

Difficulties Classroom Teachers Encounter in Teaching Mathematics: A Phenomenological Study

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Abstract

The aim of this research is to identify the difficulties that are faced by classroom teachers in teaching mathematics and to put a current perspective. In the research, phenomenological design from the qualitative research method was applied. Participants were determined by criterion sampling, which is one of the purposive sampling methods. Semi-structured focus group interviews were conducted to determine the opinions of the classroom teachers about the problems they have in teaching mathematics. The participants of the interview are a total of 7 primary school teachers, 4 female and 3 male. Content analysis was used in the analysis of the data. As a result, primary school teachers expressed many problem areas related to gain density, insufficient lesson hours, central exam-program incompatibility, reading comprehension, associating with daily life, readiness, inadequacy of economy, lack of material, distance education, fear of mathematics, peer pressure and lack of motivation.

Keywords: Teaching Mathematics, Primary School, Primary School Teacher

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INTRODUCTION

In today's world where information is produced and spread rapidly, it is expected from education to raise individuals who are able to adapt to changes quickly, are open to innovation and growth, can solve the problems they encounter in daily life (Çoban & Erdoğan, 2013), think critically, entrepreneurial, have communication skills, can empathize, be conducive to society and culture (MEB, 2018) and can produce by thinking creatively (Tutak & Güder, 2014).

Nowadays, many professions require more or less mathematical knowledge and mathematical thinking (Olkun & Toluk Uçar, 2020). To achieve an effective and efficient mathematics education in educational institutions is a requirement of being an information society (Ersoy, 1997). In a changing world, the purpose of mathematics teaching is changing, and it becomes important for individuals to use the learned mathematical knowledge in solving the problems they encounter in daily life (Güler Selek, 2020). Individuals are faced with situations where they need to use mathematics throughout their lives and they have to make mathematical decisions (Yenilmez & Duman, 2008). Because of these reasons, mathematics lessons are included in every education level from pre-school education to higher education (Baykul, 2021).

An education system aims to realize the knowledge, attitudes, skills and values that it wants to bring to individuals in a planned and systematic way (Aktan, 2020). Depending on the time, in order to meet the changing social needs, changes occur in the curriculum, as in many other fields (Dewey, 2010). Correspondingly, there has been significant changes in terms of the perspective of mathematics and how it should be taught (Olkun & Tokluk Uçar, 2020, p. 30). Within this context, the Mathematics Curriculum in Türkiye was renewed and the new program started to be implemented in 2018. The general aims in the Mathematics Lesson Curriculum are identified as; to raise individuals who have advanced mathematical literacy skills, who can adapt mathematical concepts to their daily lives, who can use mathematical terminology and language correctly, who can use their own ideas and reasoning when solving problems, who have advanced metacognitive knowledge and skills, who are able to manage their own learning processes, do research, produce and use information. (MEB, 2018). Besides, all competencies that are gained by students through education and training programs and other learning paths from primary school to higher education are determined in the Turkish Qualifications Framework (TQF) in line with the European Qualifications Framework (EQF), mathematical competence is also among these qualifications and expressed as “developing and applying mathematical thinking style to solve a series of problems encountered in daily life”. Mathematical competence includes the ability and willingness to use mathematical modes of thinking (logical and spatial thinking) and presentation (formulas, models, constructs, graphs and tables) to varying degrees (MEB, 2018).

Identifying the level of reaching the targets with the changes made in the curriculum development studies in education requires conducting continuous evaluation studies (Çobanoğlu & Kasapoğlu, 2010). Within this context, international studies enable countries to see their own situation in various fields and compare the situations of other countries with themselves (MEB, 2019) and as a guide for the development of educational goals and methods (MEB, 2016b). The Program for International Student Assessment (PISA) (OECD, 2019), which is held every three years with the participation of 15-year-old students and evaluates the extent to which students have acquired the basic knowledge and skills necessary for their full participation in social and economic life, and the mathematics of 4th and 8th grade students; and Trends in International Mathematics and Science Study (TIMSS) (IEA, 2020), which evaluates the knowledge and skills they have gained in the fields of science and science, are among these studies. Considering the results of PISA, it is seen that Türkiye is below the average in the field of Mathematics, (MEB, 2010a; MEB, 2010b; MEB, 2015; MEB, 2019; MEB, 2016a), while in the TIMSS results it was only above average at the 4th grade level in 2019 and below the average at the 8th grade level (MEB, 2020). Considering the results of the national and international exams for Türkiye; it is seen that the learning levels of students in mathematics are much lower than other learning areas and they are far behind other countries in the international arena (İlgar & Gülten, 2013). Consequently, the mathematics lessons become the

nightmare of the students (Baykul, 2021), and the life of the student who performs poorly in mathematics turns into a nightmare (Reusser, 2000). There are deficiencies and negativities in teaching and learning mathematics that cause the students to be unsuccessful. That is why, the reasons for the failure in mathematics teaching should be investigated in depth. (Bütüner & Güler, 2017). It is of great importance to reveal the difficulties that teachers face in teaching mathematics in order to eliminate the failures of students in mathematics. (Baştürk, 2012).

There are various studies on the problems experienced in primary school mathematics teaching. In the studies conducted with different data collection tools, it has been stated that there is no different education, program, understanding and policy for regional differences (Çalışkan & Türkmen, 2016) and rural areas (Turan & Garan, 2008). In addition, in the use of technology (Sarı & Akbaba Altun, 2015), in the field of learning numbers (Aydoğdu İskenderoğlu & Uzuner, 2017), in the concretization of mathematics with distance education (Ergen, Özışık Esranur, & Bülbül, 2022), and problematic behaviors (Kırbaş & Atay, 2017), and learning difficulties (Kaçar, 2018), explaining misconceptions (Gökkurt Özdemir, Bayraktar, & Yılmaz, 2017), problems in physical conditions, equipment (Gezgin & Bal, 2021) and lack of time (Durmuş & Ergen, 2021) found to be alive. However, in Türkiye, the mathematics curriculum changed in 2018 and brought new educational practices with it. In addition, the Covid 19 pandemic, which emerged in 2020, has caused many changes in the economic and social field. These changes have brought new applications in the field of education to the agenda. New applications have also led to the emergence of potential problems.

In today's rapidly developing science and technology, mathematics has become one of the significant learning areas. Nevertheless, Türkiye's success in international exams in the field of mathematics is not at the desired level. This shows that there are certain problems in teaching mathematics. For that reason, it is essential to determine the current problems faced by classroom teachers, who are the practitioners of the course, in mathematics teaching and to increase the success of Türkiye's mathematics lesson starting from basic education. The aim of this study is to put a current perspective through identifying the difficulties faced by classroom teachers in teaching mathematics.

METHOD

Design of the Study

In this study, phenomenology design from a qualitative research method was used. Phenomenology focuses on phenomena that we are aware of however do not have an in-depth and comprehensive understanding of. Phenomenology can be used for studies with the purpose of investigating these phenomena that we do not fully comprehend (Yıldırım & Şimşek, 2008).

In this study, it is aimed to determine thoroughly what kind of problems classroom teachers go through in teaching mathematics.

Study Group

In this study, criterion sampling, which is one of the purposive samplings was applied. In criterion sampling, a study group can be formed according to the criteria established by the researcher or predetermined (Yıldırım & Şimşek, 2008). As a criteria, The participants of this study were selected from classroom teachers working in the Eastern Anatolia region, with more than 10 years of professional experience. The names of the participants in the study were coded as Aslı, Büşra, Erdem, Göktürk, Şükrü, Veli and Yeliz. The characteristics of the participants are detailed in Table 1.

Table 1. Information about Participants

Participants	Professional Seniority	Gender
Aslı	21	Female
Yeliz	22	Female
Büşra	21	Female
Erdem	15	Male
Veli	13	Male
Şükrü	21	Male
Göktürk	12	Male

Data Collection Tools

In this study, it was tried to determine the opinions of the classroom teachers about how they had problems in teaching mathematics through conducting semi-structured focus group interviews. From time to time, focus group interviews may be preferred over individual interviews. Hearing the answer of a member of the group to the questions by other individuals provides them the opportunity to form their own thoughts within the framework of this answer. To put in other words, group dynamics is seen as an important factor affecting the scope and depth of the answers which are given to the questions. Some issues that may not come to mind in individual interviews may come to mind in group interviews and it may be possible to make additional comments (Yıldırım & Şimşek, 2008).

In this research, as the answers to the problems of the classroom teachers in teaching mathematics are sought, it is aimed that the answers given by the teachers will affect the answers of the other teachers in the group in a positive way. In the focus group interviews, the questions prepared were created by scanning the literature on the subject. The questions created were presented to two classroom educators who were experts in their fields and the questions took their final form as a result of the corrections. In order to collect data in the study, answers to the following questions were sought:

- What are the difficulties you encounter in teaching mathematics?
- What are the curriculum-related difficulties you encounter in teaching mathematics?
- What are the student-based difficulties you encounter in teaching mathematics?
- What are the parent-based difficulties you encounter in teaching mathematics?
- What are the material and technology-related difficulties you encounter in teaching mathematics?
- What are the difficulties you encounter in the distance education process in mathematics teaching?
- Are/what are the different challenges you would like to add to the challenges mentioned?

Data Collection Process

In this study, it is aimed to determine the difficulties experienced by classroom teachers within the scope of primary school mathematics lessons. Within this context, a focus group interview was held. The participants of the study consisted of a total of 7 classroom teachers being 4 women and 3 men. The teaching experience of the teachers participating in the research ranges from 10 to 25 years. Before the interview, everyone's opinion was taken into consideration to determine the appropriate date and time for all participants. In this way, it was tried to prevent any problems or disruptions during the interview.

Due to the Covid-19 outbreak, for security reasons the meeting was held on Google Meet on 05.10.2021 at 20:30. The participants attended the meeting from their houses. The meeting lasted for 2 hours and 14 minutes. The interview was recorded with the consent of the participants. During the interview, the cameras and microphones remained turned on. During the interview, 3 researchers attended the meeting, one being the moderator and the other two as rapporteurs. The questions prepared within the scope of the research were asked to all participants starting from the first question, and after the answers to the first question were completed, other questions were started. After each question, the participants were asked if they had any answers they wanted to include. Participants were given 5 minutes for each question. Flexibility was provided in the time given for some questions. The recording link of the meeting was shared with the participants to check the meeting.

Data Analysis, Validity and Reliability

In this study, firstly, the audio recordings obtained through semi-structured interviews were transcribed. Transcribed interviews were subjected to content analysis in order to be processed more deeply and to discover unnoticed concepts and themes with a descriptive approach. In content analysis, it is aimed to identify the data and to reveal the facts that may be hidden in the data (Yıldırım & Şimşek, 2008).

Codes were created with the data obtained from the interviews, which created categories and themes from these categories. After the codes, categories and themes were created, they were presented to two classroom educators who are experts in their fields, and the data were made more meaningful for the reader by making some changes on the naming and locations of some codes in line with the opinions of the experts. With the changes that are made, it is thought that the codes, categories and themes will be finalized and increase internal consistency (Aslan & Bektaş, 2019). The categories in the findings section created the theme of “Problems in Teaching Mathematics”. The categories of the study are curriculum, student, parent, material, distance education and psychological factors.

Some measures were taken by the researchers to increase the validity and reliability of the study (Aslan & Bektaş, 2019). These precautions are described below.

Validity in qualitative research refers to the fact that the researcher observes the researched phenomenon as it is and as unbiased as possible. In internal validity, an answer is sought to the question of whether the interpretations of the findings obtained in the research reflect the truth (Yıldırım & Şimşek, 2008). The interview form prepared by the researchers was presented to the expert classroom educators in order to increase the internal validity, that is, the credibility of the study. According to the feedback of the experts, the interview form was arranged in order to understand the questions and narrow their scope and took its final form. It was aimed to create a conversation atmosphere by making explanations about the purpose and importance of the study in order to prepare the participants before the interview. The answers received by the participants were given through direct quoting in the findings section. Using only interviews as a data collection tool can be shown as a factor limiting the internal validity.

External validity is related to the generalizability of research results. If the results of the research can be generalized to similar environments and situations, that is, if they can be transferred, it can be said to have external validity (Aslan & Bektaş, 2019; Yıldırım & Şimşek, 2008). It is explained in detail in the relevant sections to increase external validity, the research design, study group, data collection tools, analysis of the obtained data and how the findings were organized.

In order to increase the internal reliability, which is the consistency of the research, the data obtained as a result of the interviews were coded separately by three different researchers, and the coding and categories were renewed by matching with each other. Afterwards, a science and mathematics educator was presented to a field expert to check the consistency of the codes related to the categories, and it was aimed to ensure consistency by reaching a consensus among the researchers

with the feedback. To prevent data loss, the findings obtained from the interview questions were presented to the reader without comment, and the interviews were recorded and transcribed.

In order to increase the external reliability of the research, the research data were appropriately discussed in the conclusion part. It was discussed among the researchers whether the results and findings section provided consistency and a consensus was reached. The results and findings section was discussed by the researchers to check if the sections provided consistency and the consensus was made.

FINDINGS

Findings were presented under a single theme under the name of "Problems in Teaching Mathematics". Under this theme, six categories were discussed as the curriculum, student, parent, material, distance education and psychological factors. The codes obtained from the answers of the participants under these categories are presented in the table below. In Figure 1, general information about the theme, category and codes of the study are given.

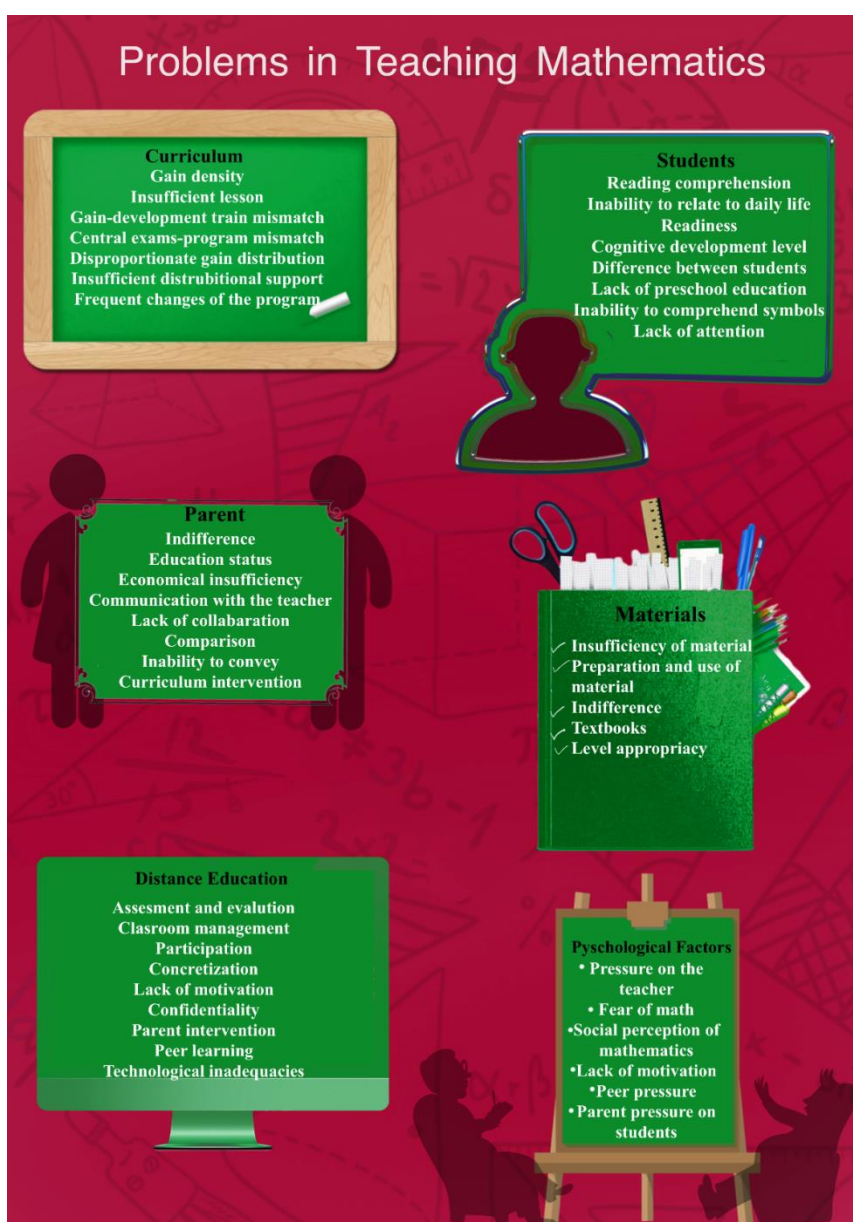


Figure 1. Infographic on themes, categories and codes

Table 2. Participant Views on the Curriculum Category

Category: Curriculum							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Gain density		*	*	*		*	
Insufficient lesson hours		*	*	*	*		
Gain-development train mismatch			*	*		*	*
Central exams (İOKBS, LGS)- program mismatch				*		*	*
Disproportionate gain distribution		*			*		
Insufficient distributional support	*						*
Frequent changes of the program	*						

When table 2 was scrutinized, the number of participants expressing their opinions on the codes of acquisition density, distribution of acquisition and appropriateness of acquisition is higher than the others. While Erdem's thoughts on the intensity of learning outcomes are: *"...I think that the curriculum is intense, it is geared towards overloading information, and it is especially intense for students at primary school level"*, Aslı asserted, *"...I think the gains are too much, I think they are too intense." ...children are meeting for the first time with four procedures, I think it is much more intense.* Regarding this issue, Büşra said, *"...the gains are too much. How am I going to raise them..."* whereas Yeliz explained her opinions as *"There were a lot of activities and gains because it was program-based..."*.

One of the participants, Veli, stated his thoughts about the inadequacy of the lesson hours: *"...We have a serious time problem. In other words, 5 hours of mathematics in the first grade in primary school is very insufficient."* while another participant Büşra described her views, *"...If I apply it according to five lesson hours, no child will go to secondary school without learning problem solving from mathematics."*

Göktürk, one of the participants, expressed his thoughts on the problem of achievement-development incompatibility: *"When we look at the achievements in the mathematics curriculum, when we look at the age status of the children, they do not match exactly."* While expressing her with the sentence Büşra asserted, *"...I realized that time was a very difficult subject after I sent my daughter to school. ...It's a bit abstract for children. We hung seasonal strips, we brought calendars and clocks, and I was able to give a lot of examples."* Regarding this subject, Aslı said, *"... friends told us to measure time, these were the last topics we worked on. We couldn't settle it, it didn't settle in the minds of those children."*

While Aslı, one of the participants described her opinions on the issue of the inconsistency of central exams-outcome as *"...we don't have any inconsistency in any way, the achievements are irrelevant with our exams."*, Göktürk expressed his opinions, *"In other words, the exams not relevant to the basic education lessons given."*

Regarding the disproportionate distribution of gains, Veli said: *"...there is an imbalance between the gains, so they did not make the distribution correctly. If we have to give an example, my teacher, there are three gains in the 1st grade program on time measurement, there are three outcomes in the 2nd grade, four outcomes in the 3rd grade, and two outcomes in the 4th grade."* While expressing his opinion with these sentences, Yeliz expressed her opinion on the subject with the sentences *"...they are overloaded with the achievements in the subjects."*

One of the participants, Şükrü, stated his thoughts on insufficient institutional support, *"...We changed the program, but I think that in-service training activities related to it are insufficient or not done at all."* while Göktürk stated his thoughts as, *"In other words, when the student cannot solve a problem, when he encounters a problem, in the mathematics lesson, of course, as the classroom*

teacher, we have to solve it first. But when we are insufficient in this regard, when we cannot offer a solution to the student regarding that issue, there is no place to turn to or there is no system to guide us.”

Şükrü, one of the participants, indicated his thoughts on the constant change of the program as “...I think that we suffer from frequent changes. Because the program is constantly changing with the government or with the changing governments.”

Table 3. Participant Views on the Student Category

Category: Students							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Reading comprehension	*			*	*		*
Inability to relate to daily life	*	*			*		*
Readiness		*	*		*		*
Cognitive development level	*				*		*
Difference between students		*		*			*
Lack of preschool education		*	*				
Inability to comprehend symbols	*						
Lack of attention					*		

When Table 3 is examined, it is seen that the views of the participants on reading comprehension, inability to associate it with daily life, fear of mathematics and readiness codes are higher. Veli, one of the participants, expressed his thoughts about the students' reading comprehension problem as, “...Our biggest problem is in reading and understanding, that is, the child has difficulties in understanding, expressing himself, and explaining what he understands. This directly affects math achievement.” While Veli was expressing his thoughts as followed, Erdem said, “...now it's all about math questions for understanding what you read. Now, to expect a higher level of skill from a student who cannot do this and to expect them to solve problems, frankly, we seem to be a bit of a burden on them.”

Yeliz, one of the participants, stated her views on the students' inability to associate mathematics with daily life: “The child does not know where to use this mathematics in his daily life, he cannot use it anyway.” while another participant Göktürk expressed it with the following sentence “...what will it do in daily life when he learns mathematics knowledge and skills, why does a child need mathematics? He should be aware of them, but he is not.”

Göktürk, one of the participants, stated his thoughts about the cognitive development level of the students “...Maybe there is no problem at the knowledge level, you can give the information, but when the child interprets it and analyzes it with this interpretation, there is an abstract situation and the child cannot visualize it in his mind.” While another participant, Veli, stated that “...they have difficulties in problem solving, critical thinking, approaching the problem at work, acquiring such skills, which we call metacognitive skills, in terms of mathematics.”

Yeliz, one of the participants, said, “What I observed is that if a child immediately answers a problem you ask in the classroom, and the other responds a little slower or comes from behind, this can affect the child from behind negatively. For example, as I just mentioned, one of them answers immediately, while the other one has to think for three minutes or two.” Erdem said, “...readiness levels are different and we try to explain a subject to them in the same time.”

Büşra, one of the participants, said regarding the lack of pre-school education, “...We teach very comfortably with children who go to kindergarten. Unfortunately, in this environment, it remains at the level of 30%. Continuation in kindergarten. The remaining seventy percent come to us, not even counting to 20 or 10.” While Yeliz expressed her opinion with these sentences, “...As Büşra said, it

can be said that she is a preschooler. These are the children who come with ready knowledge and the children who come from behind have difficulties in terms of mathematics.”.

Şükrü, one of the participants, stated that students had problems with mathematical symbols, “... we use the expressions plus, big, decrease, so the meaning we give to these symbols is not well comprehended by the students.” Veli, one of the participants, expressed his thoughts about the students' lack of attention, “... Apart from that, they have a lack of attention, especially in mathematics. He's having trouble concentrating.”

Table 4. Participant Views on the Parent Category

Category: Parent							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Indifference	*		*		*	*	*
Education status	*	*				*	*
Economical insufficiency	*	*	*			*	
Communication with the teacher			*		*	*	
Lack of collaboration			*		*		
Comparison				*		*	
Inability to convey		*					*
Curriculum intervention			*		*		

When Table 4 is analyzed, it can be seen that the number of participants expressing their opinions about the indifference of the parents is higher. Aslı, one of the participants, expressed her views on this subject as “...the parents lose interest because they can't get their homework done, they don't take care of their children, they can't understand, of course they can't teach the subjects they can't understand.” while Göktürk said, “I always express to my parents, for example, in solving problems with children, in making exercises, in order to repeat the solution that the teacher tells, to repeat what they see in the notebook, and to change the numbers, for example. But the parent doesn't even do that.”. One of the other participants, Büşra asserted, “...I mean, sometimes I'm surprised. I'm telling you, the little child says "biy, two, three, sweetly like this, so the parents don't even consider this, we are very surprised by saying that you are not interested at all.”

Stating that the education level of the parents is an important problem, Şükrü expressed, “The literacy level is quite low, even our parents who are primary school graduates are very few. Of course, this reduces their interest in mathematics and reduces their interest in other subjects.” While Yeliz stated her thoughts as “... my parents who graduated from primary school, can read and write at least by making them read with what we have given them. But when it comes to mathematics, things change...They have difficulties in this issue because they do not know.”

Büşra, one of the participants, stated her thoughts on economic problems: “...we have a parent profile dealing with financial problems. ...The person dealing with financial difficulties pushes education into the background.” While expressing this with the following sentences, Veli asserted, “...There are many students who cannot buy many course tools and materials, such as a ruler, depending on the social and economic situation.”. On the same subject, Yeliz said, “...I have students who are seasonal workers. Because their financial strength is not good, most of their parents are unemployed.”

Talking about the communication problem between the parents and the teacher, Veli expressed his thoughts on this subject as “...the biggest difficulty I have experienced is that I have a communication breakdown with the teacher. The teacher does not pay much attention to his warnings or forgets quickly.” Büşra said, “Afghan parents are a little more close to Turkish, we can communicate well and badly. We establish ourselves with Syrians through translators. I can't call and tell them why your child didn't come to school today.”.

Aslı, one of the participants, thought of the parents' thoughts on making comparisons between students “She tries to find out what their children's levels are by comparing them to the student in that

class with the student in her own class and with the students in another class." While Erdem stated, "...his child compares to other peers and other students in the class, he criticizes."

While Göktürk, one of the participants, said that the problem related to the parents' inability to convey what they know in mathematics teaching said, "...they can't explain it even if they know it because they don't have professional skills. ...I know the answer, for example, is in problem solving, but I cannot convey this situation to the child, these are the problems we hear from parents in general.", Yeliz stated that, "...when it comes to mathematics, I can call it parents whether they want to, they don't know how to explain this subject and how to get down to their level. ...The mother is calling me saying, my teacher, I am solving this question, but I cannot explain it to the child."

Veli, one of the participants, expressed his thoughts on the problem of intervention to the curriculum: "...it gives high-level gains. For example, if I were to give an example from the first grade, for example, we do not do additions with hands or subtraction by breaking tens, but the parent makes the child do this. ...They cause incomplete and wrong learning." While another participant Büşra said, "The child, whom we liken to something, comes to us as worse. For example, I say to the parents as long as they don't get involved, you don't touch them and keep it that way."

Table 5. Participant Views on the Material Category

Category: Materials							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Insufficiency of material		*	*	*	*	*	
Preparation and use of material		*			*		*
Indifference		*			*		
Textbooks	*						*
Level appropriacy					*		

When Table 5 is examined, it is seen that the number of participants who expressed their opinions about the material deficiency code is higher. Yeliz, one of the participants, stated her thoughts about the lack of a material closet: "If you say material, it doesn't exist, even if there is, every part of it is scattered in one place." Aslı said, "I think that schools should definitely have a nice locker with materials. I think it should be in every school. But neither do we." and Erdem said, "It would be nice if there was a laboratory, like science. In fact, math is just as important as science. ...it would be nice to have the necessary math tools in every classroom locker."

Regarding the subject of preparing and using materials, Göktürk said, "I can say that I am not competent enough to prepare materials for myself." Veli expressed his opinion as, "...We have serious shortcomings about how we will use these technology tools and equipment.". Yeliz, one of the participants, explained her views on this subject as "...As a friend of ours just said, the teacher doesn't know how to use it either, and that's strange."

Veli, one of the participants, expressed his thoughts on the lack of interest in the material: "...I opened the closet and looked, there were so many materials that we could use on almost every subject of mathematics, however, we were not aware of this. I mean, it arrived at school, it was put there, and it's waiting." While expressing her words with the following words, Yeliz said, "Our friends don't need the material very much anyway."

While one of the participants, Şükrü, stated his views on the textbook issue as "...I think that there are not enough examples in the textbooks. Our books do not offer plenty of exercise opportunities. There are not enough problems in the books, we cannot solve them. Few like 1 or 2 lines evaluation activities. Sometimes printing mistakes are made." Göktürk said, "The issues in the textbooks are a little easier and more concrete initially."

Veli, one of the participants, asserted that the materials are not suitable for every grade level asserted "... my teacher has a certain standard, so he wants you to use the course materials you use in

4 grades in 1st grade as well. However, it would be better if materials and materials were prepared for this course according to the grade level.”

Table 6. Participant Views on Distance Education Category

Category: Distance Education							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Assessment and evaluation	*	*	*	*	*		
Classroom management					*	*	*
Participation	*	*			*		
Concretization			*		*		*
Lack of motivation					*	*	
Confidentiality				*	*		
Parent intervention				*	*		
Peer learning				*			
Technological inadequacies		*					

When Table 6 is examined, it can be observed that the participants expressed more opinions about the issues of measurement and evaluation. Regarding the measurement and evaluation problem, Yeliz, one of the participants, said, *“I had a problem with the control mechanism... It is not clear that I can see exactly what the children are doing. What operation did the child do there? What did he do or how did he solve a problem when I asked him about it? Which step was he in? I could only find out by asking. I couldn't see it with my own eyes.”* Şükrü expressed his thoughts as, *“We experienced the biggest problem in the evaluation. So, I don't know exactly what we taught the student.”* Regarding the same problem, Erdem said, *“I agree with what my other teachers said. We cannot determine whether or not he did it or where he did right or wrong.”*

Göktürk, one of the participants, explained his thoughts on the difficulty he had in classroom management as *“...They are a bit passive at the point of constantly turning on the camera. So, I can not control it. We cannot notice or control whether they are paying attention to the lesson or not.”* while Aslı asserted, *“The screens are off, the camera is off, we just call out. We call 3-5 times, then his mother comes back and says the student is asleep. We cannot control it.”*

While Şükrü, one of the participants, expressed his thoughts regarding the problem of participation in distance education and said, *“I have 25 students, 6 of them are citizens of the Republic of Türkiye, 19 of them from Afghan and Syrian origin. 7 students participated in total.”*, Yeliz said, *“Out of my 17 students, maximum 9 or 10 of them were able to join the distance education lessons. No one else could attend distance education lessons.”*. Another participant, Veli, said, *“I had a problem with continuity. So, the child enters one day and does not enter the next.”*

While one of the participants, Büşra, expressed not being able to concentrate in distance education creates a problem as *“...I want to give them (children) paper, I need to do something on paper, they need to complete the pattern, but right now I can't do them. They have to do a lot of things on paper, they have to divide, they have to cut, but we couldn't get most of them done.”*, Göktürk stated, *“...I have difficulties in concretization in distance education for myself. Mathematics is a course with a lot of abstract concepts.”* Veli said, *“I agree with my teacher Göktürk because there are too many abstract concepts in mathematics class. Even though we say bring cutlery in front of the screen, we cannot convey it too much.”*

Regarding the lack of motivation in distance education, Aslı said, *“The biggest minus for me is that I couldn't do it by feeling like a teacher. My students, also, could not become students feeling that they were students. I never liked teaching in front of the screen.”* While Veli stated, *“There was a lot of lack of motivation in distance education.”*

While Erdem, one of the participants, explained his thoughts on the problem of privacy in distance education, *“You can't be yourself, teacher in distance education.”*, Veli asserted, *“You can*

raise your voice in the classroom environment, but you cannot raise it there. This affects you too. Because you know from behind the screen that different people are involved in the lesson.”

While one of the participants Veli, described his opinions on the issue of parent intervention as, “... *I ask a question but the parent ends up solving the question because there is that kind of an environment. To avoid embarrassment to the teacher, the parent gives instructions to the child in the background.*” Erdem said, “*They usually have a parent with them, for example, did that parent answer the question? That is also controversial. ... Every now and then parents may interfere.*”

Erdem, one of the participants, expressed the idea that students could not benefit from peer learning in sentences “...*there is no social learning in distance education. Normally, they also learn from each other in the classroom. They are deprived of learning from each other in distance education.*”

Yeliz, one of the participants, expressed her thoughts about technological inadequacies as, “*Many of them do not have internet, many of them do not have a computer or a smart phone at home.*”

Table 7. Participant Views Regarding the Psychological Factors Category

Category: Psychological Factors							
Codes	Şükrü	Yeliz	Büşra	Erdem	Veli	Aslı	Göktürk
Pressure on the teacher			*	*	*	*	*
Fear of math	*			*	*	*	
Social perception of mathematics				*	*	*	
Lack of motivation		*					*
Peer pressure		*		*			
Parent pressure on students			*	*			

When Table 7 is examined, it can be seen that the participants expressed more opinions about the problem of pressure on the teacher. Aslı, one of the participants, thought about her pressure on the teacher as “*When the child fails, you naturally get reactions from both the school administration, the parents and the students.*” While expressing this, Veli, one of the participants asserted, “*School administrations also feel the pressure of school administrations on us, rather than parents. I couldn't tell once, sir. For example, that principal entered the classroom and asked questions to the children. I'm telling you, teacher, this is not the achievement of the three classes you asked. He says no, he needs to know that.*” Another participant, Büşra, expressed in other words, “*A secondary school math teacher came to us one day and said, "Do you have a 1st grade book, can you give it me? I asked why. There is a student who has gone to secondary school, but now he cannot add or subtract. So he made an allusion here. You know, you didn't teach this in primary school, he brought the book to say that I can teach it. That's where he blames us . In general, we classroom teachers hear these words a lot.*”

Erdem, one of the participants, said that the students put pressure on him in words, “*I got a reaction for a while from the students, for example, why we do less math. When the normal mathematics curriculum works, the students said that you are taking us back.*”

Regarding the fear of mathematics, Şükrü, one of the participants, said, “...*There is a concept we call the fear of mathematics, a hidden concept, a secret concept. I think our students are afraid of math. ...I think we, as primary school teachers, need to focus on the concept of fear of mathematics, because the child who cannot succeed, the child who cannot do it, begins to feel alienated from mathematics.*” While explaining his thoughts about the sentences, Veli expressed his thoughts as “*While I was teaching 1st graders in the classroom, I noticed that children love mathematics very much and are very interested. ...but when this goes to 1, 2, 3, 4, 5, 6, 7, the child also has a fear of learning mathematics due to the imbalance of these acquisitions, as I mentioned in the first question, because these gains increase.*” Aslı, one of the participants, added, “...*when we force the student, we intensify the perception of fear of mathematics in the student. ... if the child says he is coming scared.*”

Aslı, one of the participants, stated her thoughts on the society's perception of mathematics, *"I know that all of us have this thought on mathematics as a society, even from a part of my life as a student, was a lesson to be feared. That also creates a problem."* Erdem stated that, *"Okay, parents are aware of the importance of mathematics for the future of the child, but for example, there is such an idea that parents do not care if they are successful in any course aside from mathematics. For example, being successful in Turkish and understanding what he reads are much more important as the first step, but they don't care about it. How much did he get in mathematics, they ask me, that is, the main focus is on mathematics."*

While Yeliz, one of the participants, stated her opinions on the lack of motivation as, *"The thinking child is in the belief that they can't answer anyway, so they don't have to listen or solve the questions and finish the idea of mathematics and detach from it."* Göktürk also added *"...We have many students who do not like mathematics, we have many students who develop negative attitudes towards mathematics. Some believe that they will not succeed, others because they don't know what mathematics will do for them in the future."*

To express that the students put pressure on each other, Erdem said, *"We are in a competitive environment. When students get a high score in math, for example, they are almost provocatively happy for each other, and others in the class are upset about it."* While Yeliz expressed her thoughts in sentences *"Many expressions such as, you can't do it, you can't read, you read slowly about their friends are used during recess, expressions like you read slowly are used. This is also the case in mathematics. You can't answer, for example, you couldn't count."*

On the parent pressure, Erdem stated his opinions in the words, *"...even if it is well-intentioned, it gives a different direction to the child, it suppresses the child, it creates phobia in the child."* and Büşra expressed her opinions *"Some of the parents are directing the pressure on their children, this time with things like you can't do it, you're lazy."*

CONCLUSION AND DISCUSSION

When we take the problems related to education into consideration, the difficulties experienced in primary school mathematics teaching remain up-to-date. Considering that the foundations of mathematics were laid in primary school, it is a crucial requirement to regularly state the problems experienced by classroom teachers. The aim of this research is to present the difficulties experienced by primary school teachers working at the basic education level in teaching mathematics. In terms of the context of the research, the first category created under the theme of difficulties in teaching mathematics is the curriculum. Teachers most frequently touched on the intensity of acquisition. It is noteworthy that experienced teachers, who are thought to be able to use the curriculum more effectively by making use of their past experiences while applying the mathematics curriculum (Westwood Taylor, 2013), point out this problem in the study. Although the mathematics achievements have been reduced compared to the previous programs, the opinions that the problem of intensive gains continues in the current program (İncirci, Sirem, & Sirem, 2020; Baş, 2017; Deveci & Aykaç, 2020) are in line with the results of this study, while it was also seen that some teachers complained about the intensity of the learning outcomes (Turan and Tabak, 2021). While the insufficiency of mathematics lesson hours along with the intensity of learning outcomes is expressed as an important issue by the classroom teachers, it is also stated in other studies that the lesson hours allocated to achieve the goals are insufficient at each grade level (Toptaş & Karaca, 2019; Çaycı, 2018; Yılmaz & Arslan, 2019; Ayhan, 2006). Besides, it was stated that the achievements did not match the developmental characteristics of the students. Doğan (2020) stated that the gains in knowledge level in mathematics lessons decreased in the 2nd and 3rd grades, but this increased in the 4th grade. This situation can be seen as one of the reasons for the problem of disproportionate distribution of gains. In the study, it was stated that the gains were disproportionately distributed and they were more intense in certain classes. Baş (2017) stated that in the 2017 mathematics curriculum, the achievements in the 1st, 2nd and 4th grade levels were reduced, while there was an increase in the achievements in grade 3. The classroom teachers who participated in the research stated that the

curriculum varies frequently and that they do not receive in-service training for the changing curriculum on this subject as a problem in mathematics teaching. The teachers participating in the study experienced the 2005, 2013, 2015 and 2018 curriculum. Teaching mathematics according to 4 different programs in a period that cannot be seen long in terms of education may be the reason for the problem of adaptation to the program. As a result of the research, it is thought that the problems arising from the curriculum are issues that teachers cannot interfere and have difficulties.

One of the most emphasized issues among the difficulties arising from the students by the classroom teachers participating in the study is reading comprehension. Students having problems in comprehending what they read seriously affects their mathematics learning. There are many studies on the importance of the relationship between reading comprehension and mathematics (Vilenius-Tuohimaa, Aunola, & Nurmi, 2008; Kikas, Soodla, & Magi, 2018). Elementary school mathematics course consists of four learning areas which are "Numbers and Operations, Geometry, Measurement and Data Processing". Students need literacy skills in all these learning areas. Because in order to be able to explain their mathematical thoughts, students need to utilize language correctly along with mathematical terminology, and establish relationships between people and objects by using the meaning and language of mathematics (MEB, 2018). Thus, this issue may be explained as one of the most salient problems. Classroom teachers stated that students also have problems associating mathematics with daily life in parallel with this problem. While students' inability to associate mathematics with daily life is seen as a long-standing challenge (Yenilmez K., 2007; Özgeldi & Osmanoğlu, 2017), being able to associate it with daily life causes students to develop positive attitudes towards mathematics and increase their motivation (Özgeldi & Osmanoğlu, 2017). Besides, when students associate mathematics with daily life, they can learn mathematics more easily and improve their thinking skills by using their previous knowledge (Stylianides & Stylianides, 2008). Within this context, it can be said that even though associating mathematics with daily life is an essential skill that students can utilize, it is still an ongoing challenge. Readiness is another of the deficiencies most frequently mentioned under this category. In the literature studies on the inadequacy of readiness levels of primary school students can be found (Yenilmez & Kakmacı, 2008; Metin, 2017; Ergenç, 2011). The student's level of development, age, cognitive level and prior learning are the factors affecting the learning process. The development of students' pre-learning will also positively affect their new learning (Paydar & Doğan, 2021). In other words, good readiness of students will facilitate learning mathematics in basic education. In this context, most of the teachers mentioning this problem is seen as an important result. Classroom teachers stated that there were problems with the cognitive development level of students. Inadequate metacognitive skills such as problem solving, critical thinking and reasoning is a problem that can be effective in children's comprehension, interpretation and use of information. Because an individual who cannot use metacognitive skills cannot be aware of his own mental activities and cannot effectively control the learning process (Kahramanoğlu & Deniz, 2017). Thus, it is necessary to take the cognitive development levels of students into account in order to make sure that students learn mathematics in a qualified manner (Yenilmez & Duman, Student opinions on the factors affecting mathematics achievement in primary education, 2008). In the study, differences in individual learning speed were also stated as a problem in teaching mathematics. The fact that some learn faster than others can turn into a serious problem in the classroom. Because the teacher is responsible for bringing all children to the achievements as much as possible. This does not mean giving each student the same homework, providing the same opportunity, using the same evaluation criteria. Mathematics teaching which aims for equality is a teaching model that is sensitive to individual differences and changes according to the student (Van de Walle, Karp, & Bay-Williams, 2019). The fact that primary school teachers express this problem can be interpreted as they have problems in arranging mathematics teaching according to individual differences. Starting from early childhood education, children gaining acquisitions such as describing, patterning, comparing, equating, classifying, observing, sequencing, understanding the part-whole relationship, measuring, simple addition-subtraction, number recognition, writing and drawing graphics is desired (Ministry of National Education, 2013; Unutkan, 2007). There are related studies on the positive effects of preschool education on children's future mathematics learning (McClelland, Acock, & Morrison, 2006; Fidan & Türnüklü, 2010). It is remarkable that the classroom teachers in the research expressed the problem despite the benefits of preschool education and efforts

to expand preschool education. In the research, it has been seen that pre-school education contributes positively to students' learning of mathematics, while students who do not receive pre-school education have difficulties in learning mathematics in the classroom as a current problem. Students starting school without a mathematical background may result in some misconceptions. As a matter of fact, it was detected in the study that the students had trouble comprehending the symbols. This situation may be related to pre-school education, as well as other concepts such as cognitive readiness and interpersonal differences.

Success in education is team work. This team consists of stakeholders such as school, family, environment and education system. One of the most important of these stakeholders, the family's approach, interest and attitude towards education are determinants of student success (Kolay, 2004; Akbaba-Altun, 2009). Within this context, the difficulties related to the parents of the students seem to be very important. The most frequently cited difficulty with parents is indifference. Family's interest in education has been stated as a factor growing success in various studies (Akbaba-Altun, 2009; Keçeli-Kaysılı, 2008; Brese & Mirazchyski, 2010; Çelik & Kızılaslan-Tunçer, 2020). When the frequency of studies addressing parent indifference in the relevant literature is considered, the results of this study show that this problem still exists (Akbaba-Altun, 2009; Gezgin & Bal, 2021; Çetin, Yazar, Aydın, & Yazıcı, 2018). Similarly, parents' educational status and economic inadequacies have been the subject of many studies (Keçeli-Kaysılı, 2008; Gezgin & Bal, 2021; Sarier, 2020). The insufficiency of the education of the parents brings issues like the lack of support to the lesson with it. When the findings of the study are examined, it can be said that the educational status of the parents and the difficulty of economic insufficiency are currently ongoing. The classroom teachers who participated in the research expressed that the parents lacked communication with the teacher and this impacted the student's mathematics achievement. The communication problem in this study was expressed as the parent's disregard for the teacher's warnings. This problem can be expressed as a serious communication-based problem, since an education-teaching process in which the parents do not communicate with the teacher and listen to their advice cannot be healthy (Karaca & Karaca, 2021). Besides, the teachers explained that the foreign students in their classrooms could not even establish basic communication with their parents, which resulted negatively in the classroom. There are various studies that overlap with these results (Güngör & Şenel, 2018; Yıldız-Yılmaz & Demir, 2021; Ergen & Şahin, 2019). The classroom teachers in the study expressed the lack of cooperation in parallel with the communication difficulties. Parents' lack of cooperation may result in the inability to fully learn mathematics achievements. Because although the teacher is an important actor in teaching mathematics in the classroom, a learning process that is not repeated and reinforced at home will not provide the desired efficiency (Özdogru, 2021). As a matter of fact, there are studies showing that parent collaboration contributes to academic success. Nevertheless, despite the importance of parent-teacher cooperation, studies showing that there is an inadequacy in this regard support the results of the research (Keçeli-Kaysılı, 2008; Buran & Kaplan, 2021; Bektaş & Küçükturan, 2020). Making comparisons among students is another issue expressed by teachers. It was stated that parents compared their own children and evaluated their success compared to other students. Parents' high expectation of success from their children, criticizing their children for their mistakes, using negative expressions and constantly comparing them with others have a negative impact on the child's success as it reduces the child's self-confidence (Dalkılıç, 2013). Considering that comparing with peers is a common mistake especially at primary school level, this issue can be considered as an important difficulty affecting mathematics teaching. Participating teachers stated that parents want to help students in their lessons, but while doing this, they have a problem of transferring them to their children despite knowing the subjects. Parallel to this, it was stated as a difficulty that some parents teach their children mathematics achievements beyond the curriculum and this results in false learning. Dağlı and Han (2017) stated that parents have wrong attitudes and behaviors in the teaching process, while Tösten, Han and Ergül (2016) stated that parents interfere with teachers' work and want to intervene in student achievement as an issue.

Almost all the teachers in the study stated that material insufficiency creates difficulties in teaching mathematics. Since mathematics is a science that consists of abstract concepts and develops mental thinking skills with its own language, it is recommended to use representations, concrete

materials, pictures and graphics in mathematics teaching (Yazlık, 2018). It is known that using materials in mathematics teaching affects academic success (Altun & Çatal, 2021), attitude towards the course (Kükey, Tutak, & Tutak, 2019) and motivation (İnam & Ünsal, 2017). Regardless of this, the current continuation of the material inadequacy in schools is an important problem. In addition, while the teachers stated that they had difficulties in preparing and using materials, they stated that they were insufficient in preparing materials and that they did not know how to use some existing materials. Gökmen, Budak, and Ertekin (2016) determined that teachers' pedagogical knowledge of materials was insufficient and the materials were not used because they took time, while Bozkurt and Şahin (2013) determined that teachers did not know how to use the materials and could not provide the material. Within this context, it can be said that teachers have problems in preparing and using materials and this problem creates difficulties in teaching mathematics. The classroom teachers in the study also expressed their indifference to the materials. It is thought that this situation arises from the inadequacy of the material and the difficulty in preparing and using the material. Classroom teachers stated that the inadequacy of materials for every grade level and the inadequacy of textbooks create difficulties in teaching mathematics. Korkmaz, Tutak, and İlhan (2020) stated that the textbooks are not actively used in the lessons because of their insufficiency, while Usta and İpek (2019) stated that the majority of the problems in the textbooks require low-level cognitive skills. In this context, it is a remarkable result that the use of materials is stated as an ongoing problem despite its benefits in primary school.

During the time period of the research, the classroom teachers who participated in the study experienced the distance education process. They stated that distance education creates difficulties in teaching mathematics and that the first of these is measurement and evaluation. Özdoğan and Berkant (2020) stated that school administrators, and Saygı (2020) stated that classroom teachers expressed measurement and evaluation as an important problem of the pandemic process. With the emergence of pandemic conditions, measurement and evaluation processes were suspended in many countries, and face-to-face exams had to be done online (Özalkan, 2021). As a result, it can be said that classroom teachers are inadequate and unprepared for measurement and evaluation in distance education in mathematics teaching. For a healthy learning-teaching process to take place, to facilitate students' learning processes and to have a positive learning climate, it is expected that the teacher should have a command of classroom management (Korkut & Babaoğlu, 2010). Nevertheless, the fact that the classroom environment is online in distance education and students attend classes in front of the camera has revealed a critical issue in classroom management. The classroom teachers in the study stated that they could not see the students and did not know whether they were in front of the screen or not. As a result, they had difficulties in providing classroom management. It has been stated in other related studies that classroom management in distance education is a problem experienced at all levels of education (Dinçer & Yeşilpınar-Uyar, 2016; Fidan M. , 2020; Arslan & Şumuer, 2020). It was stated by the teachers that there was a problem of participation in the lesson in parallel with the classroom management. It is an important problem that students do not attend the lesson continuously and most of the class does not attend the lessons. Because teaching mathematics is a process that requires continuity. It is seen in related studies that there are problems in class participation (Arslan & Şumuer, 2020; Demir & Özdaş , 2020). There are abstract concepts in mathematics teaching and their teaching may require concretization. However, teachers stated that they could not do this in distance education and that this created a difficulty in teaching. However, there are websites such as Matlab, Mathematica, Derive, Cabri, Excell software (Çavuş & Eskitaşçıoğlu, 2016), YouTube, Okulistik, Morpa Kampüs that can be used for concretization in mathematics teaching (YouTube, 2021; Morpa Kampüs, 2021; Okulistik, 2021). Within this context, it can be thought that the teachers in the study do not have sufficient knowledge on this subject. In the distance education process, the low motivation of the students towards the mathematics course is among the difficulties mentioned. Due to its importance in teaching mathematics, low motivation may negatively affect the mathematics learning process (Akbaba-Altun, 2009; Tahiroğlu & Çakır, 2014). In this context, it can be said that the stated difficulty is important because the motivation for success in distance education increases academic success (Kuloğlu, 2020). The classroom teachers in the study stated that there is no privacy in distance education, and knowing that the parents are watching them behind the screen creates an obstacle to comfortable teaching. The difficulty mentioned here can be considered as one of the basic criteria that

separates private space from public space. The privacy of the person observed in the private area decreases, his/her *self* disappears and the natural behavior is replaced by conditional behavior (Atmaca, Yıldırım, & Öntaş, 2021). In this context, it can be said that the transformation of the classroom environment, that is, the private space, into the public space, has a negative effect on the teacher. Parent intervention was cited as another challenge. Atmaca, Yıldırım and Öntaş (2021) stated that there is parent support/intervention in distance education and this creates anxiety, tension and unrest. In addition, among the other difficulties stated are that students cannot benefit from peer learning because their communication with each other decreases in distance education and students experience technological inadequacy. Erbil, Demir, and Erbil (2021) stated that in distance education, students cannot communicate with their peers and teachers and this may impact their learning.

In the category of psychological factors, teachers stated that the pressure put on them by parents, school administrators, other teachers and students creates difficulties in teaching mathematics. There are various studies in the related literature on psychological pressure on teachers (Şenaras & Çetin, 2018). It can be said that this situation does not reflect positively on mathematics teaching and that the pressure applied impacts the motivation of the teacher. Another difficulty noted is the fear of mathematics. Fear of mathematics can occur due to reasons such as giving too much value to mathematics in exams, perceiving mathematics as difficult, and bullying from peers and relatives (Başar & Doğan, 2020). Considering the studies on the subject (Başar & Doğan, 2020; Öztop & Toptaş, 2017), it can be stated that the fear of mathematics is an ongoing problem. The teachers participating in the research stated that the widespread belief that mathematics is the only important subject in society creates difficulties in teaching mathematics. Akkaş and Toluk Uçar (2020) stated that the participants defined mathematics under the headings of "*math is difficult, math is boring, scary and math is important*". In Turkish society, Mathematics teaching is always considered to be important. (Yenilmez & Duman, 2008). It can be said that it is common to interpret a student who is unsuccessful in mathematics as an unsuccessful student in general and this creates a significant difficulty in mathematics teaching. In addition, attitude towards mathematics is a very important issue in students' learning. Aside from that, students who have positive attitudes towards mathematics have higher academic success (Yücel & Koç, 2011). However, the teachers stated that the students had a lack of motivation and this reflected negatively on their learning. Cumhuriyet (2018) stated that students' reluctance towards the lesson reduces their motivation and negatively affects their learning. Teachers also expressed that students compete with each other and that successful students in mathematics put pressure on unsuccessful students. Başar and Doğan (2020) detected that students who were exposed to peer bullying increased their fear of mathematics and negatively affected their success. Aside from peer pressure, parents' pressure on students is another problem encountered. There are various studies in the related literature on parents' pressure on students in mathematics lessons (Başar & Doğan, 2020; Dağdelen & Ünal, 2017). Within this context, pressure from parents to students may be expressed as a continuing problem.

Suggestions

The intensity of the achievements in the mathematics program, their suitability for the developmental characteristics of the students, the highlighting of individual differences and the re-evaluation of the gain/time relationship, and the classroom teachers' receiving qualified, in-service training suitable for changing programs can be expressed as an important requirement.

Adopting a learning approach that emphasizes the cooperation of teachers, students, peers and parents in mathematics teaching will facilitate the work of teachers and increase efficiency and success in mathematics teaching.

It should be noted that motivation and psychological well-being play an important role in overcoming many problems in mathematics teaching.

REFERENCES

- Akbaba-Altun, S. (2009). An investigation of teachers', parents', and students' opinions on elementary students' academic failure. *Elementary Education Online*, 8(2), 567-586. https://atif.sobiad.com/index.jsp?modul=makale-goruntule&id=AWXw3rHyHDbCZb_mQxg2 adresinden alındı
- Akkaş, E. N., & Toluk Uçar, Z. (2020). Public Opinions on Mathematics. *Western Anatolia Journal of Educational Sciences*, 11(2), 473-491. <https://dergipark.org.tr/en/download/article-file/1310730> adresinden alındı
- Aktan, O. (2020). Investigation of Primary School Mathematics Curriculum Lesson Acquisitions According to Renewed Bloom Taxonomy. *PAU Journal of Education*, 15(36), 15-36. doi:10.9779/pauefd.523545
- Altun , Y., & Çatal, M. (2021). The Effect on Student Success of Material Supported Teaching Method in Elementary 8th Class Mathematics Teaching. *Journal of the Institute of Science and Technology*, 11(3), 2290-3000. doi: 10.21597/jist.828759
- Arslan, Y., & Şumuer, E. (2020). Classroom Management Problems Encountered by Teachers in Virtual Classes During Covid-19 Pandemic. *Milli Eğitim Dergisi*, 49(1), 201-230. doi:10.37669/milliegitim.791453
- Aslan, F., & Bektaş, O. (2019). Determination of Pre-service Science Teachers' Views Regarding STEM Applications. *International Jurnal of Educational Sciences*, 3(2), 17-50. <https://dergipark.org.tr/tr/download/article-file/914769> adresinden alındı
- Atmaca, T., Yıldırım, E., & Öntaş, T. (2021). Classroom Opening to the Public: Professional Privacy and Surveillance in Distance Education. *International Journal of Society Research*, 18, 5004-5033. doi:10.26466/opus.896351
- Aydoğdu İskenderoğlu, T., & Uzuner, F. G. (2017). Wiews of class teachers regarding the process of equipping primary school students with basic mathematical skills. *Bolu Abant İzzet Baysal University Journal of Faculty of Education*, 17(2), 563-585.
- Ayhan, G. G. (2006). *Problems, Which Teachers of Matmematics are Confronted with in Mathematic-Education in Secondary School*. Unpublished Master Thesis, Graduate School of Social Sciences, Denizli.
- Baş, M. (2017). Comparison of 2009, 2015 Primary School Mathematics Curricula and 2017 Primary School Mathematics Curriculum. *YYU Journal Of Education Faculty*, 14(1), 1219-1258. doi:10.23891/efdyyu.2017.44
- Başar, M., & Doğan, M. C. (2020). Investigation of Students' Fear of Machametics. *Turkish Journal of Educational Studies*, 7(3), 1-26. <https://dergipark.org.tr/en/download/article-file/1084095> adresinden alındı
- Baştürk, S. (2012). Classroom Teachers' Causal Attributions of Student Success or Failure on Mathematics. *Mehmet Akif Ersoy University Journal of Social Sciences Institute*, 4(7), 105-118. <https://dergipark.org.tr/tr/download/article-file/181787> adresinden alındı
- Baykul, Y. (2021). *İlkokulda matematik öğretimi*. Pegem Akademi.
- Bektaş, S., & Küçükturan, A. G. (2020). Cassroom teachers' views on teacher-parent cooperation. *Journal of Human Sciences*, 17(2), 521-534. doi:10.14687/jhs.v17i2.5981

- Bozkurt, A., & Şahin, S. (2013). Challenges in Using Materials in Elementary Mathematics Teaching and Causes of the Challenges. *Mehmet Akif Ersoy University Journal of Education Faculty, 1*(25), 19-37. <https://dergipark.org.tr/en/download/article-file/181318> adresinden alındı
- Brese, F., & Mirazchiyski, P. (2010). Measuring students' family background in large-scale education studies. *In 4th IEA International Research Conference*, (s. 1-3). Gothenburg, Sweden.
- Buran, O., & Kaplan, A. (2021). Problems Faced by Elementary Mathematics Teachers in Their Professional Lives. *Eurasian Journal of Teacher Education, 2*(1), 27-41. <https://dergipark.org.tr/en/download/article-file/1328719> adresinden alındı
- Bütüner, S. Ö., & Güler, M. (2017). Facing the Reality: A Study on TIMSS Mathematics Achievement of Turkey. *Bayburt Eğitim Fakültesi Dergisi, 12*(23), 161-184. <https://dergipark.org.tr/en/download/article-file/317332> adresinden alındı
- Casinillo, L. F. (2019). Factors affecting the failure rate in mathematics: The case of Visayas State University (VSU). *Review of Socio-Economic Research and Development Studies, 3*(1), 1-18.
- Cumhur, Ö. Ü. (2018). The Investigation of The Factors Affecting The Mathematical Success of Students in The Context of Teachers' Opinions and Suggestions. *Journal of Social And Humanities Sciences Research, 5*(26), 2679-2693. https://www.researchgate.net/profile/Fatma-Cumhur/publication/328768481_Ogretmenlerin_Gorus_ve_Onerileri_Baglaminda_Ogrencilerin_Matematiksel_Basarisini_Etkileyen_Faktorlerin_Incelenmesi/links/5be19bc84585150b2ba2c086/Ogretmenlerin-Goerues-ve-Oenerileri- adresinden alındı
- Çalışkan, E. F., & Türkmen, M. R. (2016). Difficulties encountered by classroom teachers in teaching mathematics. *Turkish Journal of Social Research, Special Issue*, 16-27.
- Çavuş, H., & Eskitaşçıoğlu, E. (2016). Mathematics Teachers' Usage Levels of the Computer and Mathematics Programs at the Educational Contexts in Turkey. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, 17*(3), 457-475. <https://dergipark.org.tr/en/download/article-file/1487490> adresinden alındı
- Çaycı, B. (2018). Evaluation of Lesson Duration and Hours of Primary School According to Opinions of Class Teachers. *International Journal of Eurasian Education and Culture*(5), 117-131. <https://dergipark.org.tr/en/download/article-file/599551> adresinden alındı
- Çelik, E., & Kızılaslan-Tunçer, B. (2020). Relationship between the 4th Grade Students' Academic Achievement in Turkish Course and Their Parents' Reading Attitudes. *Journal of Mother Tongue Education, 8*(4), 1094-1114. doi:10.16916/aded.734588
- Çetin, H., Yazar, M. İ., Aydın, S., & Yazıcı, N. (2018). Primary Mathematics Teacher Candidates' Views on the Problems of Turkish Education System and Solution Proposals. *Mediterranean Journal of Educational Research, 12*(25), 117-135. doi:10.29329/mjer.2018.153.7
- Çoban, F. N., & Erdoğan, A. (2013). Difficulties encountered by the teachers in fifth grade applications of mathematics course. *Turkish Journal of Computer and Mathematics Education, 4*(3), 242-258. <https://dergipark.org.tr/tr/download/article-file/201350> adresinden alındı
- Çobanoğlu, R., & Kasapoğlu, K. (2010). The Whys and Hows of Finnish Success at PISA. *Hacettepe University Journal of Education, 39*, 121-131.

- Dağdelen, S., & Ünal, M. (2017). Problems and Suggestions in Mathematics Teaching and Learning Process. *YYU Journal Of Education Faculty*, 14(1), 483-510. doi:10.23891/efdyyu.2017.19
- Dağlı, B., & Han, B. (2017). Educational Problems of Diyarbakır and Their Solutions According to Principal Views. *Dicle University Journal of Ziya Gökalp Faculty of Education*(32), 892-904. doi:10.14582/DUZGEF.1868
- Dalkılıç, M. (2013). Anne babaya da görev düşüyor! T. Bildik içinde, *Başarı Yolunda Rüzgarını Kendin Yarat* (s. 41-45). İzmir: Ege Üniversitesi Basımevi. <https://yayinevi.ege.edu.tr/files/yayinevi/icerik/121.pdf#page=53> adresinden alındı
- Demir, F., & Özdaş, F. (2020). Examining Teachers' Opinions Related to Distance Education in The Covid-19 Process. *Milli Eğitim Dergisi*, 49(1), 273-292. doi:10.37669/milliegitim.775620
- Deveci, Ö., & Aykaç, N. (2020). Examining of Primary School Mathematics Course Curriculum in The Republic of Turkey. *Bolu Abant İzzet Baysal University Journal of Faculty of Education*, 20(3), 1512-1532. doi:10.17240/aibuefd.20xx.xx.xxxxx-xxxxxx
- Dinçer, S., & Yeşilpınar-Uyar, M. (2016). The Problems Related to Classroom Management Encountered in The Process of Using E-Learning Systems and Solution Suggestions. *Kuram ve Uygulamada Eğitim Yönetimi Dergisi*, 21(4), 453-470. doi:10.14527/kuey.2015.017
- Doğan, A. (2020). Investigation of Gains in Primary School Mathematics Curriculum according to Solo Taxonomy. *Journal of the Human and Social Sciences Researches*, 9(3), 2305/2325. doi:10.15869/itobiad.768583
- Durmuş, M. E., & Ergen, Y. (2021). Experience of Primary School Teachers With Inclusion Students in the Context of Teaching Mathematics: A Case Study. *International Journal of Progressive Education*, 17(1), 172-195. doi:10.29329/ijpe.2021.329.12
- Erbil, D. G., Demir, E., & Armağan Erbil, B. (2021). Examination of Primary Education Teachers' Views on Distance Education During the Pandemic. *Turkish Studies - Education*, 16(3), 1473-1493. doi:10.47423/TurkishStudies.49745
- Ergen, H., & Şahin, E. (2019). Problems Confronted by Primary School Teachers in Relation to Education of Syrian Students. *Mustafa Kemal University Journal of Social Sciences Institute*, 16(44), 377-405. <https://dergipark.org.tr/en/download/article-file/837639> adresinden alındı
- Ergen, Y., Özışık Esranur, & Bülbül, Y. (2022). Experiences of Classroom Teachers on Mathematics Teaching in the Process of Distance Education. *Cumhuriyet International Journal of Education*, 11(2), 288-300. doi:doi.org/10.30703/cije.960710
- Ergenç, T. S. (2011). *İlköğretim yedinci sınıf öğrencilerinin matematik dersi bilişsel hazır bulunuşluk düzeyi ile matematik kaygı düzeyleri arasındaki ilişkinin incelenmesi*. Unpublished Master Thesis, Eskişehir Osmangazi Üniversitesi Eğitim Bilimleri Enstitüsü, Eskişehir. <http://openaccess.ogu.edu.tr:8080/xmlui/bitstream/handle/11684/1714/TEZ.pdf?sequence=1&isAllowed=y> adresinden alındı
- Ersoy, Y. (1997). Okullarda matematik eğitimi: Matematikte okur-yazarlık. *Hacettepe University Journal of Education*, 13, 115-120. <http://www.efdergi.hacettepe.edu.tr/yonetim/icerik/makaleler/1189-published.pdf> adresinden alındı
- Fidan, M. (2020). Education in The Uncertainty of Covid 19: Teachers' Views on Emergency Remote Teaching in Primary School. *Uşak Üniversitesi Eğitim Araştırmaları Dergisi*, 6(2), 24-43. doi:10.29065/usakead.736643

- Fidan, Y., & Türnüklü, E. (2010). Examination of 5th Grade Students' Levels of Geometric Thinking in Terms of Some Variables. *Pamukkale University Journal of Education*, 27(27), 185-197. <https://dergipark.org.tr/en/download/article-file/114646> adresinden alındı
- Gezgin, İ., & Bal, A. P. (2021). Problems encountered in the application process of 1st grade mathematics curriculum and solution suggestion. *Electronic Journal of Social Sciences*, 20(77), 17-39.
- Gökkurt Özdemir, B., Bayraktar, R., & Yılmaz, M. (2017). Explanations of Primary and Middle School Mathematics Teachers on Misconceptions. *Trakya Journal of Education*, 7(2), 284-305. doi:10.24315/trkefd.284301
- Gökmen, A., Budak, A., & Ertekin, E. (2016). Elementary teachers' beliefs about using manipulatives and outcome expectations in teaching mathematics. *Kastamonu Education Journal*, 24(3), 1213-1228. <https://dergipark.org.tr/en/download/article-file/210054> adresinden alındı
- Güler Selek, H. K. (2020). Matematik. V. Toptaş, S. Olkun, S. Çekirdekçi, & M. H. Sarı içinde, *İlkokulda matematik öğretimi* (s. 2-15). Ankara: Vizetek Yayıncılık.
- Güngör, F., & Şenel, E. A. (2018). Teachers and Students Views in Problems of the Foreign Primary School Students In Education Process Encountered. *Anadolu Journal of Educational Sciences International*, 8(2), 124-173. doi:10.18039/ajesi.454575
- IEA. (2020). *TIMSS 2019 International Results in Mathematics And Science*. Boston: TIMSS & PIRLS International Study Center, Lynch School of Education and Human Development, Boston College and International Association for the Evaluation of Educational Achievement (IEA).
- İlgar, L., & Gülten, D. Ç. (2013). Matematik konularının günlük yaşamda kullanımının öğrencilere öğretilmesinin gerekliliği ve önemi. *İZÜ Sosyal Bilimler Dergisi*, 2(3), 119-128. <https://openaccess.izu.edu.tr/xmlui/bitstream/handle/20.500.12436/110/Matematik%20Konularının%20Günlük%20Yaşamda%20Kullanımının%20Öğrencilere%20Öğretilmesinin%20Gerekliliği%20Ve%20Önemi?sequence=1&isAllowed=y> adresinden alındı
- İnam, A., & Ünsal, H. (2017). Evaluation of The Effect of Teaching Web-based Application of Maths Subject on 5th Grade Students' Performance and Motivation Through Students Views. *HAYEF Journal of Education*, 14(1), 203-221. <https://dergipark.org.tr/en/download/article-file/324640> adresinden alındı
- İncirci, A., Sirem, Ö., & Sirem, H. (2020). Comparison of 2015 and 2017 Primary School First Grade Curricula. *Education And Society In The 21st Century*, 9(26), 475-498. <https://dergipark.org.tr/en/download/article-file/1570049> adresinden alındı
- Kaçar, H. (2018). Analysis of primary school students' mathematics learning disabilities according to their teachers' observations and experiences.
- Kahramanoğlu, R., & Deniz, T. (2017). An Investigation Of The Relationship Between Middle School Students' Metacognitive Skills, Mathematics Self-Efficacy And Mathematics Achievement. *Inonu University Journal of the Faculty of Education*, 18(3), 189-200. doi:10.17679/inuefd.334285
- Karaca, İ., & Karaca, N. (2021). Teacher-Parent Cooperation by Class Teachers (Example of Sinop Province, Boyabat District). *Medeniyet Eğitim Araştırmaları Dergisi*, 5(1), 27-35. <https://dergipark.org.tr/en/download/article-file/1750381> adresinden alındı

- Keçeli-Kaysılı, B. (2008). Parent Involvement To Improve Academic Achievement. *Ankara University Faculty of Educational Sciences Journal of Special Education*, 9(1), 69-83. doi:10.1501/Ozlegt_0000000115
- Kikas, E., Soodla, P., & Magi, K. (2018). Teacher judgments of student reading and math skills: Associations with child- and classroom-related factors. *Scandinavian Journal of Educational Research*, 62(5), 783-797. doi:10.1080/00313831.2017.1307271
- Kırbaş, Ş., & Atay, A. (2017). The problems of elementary school teachers in class management and suggestion for solution. *International Periodical for the Languages, Literature and History of Turkish or Turkic*, 12(28), 517-538. doi:10.7827/TurkishStudies.12451
- Kolay, Y. (2004). Okul-aile-çevre iş birliğinin eğitim sistemindeki yeri ve önemi. *Milli Eğitim Dergisi*, 164(4). https://dhgm.meb.gov.tr/yayimlar/dergiler/Milli_Egitim_Dergisi/164/kolay.htm adresinden alındı
- Korkmaz, E., Tutak, T., & İlhan, A. (2020). Evaluation of Secondary School Mathematics Textbooks by Mathematics Teachers. *European Journal of Science and Technology*(18), 118-128. doi:10.31590/ejosat.667689
- Korkut, K., & Babaoğlu, E. (2010). Classroom Management Ability of Classroom Teachers'. *Dumlupınar University Journal of Social Sciences*, 26(2), 146-156. <https://www.acarindex.com/dosyalar/makale/acarindex-1423876644.pdf> adresinden alındı
- Kuloğlu, M. E. (2020). Analysis of The Relationship Between Distance Education Students' Academic Success, Achievement Motivation and Boredom. *Academic Platform Journal of Education and Change*, 3(1), 48-60. <https://dergipark.org.tr/en/download/article-file/1096960> adresinden alındı
- Kükey, E., Tutak, A. M., & Tutak, T. (2019). An Investigation of the Effect of the Teaching of Fractions with Visual Material on Primary School 4th Grade Students' Mathematics Achievement and Attitudes. *National Journal of Education Academy*, 3(1), 115-125. doi:10.32960/uead.532949
- McClelland, M. M., Acock, A. C., & Morrison, F. J. (2006). The impact of kindergarten learning-related skills on academic trajectories at the end of elementary school. *Early Childhood Research Quarterly*, 21, 471-490. doi:<https://doi.org/10.1016/j.ecresq.2006.09.003>
- MEB. (2010a). *PISA 2006 projesi ulusal nihai rapor*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2010b). *PISA 2009 ulusal ön rapor*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2015). *PISA 2012 araştırması ulusal nihai rapor*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2016a). *PISA 2015 ulusal rapor*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2016b). *TIMSS 2015 ulusal matematik ve fen ön raporu*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2018). *Matematik dersi öğretim programı (İlkokul ve ortaokul 1, 2, 3, 4, 5, 6, 7 ve 8. sınıflar)*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2019). *PISA 2018 Türkiye ön raporu*. Ankara: Milli Eğitim Bakanlığı.
- MEB. (2020). *TIMSS 2019 Türkiye ön raporu*. Ankara: Milli Eğitim Bakanlığı.

- Metin, T. (2017). *İlkokul matematik dersinde yapılandırmacı yaklaşımla eğitim görmüş ortaokul 5. sınıf öğrencilerinin hazırbulunmuşluk düzeylerinin incelenmesi*. Yayımlanmamış Yüksek Lisans Tezi, Akdeniz Üniversitesi Eğitim Bilimleri Enstitüsü, Antalya. <http://dspace.akdeniz.edu.tr/bitstream/handle/123456789/3140/T04303.pdf?sequence=1&isAllowed=y> adresinden alındı
- Milli Eğitim Bakanlığı. (2013). *Okul Öncesi Eğitim Programı*. T.C. Milli Eğitim Bakanlığı Öğretim Programlarını İzleme ve Değerlendirme Sistemi: <http://mufredat.meb.gov.tr/ProgramDetay.aspx?PID=652> adresinden alındı
- Morpa Kampüs. (2021). *Morpa Kampüs*. Morpa Kampüs: <https://www.morpakampus.com/anasayfa> adresinden alındı
- MYK. (2015). *Türkiye yeterlilikler çerçevesi*. Ankara: Mesleki Yeterlilik Kurumu. <https://www.myk.gov.tr/index.php/tr/turkiye-yeterlilikler-cercevesi> adresinden alındı
- OECD. (2019). *PISA 2018 results (Volume I): What students know and can do*. Paris: OECD Publishing.
- Okulistik. (2021). *Okulistik: Eğitim ve Öğrenme Platformu*. Okulistik: <https://www.okulistik.com/anasayfa/index.html> adresinden alındı
- Olkun, S., & Toluk Uçar, Z. (2020). *İlköğretimde etkinlik temelli matematik öğretimi*. Ankara: Vizitek Yayıncılık.
- Özalkan, G. Ş. (2021). Measurement and Evaluation in Distance Education: Rethinking Social Sciences Education During the Pandemic. *International Journal of Economics Administrative and Social Sciences*, 4, 18-26. <http://ijeass.gedik.edu.tr/en/download/article-file/1547485> adresinden alındı
- Özdoğan, A. Ç., & Berkant, H. G. (2020). The Examination of Stakeholders' Opinions on Distance Education During The Covid-19 Epidemic. *Milli Eğitim Dergisi*, 49(1), 13-43. doi:10.37669/milliegitim.788118
- Özdoğru, M. (2021). Teachers' Views Regarding the Problems Experienced in Teacher-Parent Relationship in Primary Schools. *International Journal of Primary Education Studies*, 2(1), 68-76. <https://dergipark.org.tr/en/download/article-file/1500886> adresinden alındı
- Özgeldi, M., & Osmanoğlu, A. (2017). Connecting Mathematics to Real Life: An Investigation on How Prospective Secondary Mathematics Teachers Build Real Life Connections. *Turkish Journal of Computer and Mathematics Education*, 8(3), 438-458. doi:10.16949/turcomat.298081
- Öztop, F., & Toptaş, V. (2017). Fear of the 4th grade primary school students towards mathematics course and underlying causes. *International Journal Of Education Technology and Scientific Researches*(3), 162-173. <https://dergipark.org.tr/en/download/article-file/341429> adresinden alındı
- Paydar, S., & Doğan, A. (2021). An action research on teaching natural numbers to the first grade primary school student with low readiness. *Journal of Qualitative Research in Education*, 27, 26-51. doi:10.14689/enad.27.3
- Reusser, K. (2000). Success and failure in school mathematics: Effects of instruction and school environment. *European Child & Adolescent Psychiatry*, 9(2), 17-26.

- Sarı, M. H., & Akbaba Altun, S. (2015). A qualitative research on classroom teachers' technology use in mathematics teaching. *International Journal of Eurasia Social Sciences*, 6(19), 24-49.
- Sarıer, Y. (2020). Turkey's performance in TIMSS applications and variables predicting academic achievement. *Journal of Primary Education*, 2(2), 6-27. <https://dergipark.org.tr/en/download/article-file/1127364> adresinden alındı
- Saygi, H. (2020). Problems encountered by classroom teachers in the covid-19 pandemic distance education process. *Journal of Open Education Applications and Research*, 7(2), 109-129. doi:<https://doi.org/10.51948/auad.841632>
- Stylianides, A. J., & Stylianides, G. J. (2008). Studying the classroom implementation of tasks: High-level mathematical tasks embedded in 'real-life' contexts. *Teaching and Teacher Education*, 859-875. doi:<https://doi.org/10.1016/j.tate.2007.11.015>
- Şenaras, B., & Çetin, Ş. (2018). Parental pressure on principals and teachers: a qualitative analysis. *Milli Eğitim Dergisi*, 47(220), 157-176. <https://dergipark.org.tr/en/download/article-file/584612> adresinden alındı
- Tahiroğlu, M., & Çakır, S. (2014). Development of Mathematics Motivation Scale Related to Elementary Education 4th Grade. *Ahi Evran University Journal of Kirsehir Education Faculty*, 15(3), 29-48. <https://dergipark.org.tr/en/download/article-file/1489364> adresinden alındı
- Toptaş, V., & Karaca, T. (2019). Primary school teachers' opinions about mathematics courses within remedial program in primary schools (IYEP). *Milli Eğitim*, 48(1), 417-431. <https://dergipark.org.tr/en/download/article-file/929038> adresinden alındı
- Tösten, R., Han, B., & Ergül, F. (2016). Management Problems of Public Schools in Diyarbakır. *EKEV Academy Journal*(65), 433-450. http://www.ekevakademi.org/Makaleler/504071716_21%20Rasim%20TOSTEN-Bunyamin%20HAN-H.%20Fazl%20c4%b1%20ERGUL.pdf adresinden alındı
- Turan, A. (2021). Primary teachers' views on the 4th grade mathematics curriculum (2018): a mixed-method study. *Milli Eğitim*, 50(229), 463-491. <https://dergipark.org.tr/en/download/article-file/885863> adresinden alındı
- Turan, S., & Garan, Ö. (2008). Issues that primary school teachers face in mathematic instruction in rural communities. *Milli Eğitim Dergisi*(177), 116-128.
- Tutak, T., & Güder, Y. (2014). Definition, Content and Importance of Mathematical Modelling. *Turkish Journal of Educational Studies*, 1(1), 173-190.
- Unutkan, Ö. P. (2007). A study of pre-school children's school readiness related to skills of mathematics. *Hacettepe University Journal of Education*, 32(32), 243-254. <https://dergipark.org.tr/en/download/article-file/87621> adresinden alındı
- Usta, A., & İpek, A. S. (2019). Investigation of problems multiplication and division operations with natural numbers for primary school in turkish mathematics textbooks. *Milli Eğitim*, 48(1), 241-265. <https://dergipark.org.tr/en/download/article-file/926687> adresinden alındı
- Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2019). *Elementary and Middle School Mathematics: Teaching Developmentally* (7. Baskı b.). (S. Durmuş, Çev.) Ankara: Nobel Akademi.

- Vilenius-Tuohimaa, P. M., Aunola, K., & Nurmi, J. E. (2008). The association between mathematical word problems and reading comprehension. *Educational Psychology*, 28(4), 409-426. doi:<https://doi.org/10.1080/01443410701708228>
- Westwood Taylor , M. (2013). Replacing the ‘teacher-proof’ curriculum with the ‘curriculum-proof’ teacher: Toward more effective interactions with mathematics textbooks. *Journal of Curriculum Studies*, 45(3), 295-321. doi:<https://doi.org/10.1080/00220272.2012.710253>
- Yazlık, D. Ö. (2018). The Views of Teachers About Use of Concrete Teaching Materials in Mathematics Teaching. *International Journal of Society Researches*, 8(15), 775-805. doi:10.26466/opus.417200
- Yenilmez , K., & Kakmacı, Ö. (2008). The level of the readiness of seventh grade students in mathematics. *Kastamonu Education Journal*, 16(2), 529-542. <https://dergipark.org.tr/en/download/article-file/819025> adresinden alındı
- Yenilmez, K. (2007). The primary school students' level of the ability of establishing relation the mathematical expression and symbols with daily life. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 0(4), 89-98. <https://app.trdizin.gov.tr/publication/paper/detail/TnpBek9EYZM=> adresinden alındı
- Yenilmez, K., & Duman , A. (2008). Students' opinions about the factors which affect the mathematics success in elementary education. *MANAS Journal of Social Studies*, 10(19), 251-268. <https://dergipark.org.tr/en/download/article-file/843622> adresinden alındı
- Yenilmez, K., & Duman, A. (2008). İlköğretimde matematik başarısını etkileyen faktörlere ilişkin öğrenci görüşleri. *Sosyal Bilimler Dergisi*, 19, 251-268.
- Yıldırım, A., & Şimşek, H. (2008). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin.
- Yıldız-Yılmaz, N., & Demir, E. (2021). Evaluation of Classroom Teachers’ Problems Related to Foreign Students and Suggestions for Solutions. *KALEM International Journal of Education and Human Sciences*, 11(2), 535-556. doi:10.23863/kalem.2021.197
- Yılmaz, Ö., & Arslan, M. (2019). Evaluation of the Weekly Course Schedule of Primary Schools According to the Views of the Primary School Teachers. *Journal of Contemporary Administrative Science*, 6(1), 18-35. <https://dergipark.org.tr/en/download/article-file/704480> adresinden alındı
- YouTube. (2021). *YouTube*. YouTube: <https://www.youtube.com/> adresinden alındı
- Yücel, Z., & Koç, M. (2011). The Relationship between the Prediction Level of Elementary School Students’ Math Achievement by their Math Attitudes and Gender. *Elementary Education Online*, 10(1), 133-143. <https://eds.a.ebscohost.com/eds/pdfviewer/pdfviewer?vid=0&sid=28a98269-d73f-4714-9fb2-bb31ae25ae5b%40sessionmgr4006> adresinden alındı