Totally agree") with six items, CIAS has a single factor structure. Some of the items in the scale are: "It is a disgrace to get infected by COVID-19" and "Anxiety and worries of others around me can increase my fear of COVID-19 outbreak". Cronbach Alpha internal consistency coefficient of CIAS is .78. Reverse-coded items do not exist in CIAS and an increase in the scores obtained from CIAS means an increase in COVID-19 induced anxiety of individuals.

3. PROTECTIVE BEHAVIORS TOWARDS COVID-19 SCALE (PBCS)

PBCS was developed by Raid at al. (2020) to examine individuals' protective behaviors towards COVID-19 infection. As a 5-point Likert scale (1= "Not at all like me, and 5= "Just like me"), PBCS has a three-factor structure as Routine Protective Behaviors (RPB), Post-exposure Protective Behaviors (PPB), and Post-exposure Risky Behaviors (PRB). Some of the items in the scale are: "I cover my mouth and nose whenever I go out or in public" and "I do not visit any relatives or friends during the outbreak". Cronbach Alpha internal consistency coefficient of the whole scale is .85. The items in post-exposure risky behaviors dimension of PBCS must be reverse-coded to obtain a total score from PBCS. An increase in the total score obtained from PBCS indicates an increase in the level of individuals' displaying protective behaviors towards COVID-19.

4. FEAR OF COVID-19 SCALE

Fear of COVID-19 Scale developed by Ahorsu et al. (2020) was adapted to Turkish culture by Satici et al. (2020). As a 5-point Likert scale with seven items, the Fear of COVID-19 Scale has a single factor structure. "It makes me uncomfortable to think about coronavirus-19" and "I cannot sleep because I'm worrying about getting coronavirus-19" are example of this scale's items. Cronbach Alpha internal consistency coefficient of the scale is .85. An increase in the scores obtained from the scale means that individuals' fears of COVID-19 increases, as well. The adaptation study in which the scale was adapted to Turkish culture concluded that scores of fear of COVID-19 had significantly positive correlations with depression, anxiety and stress; and had significantly negative correlation with life satisfaction (Satici et al., 2020).

PROCEDURE

Initially, permission was asked from Abanoub Riad, who is the corresponding author on behalf of the researchers who developed CIAS and PBCS which were planned to be adapted to Turkish culture, and Trabzon University Ethics Board. During the translation of the scale items into Turkish, the approach known as the forward and backward translation method (Hambleton, 1996) was used. Firstly, the English forms were translated into Turkish language by six faculty members with good level of English. Secondly, the original and the translated items were compared by 5 counseling and 2 measurement and evaluation experts, who have command of both languages, and were examined the translated items in terms of content and understandability. Afterwards, those Turkish versions were translated back into English, thereby examining the consistency between Turkish and English forms. Finally, Turkish

forms of the scales were reviewed in terms of meaning and grammar, and pilot study was conducted in July 2020 with 100 adults (Female=74, Male=26). Some items of the scales were revised based on participants' opinion and results of the pilot study. Data of the present study were collected through an online form in August 2020. Individuals were involved in the study based on voluntary participation.

DATA ANALYSIS

Data of the study were analyzed with IBM AMOS and SPSS 23.0 package programs. Descriptive information of the group was presented with basic statistical techniques. For the validity of the scales, criterion validity, exploratory and confirmatory factor analyses were utilized whereas internal consistency coefficient was used for reliability analyses.

Before the analyses, normal distribution of data obtained from the study groups was tested and normal distribution properties were verified. KMO ($KMO_{CIAS} = .87$, $KMO_{PBCS} = .77$) and Bartlett's test of sphericity ($\chi^2_{CIAS} = 541.65$, $df=15$, $p<.001$, $\chi^2_{PBCS} = 716.53$, $df=9$, $p<.001$) were used to determine whether the sample size was appropriate for EFA, and it was found that criteria were met for factoring (Tabachnick, & Fidell, 2007). Chi-square goodness of fit test, GFI, AGFI, CFI, RMSEA and SRMR goodness of fit indices frequently used in testing the models with CFA (Byrne, 2010; Hu, & Bentler, 1999) were considered in the present study.

FINDINGS

In the first stage, Principal Components Analysis was initially conducted to determine the factor structure of CIAS. Factor analysis revealed a single-factor structure with an eigenvalue over 1.00 (3.4) which explained 56.66% of total variance. Factor loadings of the items varied from .65 to .82. EFA results of CIAS are summarized in Table 2.

Table 2. EFA Results of COVID-19 Included Anxiety Scale

Items	Factor Load	Communality
Item 1	.73	.54
Item 2	.81	.65
Item 3	.82	.67
Item 4	.79	.62
Item 5	.71	.50
Item 6	.65	.42

Principal Components Analysis was also performed by utilizing Promax rotation method to determine the factor structure of PBCS. The analysis showed a structure with four factors with an eigenvalue over 1.00. It was observed that some items were loaded in two factors with values close to each other in the four-factor structure which explained 55.92% of total variance. However, the variance explained by the fourth factor was only 1.14%, and the items there were loaded more strongly on other factors. In social sciences, it is expected that the variance explained by a factor should not be less than 5% (DeVellis, 2014). Considering cross-loadings and the original structure of the scale, the structure was compelled to three factors.

The structure with three factors explained the 47.77% of total variance. Factor loadings of the items ranged from .32 to .81 and items were not loaded in more than one factor concurrently. 25.53%, 12.76% and 9.48% of the total variance were explained by the first, second and third factor, respectively; thereby making the variance explained by each factor convenient (>5%) (DeVellis, 2014). The variance values of all items except the first item are above .30. Field

(2009) recommends that items in a scale should have a communality value above .30. According to Child (2006), items with a communality value below .20 should be removed from the scale. The factor loads and item-total score correlations of the first item in this scale were examined by assessment experts and authors. It was decided that the item contributed to the scale and remained on the scale. EFA results of PBCS are summarized in Table 3. Examining the item distributions obtained from EFA, it was observed that the sixth and seventh items in the second factor of the original scale were compiled into the “Routine Protective Behaviors” sub-dimension with the first five items. Considering that those two items contributed significantly to the factor, experts decided to include them in the first factor. Thus, Turkish form of PBCS was found to have a similar factor structure with the original scale except for the two items in the second factor that were loaded in another factor.

Table 3. EFA Results of Protective Behaviors towards COVID-19 Scale

Items	Factor Load			Communality
	I	II	III	
Factor I. Routine Protective Behaviors				
Item 1	.32			.24
Item 2	.68			.49
Item 3	.56			.46
Item 4	.77			.54
Item 5	.56			.42
Item 6	.72			.50
Item 7	.61			.43
Factor II. Post-exposure Protective Behaviors				
Item 10		.63		.48
Item 12		.59		.39
Item 13		.58		.30
Item 14		.81		.63
Factor III. Post-exposure Risky Behaviors				
Item 8			.80	.68
Item 9			.81	.63
Item 11			.69	.52

In the second stage, the structures obtained from EFA for CIAS and PBCS were tested with CFA. Based on the analysis performed for CIAS, error covariances were drawn between i3 and i5 by considering the modification indices. Goodness of fit indices of the model tested with CFA were found as $\chi^2/df = 1.77$ ($\chi^2 = 14.17$, $df = 8$, $p < .001$), GFI=.99, AGFI=.97, CFI=.99, RMSEA=.04 and SRMR=.03. Those values indicated a perfect fit between the data and the six-item single-factor model obtained from the Turkish sample (Bayram, 2013; Byrne, 2010; Doll, Xia, & Torkzadeh, 2011; Hu, & Bentler, 1999). Standardized coefficients displaying the relationships of items with their factors varied from .57 to .77 and all were significant at .01 level. Path diagram and factor loads of CIAS are presented in Figure 1.

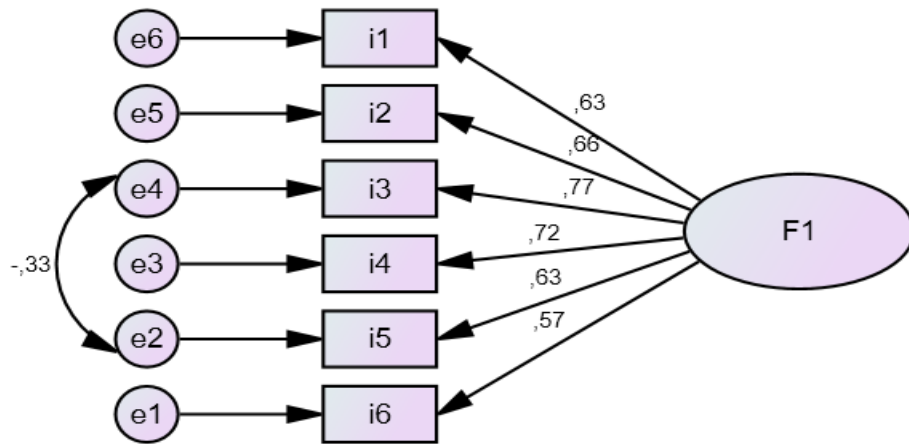


Figure 1: Path diagram and factor loads of CIAS

The three-factor structure of PBCS was tested with CFA and it was found that error covariances of some items would significantly contribute to the model. Error covariances were identified between i2-i3, i6-i7, i10-i13 and i13-i14. Goodness of fit indices of the model retested with CFA were found as $\chi^2/df = 2.43$ ($\chi^2=170.06$, $df=70$, $p<.001$), GFI=.93, AGFI=.89, CFI=.91, RMSEA=.07, SRMR=.06; thus indicating good fit between the model and the data (Bayram, 2013; Byrne, 2010; Doll et al., 2011; Hu & Bentler, 1999). Standardized coefficients showing the relationships of items with their factors varied from .32 to .72 and all were significant at .01 level. Path diagram and factor loads of PBCS are presented in Figure 2.

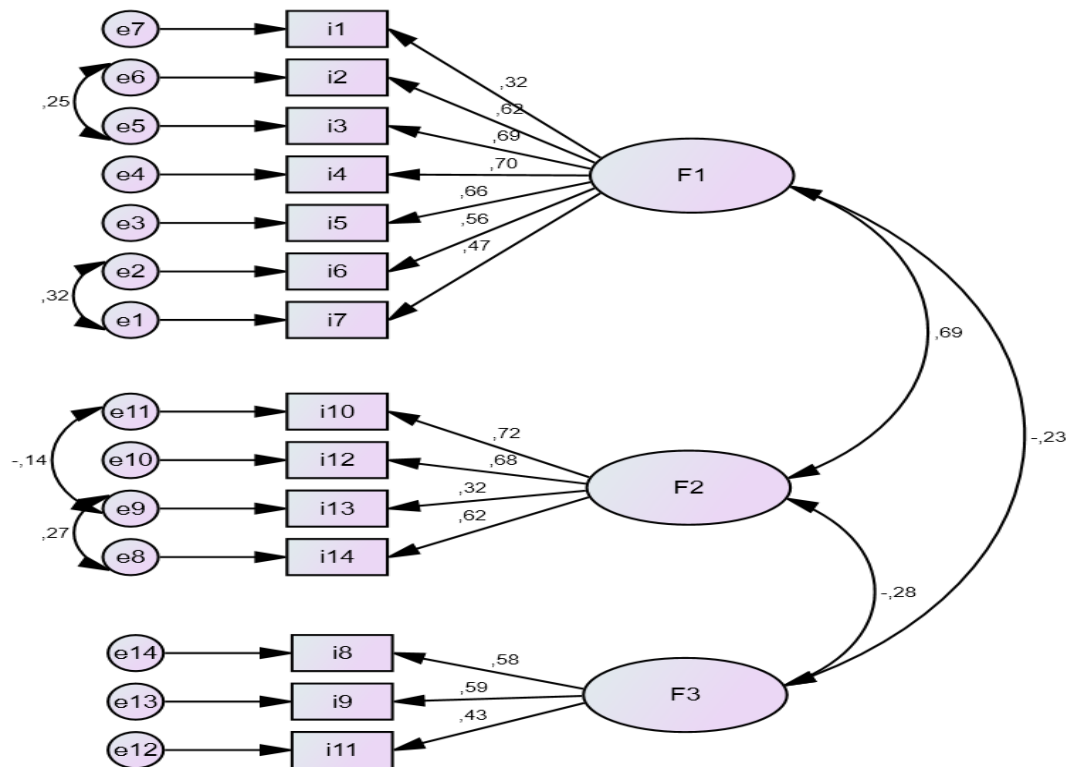


Figure 2: Path diagram and factor loads of PBCS

Turkish form of the Fear of COVID-19 Scale (Satici et al., 2020) was used for the criterion validity in the present study. Significant correlations were found between the Fear of COVID-19 Scale, CIAS (EFA sample $r=.78$, $p<.01$; CFA sample $r=.75$, $p<.01$) and PBCS (EFA sample $r=.24$, $p<.01$; CFA sample $r=.20$, $p<.01$). The correlations calculated between sub-dimensions of PBCS and the Fear of COVID-19 scale in EFA and CFA samples are as follows, respectively: .30 and .31 for “Routine Protective Behaviors”, .24 and .14 for “Post-exposure Protective Behaviors”, .02 and .04 ($p>.05$) for “Post-exposure Risky Behaviors”. Lastly, Cronbach alpha internal consistency coefficient and McDonald’s Omega were calculated for reliability analyses of CIAS and PBCS. Results were summarized in Table 4. Cronbach alpha and McDonald’s Omega coefficients varied from .84 and .81 for CIAS in the EFA and CFA samples. These coefficients varied from .73 and .77 for PBCS in EFA and CFA samples. As seen in the table, sub-dimensions of PBCS have lower reliability values than the total score. However, when looking at the obtained values, it is seen that it has acceptable reliability values (George & Mallery, 2003: 231).

Table 4. Reliability Results of CIAS and PBCS

Scale	EFA Sample		CFA Sample	
	α	ω	α	ω
COVID-19 Included Anxiety Scale (CIAS)	.84	.84	.81	.81
Protective Behaviors towards COVID-19 (PBCS)	.74	.73	.77	.77
Routine Protective Behaviors ^a	.73	.74	.77	.79
Post-exposure Protective Behaviors ^a	.58	.60	.67	.69
Post-exposure Risky Behaviors ^a	.68	.70	.53	.55

a= Sub-dimension of PBCS

DISCUSSION AND CONCLUSION

Although the research history is only based on the last one year, the deleterious mental health outcomes associated with COVID-19 are well documented (Vindegard & Benros, 2020; Xiong et al., 2020). However, using traditional assessment tools (e.g. PHQ-9, GAD-7) to determine the psychological effects of COVID-19 may result in under-diagnosis or over-diagnosis (Ransing et al., 2020). In fact, several measurement tools such as Fear of COVID-19 Scale (Ahorsu et al., 2020) and Coronavirus Anxiety Scale (Lee, 2020) have been developed to examine the negative impact of COVID-19 on mental health. Moreover, the validity and reliability studies of these new scales were carried out in many different languages (e.g. Bitan et al., 2020; Choi, Lee, & Lee, 2020), including Turkish (e.g. Evren, Evren, Dalbudak, Topcu, & Kutlu, 2020; Satici et al., 2020) in this short period.

It is observed that the number of specific scales developed to measure mental health issues related to COVID-19 is constantly increasing worldwide (e.g. Feng et al., 2020; Nikčević & Spada, 2020; Riad et al., 2020; Taylor et al., 2020). Considering that only a few of these scales were developed in Turkish (e.g. Arpacı, Karataş, & Baloğlu, 2020; Yıldırım & Güler, 2020), it is important to adapt scales in different languages into Turkish. The present study aimed to adapt CIAS which was developed to measure the level of COVID-19 induced anxiety and PBCS which was developed to evaluate the protective behaviors towards coronavirus infection (Riad et al., 2020) into Turkish language and to investigate their psychometric properties. EFA and CFA were firstly conducted to obtain evidence for the construct validity of CIAS and PBCS. The results of EFA showed that CIAS had a single-factor structure with an eigenvalue over 1.00 and 56.66% of total variance was explained, which is in line with the factor structure of the original form of CIAS (Riad et al., 2020). Similarly, the scale developed on fear of COVID-19 is of one dimension (Ahorsu et al., 2020). Coronavirus Anxiety Scale (CAS) developed by Lee (2020) is comprised of four dimensions. The result of EFA performed for PBCS demonstrated that the scale had a

structure with four factors with an eigenvalue over 1.00 and 55.92% of total variance was explained. Considering cross-loadings and original structure of the scale, the model that was established to test the three-factor structure explained 44.77% of total variance. Distribution of all items into the factors was in line with the original form except for the case that two items that were collected under “Post-exposure Protective Behaviors” factor in the original form were compiled into “Routine Protective Behaviors” factor in the present study (Riad et al., 2020). The fit indices that were obtained from CFA conducted for CIAS and PBCS demonstrated that the models that were identified for the original factor structure of both of the scales were validated.

The Turkish form of the Fear of COVID-19 Scale which measures the severity of fear of COVID-19 (Satici et al., 2020) was utilized in the present study to test the criterion validity of CIAS and PBCS. The analysis revealed that the scores obtained from CIAS were significantly and positively correlated with the scores of Fear of COVID-19, which is in line with the findings of the previous research investigating the relationship between generalized anxiety and fear of COVID-19 (Alyami et. al., 2020). Furthermore, the present study found that protective behaviors towards COVID-19 and the level of fear were of a significant relationship. Similarly, Yıldırım, Geçer and Akgül (2020) reported in their study that fear of COVID-19 is significantly and positively correlated with the behavioral precautions taken for not being infected.

In the next stage, Cronbach α reliability coefficient of the measurements obtained from CIAS and PBCS was calculated and the reliability coefficient of the two integrated scales was found to be over .74. Cronbach α coefficients of the sub-dimensions of PBCS ranged from .53 to .77. Those Cronbach α coefficients obtained for the integrated scales in the present study are considerably close to those obtained from Riad et al. (2020).

The study has some limitations; one of which was to use convenient sampling method in the sampling process. Notwithstanding the useful information provided to answer the research questions and hypothesis, it is difficult to maintain that the participants represented the population reliably in convenient sampling (Creswell, 2012). Thus, individuals participating in the present study might not represent the adult population in Turkey. Lastly, any formal diagnosis was not made on the mental health problems of the participants in the present study. However, general mental health of individuals might be related to COVID-19 induced anxiety levels and protective behaviors.

Despite those limitations, this study provides two valid and reliable measurement tools to examine mental health outcomes related to COVID-19 among Turkish-speaking populations. It can be suggested that the researchers might test the psychometric properties of CIAS and PBCS in different subgroups such as children and elderly. Moreover, future research can identify participants using different sampling methods.

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