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Baş Editörden

Eğitim Programları ve Öğretim alanında gelişen, dönüşen ve dönüştüren bir dergi olma idealine sahip olan 'IJOCIS' TR Dizin ve diğer bazı indekslerce taranmaktaydı. Bunlara ek olarak, yaptığımız başvurular üzerine Türkiye'de Eğitim Bilimleri Temel Alanı için doçentlik alan indekslerinden sayılan 'Education Resources Information Center' (ERIC) tarafından 2018 yılından itibaren taranmak üzere davet aldık. Pek yakında güncel listede yerimizi alacağımız bildirilmiştir. Bu gelişmeyle birlikte dergimize yüklenen makale sayısında artış olduğunu da memnuniyetle belirtmek isterim.

2021 yılının ikinci sayısını yayımladığımız "Uluslararası Eğitim Programları ve Öğretim Çalışmaları Dergisi"nin 11. Cilt 2. sayısında yayımlanan makalelere bakıldığında 'hizmet içi eğitim programı geliştirme, matematik kaygı incelemesi, kapsayıcı eğitimde yaşanan sorunlar, pandemi sürecinde yükseköğretim öğrencileri, pandemi sürecinde öğretmen rolleri'nin incelendiği nicel-nitel alan araştırmalarının yanında; 'tasarıma dayalı anlama modeli ve ders imecesi'ne yönelik iki meta sentez çalışması ve bir de 'eğitim programı kuramları' üzerine bir derleme çalışmasına da yer verildiği görülmektedir.

Bu sayıya katkıda bulunan tüm yazarlarımızı çalışmalarından dolayı tebrik ediyor ve başarılarının devamını diliyorum. Ayrıca başta Eğitim Programları ve Öğretim alanından hakemlik tekliflerimizi geri çevirmeyip, makaleleri titizlikle inceleyen alanlarında uzman tüm akademisyenlerimize ve editörler kuruluna bu sayının hazırlanması için yapmış oldukları özverili katkılarından dolayı teşekkür ederim.

IJOCIS dergimizin daha nitelikli ve tanınır veri tabanlarında dizinlenmesi için her zamankinden daha fazla titizlik, ciddiyet ve tutarlılık içinde çalışmaya devam ediyoruz. Eğitim Programları ve Öğretim alanında çalışan ülkemizdeki ve dünyadaki tüm eğitimcileri dergimize bilimsel niteliği yüksek ve özgün çalışmalar göndermeleri için çağrıda bulunuyoruz.

Esenlik dileklerimle.

Prof. Dr. Kerim GÜNDOĞDU

From the Editor-in-Chief

'IJOCIS', which has the ideal of being a developing and transforming journal within the field of Curriculum and Instruction, has been indexed by TR Dizin and different education indexes. In addition, upon our applications, we were invited to be indexed by the 'Education Resources Information Center' (ERIC), which has been considered as one of the associate professorship promotion indexes for Educational Sciences in Turkey, since 2018. Soon we will take our place on the updated list. With this progress, there has been an increase in the number of articles uploaded to our journal.

In the 11th volume of the 2nd issue of the "International Journal of Curriculum and Instructional Studies", which we published in 2021, quantitative and qualitative field studies on ‘in-service training program development, mathematics anxiety analysis, problems in inclusive education, higher education students during the pandemic process, examining the roles of teachers in the pandemic process’ as well as two meta-synthesis studies on ‘design-based understanding model and lesson study’ and a review study on 'curriculum theories’ have taken place.

We congratulate all the authors who contributed to this issue for their work and wish them continued success. In addition, I would like to thank all our academicians who are experts in their fields, who do not reject our review assignments from the field of Curriculum and Instruction, and the editorial board, who meticulously examine the articles, for their devoted contributions to the publication of our journal.

We continue to work with more diligence, seriousness and consistency than ever before so that our IJOCIS journal is indexed in more qualified and recognizable databases. We invite all educators working in the field of Curriculum and Instruction in our country and around the world to submit original and scientific studies to our journal.

With my best regards.

Prof. Dr. Kerim GÜNDOĞDU

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In-Service Teacher Training Program Development Study to Prevent Peer Bullying[1]

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Abstract

Peer bullying is a problem that is difficult to notice and is increasingly affecting the health of society. Responding to peer bullying requires the determination and intense effort of school administrators, teachers, parents, and other school staff. Teachers who feel more competent about bullying are more likely to intervene in situations of bullying and victimization situations. However, many teachers have difficulty diagnosing bullying, do not know how to cope with bullying, or have trouble applying coping methods. This study aims to introduce the in-service teacher training program to prevent peer bullying. This program was developed using a problem-centered education program design. The content was determined with a thematic approach. The values emphasized by this program, the tools and methods it proposes, and the outcomes of the program reflect the progressive and existentialist perspectives. As a result of the evaluation of the program, it was seen that the in-service training program effectively improved teachers' competencies by increasing their awareness of peer bullying and combating bullying. It is recommended that future studies should be conducted in broad scope, including developing the competencies of teachers in dealing with cyberbullying that increased during online education.

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Introduction

Today, school violence, especially peer bullying, which is frequently emphasized to prevent and reduce, continues to be a global problem. Large-scale international studies conducted in recent years (Organisation for Economic Co-operation and Development [OECD], 2017; United Nations International Children's Emergency Found [UNICEF], 2018; Yıldırım, Özgürlük, Parlak, Gönen & Polat,

[1] This article is produced from the project numbered 'EF150219B08: Is It Possible to Cope With Peer Bullying? Development of a teacher program to prevent bullying'. Çankırı Karatekin University Scientific Research Projects Commission.

2016) reveals that bullying, especially among primary and secondary school students in Turkey, is an undeniably widespread problem. Bullying is the deliberate and regular use of force, coercion, psychological or physical harm, or threatening by an individual to behave aggressively towards, dominate or suppress another individual they consider less powerful than themselves.

Exposure to bullying negatively affects the psychological, social, spiritual, and emotional state of the individual in childhood, youth, and even adulthood for a long time. Studies in both education and psychology show that bullying causes many health problems and mental problems in victims, bullies, and bystanders (Alikaşifoğlu & Ercan, 2007; Copeland, Wolke, Angold & Costello, 2013; deLara 2016; 2019; DeVooght et al., 2015; Espelage, Hong & Mebane, 2016; Lehti et al., 2011; Lereya, Copeland, Costello & Wolke, 2015; Ttofi, Farrington, Lösel & Loeber, 2011; UNICEF, 2018). Regardless of role, being involved in a bullying situation can increase the risk of developing psychotic experiences during adolescence (Wolke, Lereya, Fisher, Lewis & Zammit, 2014). Both short-term and long-term adverse effects of bullying on the health and behavior of the three actors-bully, victim and bystander - involved in the bullying incident are summarized below.

The Effects of Bullying on Victims, Bullies, and Bystanders

Victims of bullying often experience low academic achievement, higher rates of depression, decreased self-esteem, and difficulties with lifelong interpersonal relationships. Victims may also show disappointment, anger, and aggressive behavior. In addition, the physical health of children exposed to bullying is adversely affected (Bogart et al., 2014). Baldwin, Arseneault and Danese (2015) state that children who experience continuing bullying experience more obesity problems. Victims may also have sleep disorders, gastrointestinal problems, headaches, palpitations, and chronic pains (Chen, Chen, Zhu, Chan & Ip, 2018; Ford, King, Priest & Kavanagh, 2017; Gini & Pozzoli, 2013; Hunter, Durkin, Boyle, Booth & Rasmussen, 2014; van Geel, Vedder &Tanilon, 2014).

Children who bully are at higher risk of developing psychosomatic disturbances (e.g. aches and pains, insomnia, indigestion) than peers who do not bully (Gini & Pozzoli, 2009). Bullies are more prone to commit suicide than individuals who have never been involved in bullying, and children displaying bullying behavior have a greater risk of developing depression (Roland, 2002). According to psychopathology, which examines the causes, development, course, classification and treatment of mental disorders, bullying is one of the lowest level disorders. Bullies have a purpose (e.g. to hurt someone, to become more popular, to achieve and/or maintain hegemony) and for this purpose they plan how to attack their victims, that is, they use aggression instrumentally (Rodkin, Espelage & Hanish, 2015; Vaillancourt, Hymel & McDougall, 2003).

Studies show that, as well as victims and bullies, *bystanders/witnesses/viewers* may also be at psychological risk. Bystanders' physical health, mental health, and even academic success are affected by the bullying incident (Polanin, Espelage & Pigott, 2012). Witnessing bullying causes many emotions and stress that can harm the bystander, such as anxiety, fear of uncertainty, and guilt (Sprigg, Niven, Dawson, Farley & Armitage, 2019). Students who witness bullying avoid intervening and helping out because they may become victims, and the bully might retaliate (Musher-Eizenman et al., 2004; Unnever & Cornell, 2003).

The problems caused by the exposure of bullying events are not limited to school life, on the contrary, the negative effects of bullying last throughout the lives of individuals and negatively affect public health (Copeland et al., 2013; Wolke et al., 2015). The fact that bullying has negative consequences, up to the suicide of the individual, makes bullying a syndrome in schools (Yaman, Eroğlu & Peker, 2011; Yelboğa & Koçak, 2019). Since peer bullying is a complex and increasing problem, the assumption that bullying is a harmless and insignificant situation arising from the nature of childhood and ignoring its adverse effects can cause irreversible social problems. Training programs are developed and implemented in many countries to prevent, reduce and combat bullying.

School-Based Anti-Bullying Programs

The international literature shows that school-based anti-bullying programs effectively reduce both bullying and victimization of bullying (Gaffney, Ttofi & Farrington, 2019; Salmivalli, Poskiparta, Ahtola & Haataja, 2013; Thompson & Smith, 2014). Anti-bullying programs are widely implemented in public schools in Australia and the United States in many European countries, especially in Scandinavian countries (Finland, Norway), Greece and Italy. Norwegian researcher Olweus was the person who carried out the first systematic study of the bullying intervention program in the 1980s. The Norwegian Government supports this program aims to decrease bullying by rearrangement school classes and reward positive behavior. The KiVa program used in Finland, on the other hand, uses virtual learning methods and assigns students who defend victims and stand up to bullies as high-status peers (Thompson & Smith, 2014).

Violence and peer bullying in schools has become a national problem in Turkey.The Turkish Ministry of National Education (MoNE/Milli Eğitim Bakanlığı [MEB]) issued circulars in 1995, 2003, 2005 and 2006 to prevent violence in schools. In line with the 2006 circular, a "Committee for the Prevention of Violence" was established in each school in order to develop action plans for the prevention of violence (MEB, 2014). When the literature examined, it has been recognized that the number of studies on combating bullying in Turkey is limited, and primarily experimental studies are based on small samples and there are initiatives at a local level (Dölek, 2002; Karataş, 2011; Kartal & Bilgin, 2007). In 2013, Ankara-Çankaya Counseling Research Center attempted to initiate a national anti-bullying program. However, this program could not be successfully implemented, as comprehensive training for teachers and guidance counselors could not be provided and the content of the program could not be determined precisely (Ertunç, Yogev & Kılıç, 2013). Although peer bullying in schools is seen as a fundamental problem in the Turkish Education System, action plans could not be implemented at the national level, and teachers were not provided with adequate support in this regard. VSC bullying prevention is an evidence-based prevention program that promises success, but it is suitable for secondary school level (Doğan et al., 2017). The increase in violence in schools makes these institutions, not places where safe education can be obtained (MEB, 2015).

Preventing or reducing peer bullying requires the commitment and intensive effort of school administrators, teachers, parents, and other school staff. Bullying will continue when any bullying prevention/response program is implemented without adult leadership. Bullying cannot be addressed as an individual's self-regulation, so adult involvement and emphasis are required. Adults are the cornerstone of combating bullying. They are effective both in developing the bullying prevention program, implementing the program, and reinforcing students' positive attitudes towards bullying (Padgett & Notar, 2013).

On the other hand, when adults view bullying as part of development, normalize and ignore it, the likelihood of bullying increases. The lack of awareness of adults about peer bullying and their incomplete or misconceptions about the nature and extent of bullying makes it difficult to identify and prevent cases of bullying. According to (Brendtro, 2001) most teachers (96%) ignore subtle forms of aggression (such as verbal bullying) even if they notice the behavior, hoping or thinking that students will solve the problem on their own. If adults at school underestimate, ignore, or tolerate bullying, it causes victims to adopt the unspoken message that adults underestimate their worth and bring that message to maturity (Clarke & Kiselica, 1997).

In other words, bullying incidents result more negatively when parents ignore the problem and tell children to stop spying or solve the problem on their own (Davis & Nixon, 2011). Similarly, Yoon and Bauman (2014) state that teachers have an important responsibility in the management of classroom bullying. Teachers must not underestimate the seriousness of reported or observed bullying to identify, reduce and solve the verbal and nonverbal bullying (Rose, Monda-Amaya & Espelage, 2011).

However, teachers have difficulties identifying/diagnosing bullying and do not know how to cope with bullying, and even if they do, they have problems applying these methods (Mishna, Scarcello,

Pepler, & Wiener, 2005). The fact that bullies are attractive members of the peer group or rank high in valued qualities and competencies such as being good athletes (Farmer, Estell, Bishop, O'Neal & Cairns, 2003; Kaloyirou & Lindsay, 2008; Rigby & Slee, 2008; Vaillancourt et al., 2003) makes it difficult for teachers to identify/ diagnose bullies. Teachers do not know the methods of coping with bullying, and even if they do, they have problems applying these methods. Since some bullies are loved/famous students at school or classroom, teachers sometimes fail to recognize their bullying behaviors or ignore the behaviors of these students (Hammel, 2008). In addition, although teachers can easily recognize physical and direct bullying because it is visible, they have trouble recognizing indirect bullying (Dedousis-Wallace & Shute, 2009). The fact that bystanders as well as the bullies and the victims in the bullying cases make these events even more complicated. Therefore, teachers feel perplexed, uncertain of what to do, and behave inefficiently (Gerber & Solari, 2005).

The literature shows that teachers intervene more when they believe they can reduce bullying (Duong & Bradshaw, 2013; Williford & Depaolis, 2016; Yoon & Bauman, 2014). It is vital to involve teachers in programs or studies that try to comprehend and stop bullying (Bauman, Rigby & Hoppa, 2008; Kochenderfer-Ladd & Pelletier, 2008) because when it comes to lack of education, knowledge, or competencies, teachers are unsuccessful in struggling with bullying (Fekkes, Pijpers & Verloove-Vanhorick, 2005).

Han and Weiss (2005) state that teachers' self-efficacy, the level and type of education they receive, and their perceived efficacy beliefs affect their adoption and use of intervention methods aimed at behavioral and emotional change of students. Teachers become more effective and confident in dealing with victimization issues, especially if they deal with bullying issues and actively participate in prevention projects. In this respect, the study aims to introduce the bullying prevention in-service teacher training program, developed to support teachers and school staff who want to uncover the frequency, type, and causes of bullying in schools, seeking ways to create a peaceful classroom and school atmosphere to enhance a safer learning and teaching process.

In-Service Teacher Training Program to Prevent Peer Bullying

Teachers should consider themselves competent to determine the frequency and types of peer bullying events in schools and intervene in peer bullying. When teachers feel knowledgable and competent about bullying, they are more likely to intervene in situations of bullying and victimization situations. Teachers can develop their competencies through unique training opportunities that focus on identifying the bullying situation, highlighting the dynamics of the problem, and offering the best intervention strategies (de Luca, Nocentini & Menesini, 2019). Taneri, Özbek, and Akduman (2020) developed an in-service teacher training program within the scope of the Scientific Research Project to improve teachers' competencies in combating peer bullying. The program development process is described in detail below:

Method

Development Process of In-service Teacher Training Program to Prevent Peer Bullying

The development process of In-service Teacher Training Program to Prevent Peer Bullying involves the selection of objectives (outcomes), content, learning, and teaching experiences (e.g., teaching methods, techniques, and materials), as well as organizing and evaluating these experiences to reveal how effective they are in achieving the set goals. As this program aims to provide teachers with knowledge and experience on dealing with and solving peer bullying, care has been taken to make it a flexible and inclusive program that emphasizes social justice, democratic lifestyle, equality, and social peace, and is open to change.

Problem-centered curriculum design was used in the development of the in-service teacher training program. Learning, which is an integrated, active, and constructive process, is not independent of social and contextual factors (Vasuthavan & Kunaratnam, 2017). Problem-centered curriculum design

is a design that "…*empowers learners to research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem*" (Savery, 2006, p.12).

While determining the components of the in-service teacher training curriculum for the prevention of peer bullying, the social processes and social relations that have the potential to affect peer bullying were examined by making use of the findings of both sociology, psychology and educational sciences. In this context, theories about child development, violence and peer bullying from sociological perspective, school climate and exposure to bullying are discussed. In addition, current research on the relationship between staying together, developing a peaceful, safe and meaningful society, inclusive education, democratic education, effective learning-teaching principles, behavior and classroom management, conflict resolution methods, and effective bullying intervention programs is reviewed.

This training program aims to help teachers develop skills that can be transferred to the natural classroom environment, take the initiative to prevent bullying, and become a part of the solution. In this respect, while designing the learning and teaching component of the curriculum, the training needs of teachers were taken into account. Teachers need a new political and pedagogical language to address the problems facing schools. In this respect, this training program has been designed with the critical perspective defined by Giroux (2004). In other words, this training program aims to provide teachers with the skills, knowledge, and competencies they need to create a peaceful environment at school, recognize exclusionary and discriminatory behavior patterns, and fight bullying in school and the classroom, and act accordingly.

In-Service Teacher Training Program to Prevent Peer Bullying is expected to help teachers accept their responsibilities in reducing and preventing bullying and how the methods used in responding to cases of bullying affect the course of bullying. The curriculum development process took about three years. It includes one year of preparation and literature review, one year of needs analysis, development and determination of teaching materials, and one year of implementation and evaluation of the program's impact. The steps of the development process of the In-Service Teacher Training Program to Prevent Peer Bullying shown in Figure 1 are explained in detail below:

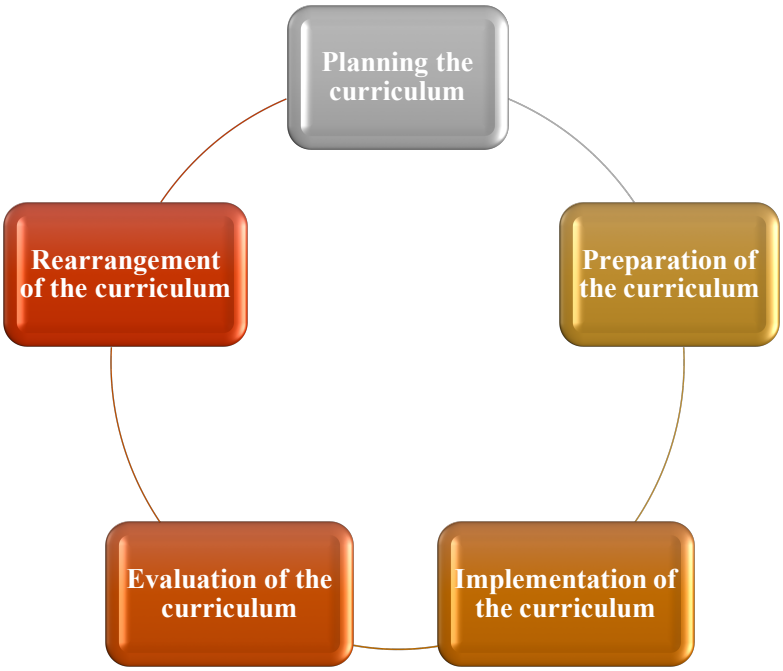


Figure 1. *Curriculum development process*

Stage I: Planning the Curriculum

This study started with examining the literature on the increase in bullying events in schools in Turkey. The literature on the increase in peer bullying incidents and intervention studies in Turkey and the world was reviewed, and it was seen that the role of adults, especially teachers, was emphasized in the success of intervention programs. In order to determine the need for a teacher training program for the prevention of peer bullying, participants of this study were determined by the convenience sampling method. In convenience sampling, members of the universe are sampled because they are "convenient" data sources for researchers. In other saying, convenience sampling is a non-random or nonprobability sampling in which the members of the population planned to be reached are selected as suitable for the study if they meet predetermined criteria such as convenience at a specific place, a particular time, easy accessibility, geographical closeness, or eagerness to volunteer (Lavrakas, 2008). In this study, schools close to the institution where the second researcher works were selected. In the telephone interview with Çankırı Provincial Directorate of National Education, three primary schools with the highest number of students and guidance teachers in the city center were determined. So as to increase the generalizability of the research findings, the only private school in the province was included in the study. The study group of this research consists of 115 participants working in three public primary schools and a private school in the Çankırı province. The participants consist of 99 classroom teachers, 14 school counselors, and two school administrators. Most of the participants (89%) work in public schools.

A work schedule was developed by establishing a program development team for preventing peer bullying. The planning stage is shown in Figure 2.

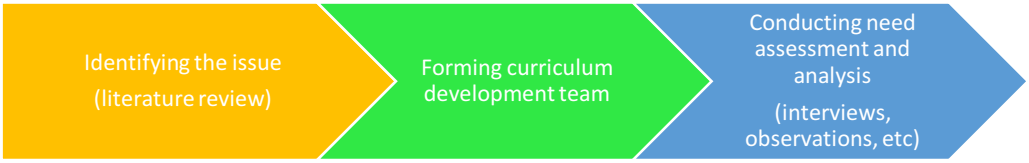


Figure 2. *The Planning Stage of Curriculum development process*

In order to establish the objectives of the in-service teacher training program realistically, a needs analysis was conducted through interviews with teachers, school administrators, and school counselors, unstructured observations, document analysis, informal discussions, and conversations. In addition, the current situation regarding the handling of the issue of peer bullying has been examined. First, the national and international literature on the definition, types, causes, and consequences of peer bullying was reviewed (Arslan, 2015; Çankaya, 2011; Dölek, 2002; Karataş, 2011; Kartal & Bilgin, 2007; Pişkin, 2010; Ünalmış & Şahin, 2012). Then, peer bullying intervention programs were examined, and the characteristics of successful programs were reviewed. There are many different bullying intervention methods in the literature, but according to Taneri, Özbek and Şahin (2019), the most commonly used bullying methods are school-based, peer-supported, and group intervention methods. As a result of the literature review, it was seen that the programs in the fight against bullying, which focused on a single actor of bullying, were unsuccessful.

As a result of the literature review, it has been revealed that the characteristics of successful intervention programs are as follows: having a school-wide approach, evaluating bullying frequently (e.g., administering an anonymous bullying survey to students), involve staff and parents in the new bullying program, creating a team for coordination, providing leadership for implementing a bullying program, adopting an anti-bullying policy at school, establishing and enforcing school rules, and having supervisors where bullying occurs most often, conducting follow-up meetings to determine the effectiveness of the implementation of the bullying prevention program, and integrating the bullying program into the curriculum (Bossenmeyer, 2014; Olweus, 1993; Wang, Berry & Swearer, 2013).

Stage II: Preparation of the Curriculum

The determination of the program's objectives (outcomes), content, teaching methods, techniques and materials, and evaluation methods was realized at this stage. Philosophy is the beginning of the decision-making process regarding the curriculum and is the basis for all subsequent decisions regarding the curriculum (Goodlad, 1979). In this respect, the values emphasized, the tools and methods proposed, and the outcomes of the curriculum were determined to reflect the progressive and existential perspective. In this curriculum developed with a thematic approach, emphasis is placed on the importance of change, individual differences, learning by doing-living and lifelong learning, critical thinking, group work, collaborative learning, development of social skills, adoption of democratic values, and the emancipation of individuals. However, the freedom mentioned here focuses not only on the free choices of the individual but also on being an individual who feels competent and autonomous in the face of social problems. Since the target audience of the training program is teachers, care has been taken to ensure that it is a curriculum that can respond to individual differences, needs, attitudes, values, beliefs, and interests of the teachers are connected with real-life experiences. They are consistent and compatible with working conditions.

In line with the needs determined in the planning phase of the curriculum, it was foreseen which issues should be included in the in-service training program. In the In-Service Training Program, which is planned to last for three days, 26 outcomes are planned to be achieved in 6 lesson hours per day (18 lesson hours in total) (Table 1).

The content of the training program includes (1) raising awareness about peer bullying, (2) types of peer bullying, (3) national and international statistics on peer bullying, (4) definition of peer bullying, (5) well-known mistakes about peer bullying, (6) introduction of bibliotherapy as an intervention method with peer bullying, (7) sample bibliotherapy applications, (8) integration of bibliotherapy method with the official curricula of the Ministry of Education, (9) introduction and design of teaching materials to be used in the classroom to recognize and prevent peer bullying, and (10) introducing the primary school education program to prevent peer bullying.

In the literature examined while preparing the learning-teaching activities of the curriculum, it was seen that the widely used approaches in adult education programs are self-directed learning (Tough, 1971), andragogy (Knowles, 1988), perspective transformation theory (Mezirow, 1978); and experiential learning (Candy, 1980). Considering that each of the teachers participating in the training program has different learning styles, the focus has been on providing various ways to ensure that all teachers achieve the program's goals. The curriculum included creative drama and bibliotherapy activities that allow participants to choose activities according to their learning styles and preferences, share and provide mutual assistance, require active participation such as creating and producing ideas and behaviors and provide feedback. Bibliotherapy and creative drama are effective methods in combating peer bullying (Taneri, Özbek, Şahin, & Akduman, 2019). In this respect, besides traditional teaching methods like a lecture, question, and answer), creative drama techniques such as warm-up games, still images, creative writing, animation, painting, and group work were frequently included in this curriculum. Although the most valuable teaching material used in the activities is the imagination and creativity of the participants, background cardboard, crayons, different sized papers, scissors, videos on peer bullying, picture books, and PowerPoint presentations were also used.

Table 1. *Outcomes of In-service Teacher Training Program for Preventing Peer Bullying*

Day	*Hours*	*Outcomes*
1	Six	1. Explains the basic concepts of peer bullying. 2. Identifies three essential elements (willfulness, power imbalance, and persistence) that determine a behavior as bullying. 3. Defines the actors involved in peer bullying (bully, victim, audience). 4. Defines the types of peer bullying. 5. Realizes the frequency of peer bullying. 6. Gives examples from his own life about peer bullying. 7. Discusses the well-known mistakes of peer bullying. 8. Explains the difference between peer bullying and violence. 9. Realizes the areas where peer bullying occurs most frequently in school/classroom. 10. Determines the precautions to be taken in the areas where peer bullying occurs most frequently in the school/classroom.
2	Six	1. Discusses the reasons for peer bullying. 2. Realizes the behavioral, psychological, and physiological effects of peer bullying. 3. Realizes the victimization of students who are exposed to peer bullying and watching. 4. Explains the ways of compensating students who are exposed to peer bullying and watching. 5. Discusses the features of peer bullying prevention programs. 6. Defines the stages of the bibliotherapy method. 7. Realizes how to use the bibliotherapy method to prevent peer bullying in the classroom. 8. Discusses the ways of integrating the bibliotherapy method with the official curricula of the Ministry of Education.
3	Six	1. Defines the teacher's responsibilities in dealing with peer bullying. 2. Plans activities that will develop conscious awareness of peer bullying in students. 3. Prepare activities for selected storybooks using the bibliotherapy method to prevent peer bullying. 4. Designs materials to increase awareness of peer bullying (various poetry, poster, slogan, billboard). 5. Compares the physical and emotional characteristics of the actors involved in peer bullying. 6. Examines the Primary School Peer Bullying Prevention Curriculum. * 7. Examines the storybooks recommended to be used in the Primary School Peer Bullying Prevention Curriculum.* 8. Willing to implement the Primary School Peer Bullying Prevention Curriculum* in his/her classroom.

*The curriculum in question was developed by the researchers who wrote this article.

This curriculum's measurement and evaluation dimension, which was prepared with a problem-centered approach, was inclusive. During the evaluation of the teachers' level of reaching outcomes determined in the curriculum, the focus was on the process rather than the product. In this respect, *"…the participants were encouraged to express themselves by establishing an effective communication and planning their future learning by recognizing their strengths and weaknesses"* (Taneri, 2019, p.105). Therefore, alternative assessment methods and techniques such as self-assessment, poster

preparation, exhibition, creative writing, which are more inclusive, are used instead of traditional assessment methods.

Stage III: Testing the Curriculum

A prepared teacher training program was implemented between 19-21 November 2019 with 115 participants, consisting of classroom teachers and guidance counselors from four primary schools (3 states and one private) selected from Çankırı province. This in-service training program, which aims to support teachers' professional development, aims to create a flexible and sensitive space of trust and respect that encourages participants to think about, assimilate, practice, and try out strategies where they can explore and share. The theoretical and application-based content of the training program has been arranged in a balanced way. The program's theoretical parts were carried out using traditional teaching methods with the joint participation of all participants, and the application parts were carried out in different sessions by dividing the participants into two groups. Each program session is planned as a 40+40-minute block schedule and six lessons a day with 10-minute intervals. The program was implemented between 09.00-13.30 hours (approximately 4.5 hours), and training lasted three days.

Interactive lessons include bibliotherapy, creative drama, group discussions, and practice opportunities. The knowledge and skills obtained from the sessions were reviewed by discussing the experiences of the participants. In the last session, participants were asked how they plan to integrate peer bullying intervention strategies into their curriculum in the in-service training program.

Stage IV: Impact Evaluation of the Curriculum

In the evaluation of the curriculum, it was focused on whether there was a change in teachers' conceptualization of peer bullying and their strategies to prevent bullying, their views on the content of the in-service training program, how they experienced the implementation of the curriculum, changes they made in classroom practices, changes in student experiences and changes in the school.

After the curriculum was implemented, individual and small group interviews were done with the participants, and their opinions about the program were determined. In addition, art-based data such as poetry, painting, story, and animation were collected to determine participants' awareness of peer bullying during creative drama activities. In addition, the participants were asked to write the most liked, disliked, and most curious aspects of the program. Participants were asked for their opinions on the prevention of peer bullying in the arts-based activities implemented during and after the program was completed. It was observed that the training program increased teachers' awareness of bullying and their self-confidence in organizing classroom activities to prevent bullying. As can be seen from the examples below from the poems that the teachers wrote together, after the training, the teachers were able to express the actors, types quickly and likely consequences of bullying, the places where it was most frequently experienced, and the three criteria to be considered for an event to be called bullying:

Bullying*

The three actors in bullying are
the bully, the victim, and the bystander,
What separates bullying from fighting is
persistence, willingness, and an imbalance of power.

Bad words hurt more than slaps and kicks,
Wounds are invisible from the soul of the kids,
It was a child fight that that was over.
It will be surprising to see the child start biting nails,
not wanting to go to school.
It would be deceiving to underestimate bullying.

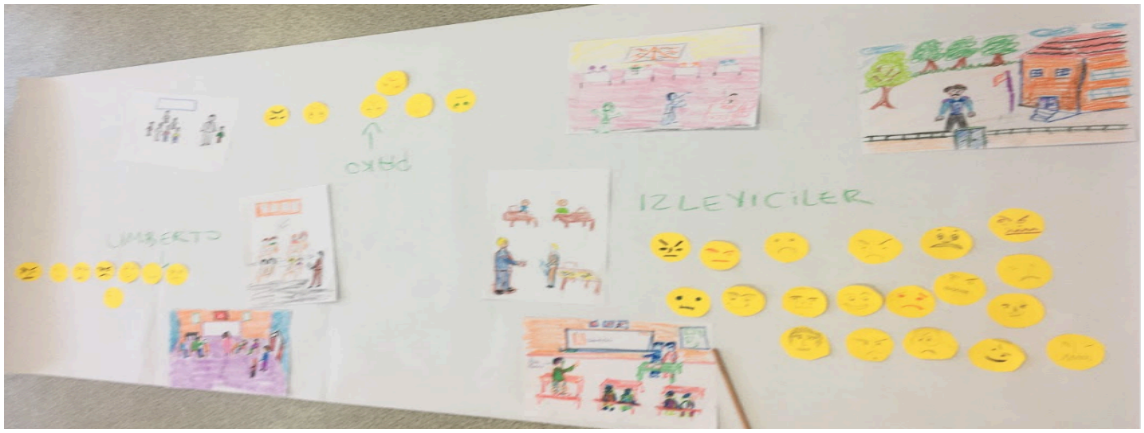
Bullying is hard to see,
The most common place is the secret corridor,

Pushes, pokes, pulls bullies,
If the bystanders do not support,
the victims are doomed to be saddened and crushed.

*Note: The lines and stanzas in the poems written by different participants were combined. Some rhymes have been lost because they were translated from Turkish.

Pictures 1 and 2 are example drawings of the participants during the in-service training activities. These illustrations show the emotions of the three actors of bullying –the bully, the victim, and the bystander. In these drawings prepared during bibliotherapy activities, Pako represents the victim and Umberto, the bully.

Picture 1. *Drawings of the participants about the actors of the bullying*



Picture 2. *Drawings of the participants about the actors of the bullying*

Participants stated that their awareness of the areas where peer bullying occurs most frequently at school/classroom has increased, and they discussed the measures to be taken in these areas. Most of the participants stated that they had not heard of bibliotherapy before this in-service training. They stated that the bibliotherapy method would be effective in preventing peer bullying in the classroom. During the training, the participants wrote practical bibliotherapy applications for the picture books provided to them.

With the third author of this study, who was also a primary school teacher, the participant teachers have thought about the ways of integrating the bibliotherapy method with the official curricula of the Ministry of Education and concluded that the activities of the Primary School Peer Bullying Prevention Curriculum could be easily applied in lessons such as Turkish, visual arts, physical education, and free activities.

The participants think that the subject of this in-service training is suitable for their personal and professional development and that the suggested strategies are applicable and can contribute to the solution of the problem of peer bullying. At the end of the in-service training program, the teachers stated they felt more knowledgeable about diagnosing peer bullying and intervening in bullying incidents. In addition, they stated that the educators who provide in-service training try to be good role models for them.

All but six participants were willing to implement the Primary School Peer Bullying Prevention Curriculum in their classroom. However, it has been observed that participant teachers have various concerns about implementing a curriculum on combating peer bullying in their classes, in terms of the approach of the school administration, the high number of students in their classrooms, and access to the materials recommended in the curriculum. After all activities in the curriculum were implemented, various educational materials, two sets of 16-children's books, and a peer bullying prevention book were donated to the schools participating in the in-service training program. In addition, teachers' guide booklets, which were prepared by the researchers who conducted this study, including the Primary School Peer Bullying Prevention Curriculum, were distributed to all teachers who participated in the study.

The teachers evaluated the effectiveness of in-service training and as decision-makers in the parts of the curriculum that needed to be organized. Since the in-service training program was evaluated and rearranged in cooperation with teachers, teachers who participated in this training attributed more value to in-service training.

At this stage, it was also planned for the researchers to visit the classrooms of teachers participating in the in-service training program to observe how the teachers implemented the curriculum - changes in teachers' classroom practices, changes in student experiences, and changes in the school - in order to identify the problems encountered in the implementation of the primary school peer bullying curriculum. As a result of the closure of schools and transition to distance education due to the Covid-19 outbreak, only a tiny part of these studies have been carried out.

Stage V: Correction and Improvement of the Curriculum

At this stage, only the findings obtained from the unstructured interviews with the teachers and the evaluations made during the activities were used. This study reveals that teachers prefer in-service pieces of training that allow peer interaction and active participation and inform them about current trends and innovations. In general, teachers are satisfied with the in-service teacher training program's goals/outcomes and evaluation component to prevent peer bullying. However, they think that the theoretical explanations in the curriculum are complex. They find traditional methods such as the narration in the education-teaching situations component boring, teaching activities based on practices, and active participation. Based on their preferred findings, the content of the curriculum and education activities were rearranged to meet these needs.

Discussion, Conclusion, and Implications

The in-service training program described in this study increases teachers' awareness of peer bullying and effectively improves teacher competencies in combating bullying. Interactive teaching approach in-service training has been shown to provide teachers with readily valuable strategies on making the classroom environment more democratic, more inclusive, and more peaceful, and how to make students feel safe at school and in the classroom.

The research highlights the unavoidable importance of teacher education in recognizing and responding to bullying incidents (Craig, Henderson & Murphy, 2000; Townsend-Wiggins, 2001). A successful bullying prevention program on a national scale is only possible by raising teachers, school counselors, students, other staff, and families working in the school and their struggle together.

Therefore, to create a school culture that does not allow and does not allow peer bullying, it is necessary to include all educational components in the anti-bullying program.

Teachers' self-efficacy beliefs affect their professional practices (Han & Weiss, 2005; Hoy, Hoy & Davis, 2009). When teachers have sufficient knowledge and skills to deal with bullying, they can be more confident, develop strategies to deal with bullying more effectively, and reduce class bullying. As Nicolaides, Toda and Smith (2002) stated, teachers, need more training to increase their self-confidence and competence to recognize and intervene in peer bullying. In this respect, teachers' preparation of in-service training programs will reduce and prevent peer bullying in schools. The literature shows that in-service training for teachers is beneficial both institutionally and individually (Durmuş, 2003; George & Lubben, 2002; Kanlı & Yağbasan, 2002; Seferoğlu, 2001). In-service training programs are instrumental for teachers to reflect on their classroom experiences and develop them.

The most substantial aspect of implementing this in-service teacher training program is that it allows teachers to be a part of the development process of the primary school education program to prevent peer bullying. During this training, the teachers analyzed current practices, applied the theoretical knowledge with a critical eye, and made suggestions to improve the proposed training program. It is thought that the inclusion of all school components in the process will be effective in reducing teachers' anxiety about implementing a training program on combating peer bullying in their classrooms. In this respect, it would be appropriate to implement anti-bullying training programs for parents, school staff such as janitors, canteen workers, security guards, and school administrators in parallel with the teacher training program.

In-service Teacher Training Program to Prevent Peer Bullying was implemented only with teachers working in four schools selected in Çankırı province. In this study, since the curriculum development process is considered an active process that constantly repairs, renews, adapts, and develops itself, it is recommended that the curriculum be disseminated throughout the country. Necessary changes and arrangements should be made before, during, and after its dissemination. In-service training programs to teachers to intervene in future peer bullying may also include helpful intervention strategies, especially for students exposed to cyberbullying during distance education, have disabilities, and learn Turkish as a second language. The adoption of appropriate teaching methods for online education in subsequent studies may also increase the prevalence of the programs.

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TÜRKÇE GENİŞ ÖZET

Akran Zorbalığını Önlemek için Hizmet içi Öğretmen Eğitimi Programı Geliştirme Çalışması

Giriş

Günümüzde engellenmesi ve azaltılması üzerinde sıkça durulan okul şiddeti, özellikle akran zorbalığı, küresel çapta bir sorun olmaya devam etmektedir. Son yıllarda yapılan geniş ölçekli uluslararası çalışmalar (Organisation for Economic Co-operation and Development [OECD], 2017; United Nations International Children's Emergency Found [UNICEF], 2018; Yıldırım, Özgürlük, Parlak, Gönen, & Polat, 2016) akran zorbalığının Türkiye'de özellikle ilk ve ortaokul öğrencileri arasında yadsınamayacak ölçüde yaygın bir sorun olduğunu ortaya koymaktadır. Zorbalık, bir bireyin kendisinden daha güçsüz gördüğü başka bir bireye karşı saldırgan bir şekilde davranması, üzerinde egemenlik kurmak veya onu sindirmek için kasıtlı ve düzenli olarak güç kullanması, zorlaması, psikolojik ya da fiziksel olarak zarar vermesi veya tehdit etmesidir.

Zorbalığın, zorbalık olayına karışan üç aktörün - zorba, mağdur ve izleyici - sağlığı ve davranışları üzerinde hem kısa hem de uzun vadeli olumsuz etkileri bulunmaktadır. *Mağdurlar* hayal kırıklığı, öfke ve saldırgan davranışlar gösterebilmektedir. Ayrıca, zorbalığa maruz kalan çocukların fiziksel sağlığı da olumsuz etkilenmektedir (Bogart et al., 2014). *Zorbaların* psikosomatik sorunlar sergileme riski, zorbalık yapmayan akranlarına göre daha yüksektir (Gini & Pozzoli, 2009). *Zorbalığa tanık olanların* fiziksel sağlığı, zihinsel sağlığı ve akademik başarısı zorbalık olayından etkilenmektedir (Polanin, Espelage & Pigott, 2012).

Araştırmalar, okul temelli zorbalıkla mücadele programlarının hem zorbalığı hem de zorbalık mağduriyetini azaltmada etkili olduğunu göstermektedir (Gaffney, Ttofi, & Farrington, 2019; Salmivalli, Poskiparta, Ahtola & Haataja, 2013; Thompson & Smith, 2014). Türkiye'de zorbalıkla mücadele konusunda az sayıda, sınırlı örneklemlere dayanan, yerel düzeyde girişimler bulunmaktadır (Doğan, Keser, Şen, Yanagida, Gradinger & Strohmeier, 2017; Dölek, 2002; Karataş, 2011; Kartal & Bilgin, 2007).

Akran zorbalığını önlemek ve/veya azaltmak, okul yöneticilerinin, öğretmenlerin, velilerin ve diğer okul çalışanlarının kararlılığını ve yoğun çabasını gerektirir. Ancak yetişkinlerin akran zorbalığı konusundaki farkındalıklarının yetersiz olması, zorbalığın doğası ve kapsamı hakkında eksik ya da yanlış kavramsallaştırmaları zorbalık olaylarının tanımlanmasını ve önlenmesini zorlaştırmaktadır. Alan yazın öğretmenlerin zorbalığın azalmasına katkıda bulunabileceklerine inandıkları zaman daha çok müdahale ettiklerini göstermektedir (Duong & Bradshaw, 2013; Williford & Depaolis, 2016; Yoon & Bauman, 2014). Bu bakımdan çalışmanın amacı okullardaki zorbalığın sıklığını, türünü ve nedenlerini ortaya çıkarmak isteyen, daha güvenli bir öğrenme ve öğretme sürecini geliştirmek için barışçıl bir sınıf ve okul atmosferi yaratmanın yollarını arayan öğretmenleri ve okul personelini desteklemek için geliştirilen zorbalığı önleme hizmet içi öğretmen eğitim programını tanıtmaktır.

Yöntem

Öğretmenlerin akran zorbalığı ile mücadele etmede öğretmen yetkinliklerini geliştirmek için Taneri, Özbek ve Akduman (2020) tarafından Bilimsel Araştırma Projesi kapsamında, hizmet içi öğretmen eğitim programı geliştirilmiştir. Program geliştirme süreci aşağıda ayrıntılı olarak açıklanmaktadır:

Hizmet içi öğretmen eğitim programının geliştirilmesinde sorun merkezli eğitim program tasarımı kullanılmıştır. Sorun merkezli program yaklaşımında öğrenme, sosyal ve bağlamsal etkenlerden etkilenen aktif, bütünleşik ve yapıcı bir süreç olarak görülmektedir (Vasuthavan & Kunaratnam, 2017).

Program Geliştirme Çalışmasının Planlaması

Akran zorbalığını önleme program geliştirme ekibi kurularak iş zaman çizelgesi geliştirilmiştir. Program geliştirme ekibinde bir ölçme değerlendirme uzmanı, bir program geliştirme uzmanı ve bir sınıf öğretmeni rol almıştır. Ayrıca program geliştirmenin farklı aşamalarında psikolojik danışma ve rehberlik alanından uzmanların görüşlerine de yer verilmiştir. Eğitim programının hedeflerinin gerçekçi biçimde oluşturulması amacıyla doküman analizi, öğrenciler, öğretmenler ve okul yöneticileri ile mülakatlar, yapılandırılmamış gözlemler, gayri resmi tartışmalar ve sohbetler yoluyla ihtiyaç analizi yapılmıştır. Bu aşamada akran zorbalığı konusunun ele alınışı ile ilgili var olan durum incelenmiştir. İlk olarak akran zorbalığının tanımı, çeşitleri, nedenleri ve sonuçları konusunda ulusal ve uluslararası alan yazın taranmıştır. Daha sonra akran zorbalığı müdahale programları eleştirel bir bakış açısı ile incelenerek (Taneri, Özbek, & Şahin, 2019) başarılı programların özellikleri gözden geçirilmiştir.

Bu çalışma, Türkiye'de okullarda zorbalık olaylarının görülme sıklığının artışına ilişkin literatürün incelenmesiyle başlamıştır. Türkiye'de ve dünyada akran zorbalığı olaylarının artışına ve müdahale çalışmalarına ilişkin literatür taranmış ve müdahale programlarının başarısında yetişkinlerin, özellikle de öğretmenlerin rolünün vurgulandığı görülmüştür. Akran zorbalığının önlenmesine yönelik bir öğretmen yetiştirme programına duyulan ihtiyacı belirlemek amacıyla bu araştırmanın katılımcıları kolay ulaşılabilir örnekleme yöntemiyle belirlenmiştir. Kolay ulaşılabilir örnekleme, ulaşılması planlanan evren üyelerinin coğrafi yakınlık, belirli bir yere uygunluk, belirli bir yere uygunluk, belirli bir zaman, kolay erişilebilirlik veya gönüllülük gibi önceden belirlenmiş ölçütleri karşılamaları halinde araştırmanın amacına uygun olarak seçildiği tesadüfi olmayan veya olasılık dışı örnekleme türüdür (Lavrakas, 2008). Bu araştırmanın çalışma grubunu Çankırı ilinde bulunan üç resmi ilköğretim okulunda ve bir özel okulda görev yapan 115 katılımcı oluşturmaktadır. Katılımcılar 99 sınıf öğretmeni, 14 okul psikolojik danışmanı ve 2 okul yöneticisinden oluşmaktadır. Katılımcıların %89'u devlet okullarında çalışmaktadır.

Programın hazırlanması

Programın kazanımlarının, içeriğinin, öğretim yöntem, teknik ve materyallerinin ve değerlendirme yöntemleri bu aşamada belirlenmiştir. Programın vurguladığı değerler, önerdiği araçlar ve yöntemler ile programın sonunda elde edilecek kazanımlar, ilerlemeci ve varoluşçu bakış açısını yansıtacak biçimde belirlenmiştir. Tematik bir yaklaşımla geliştirilen programda değişimin önemi, bireysel farklılıklar, yaparak-yaşayarak ve yaşam boyu öğrenme, eleştirel düşünme, grup çalışmaları, işbirliğine dayalı öğrenme, sosyal becerilerin geliştirilmesi, demokratik değerlerin benimsenmesi ve bireylerin özgürleştirilmesine vurgu yapılmaktadır. Eğitim programında 26 *kazanım* yer almaktadır.

Eğitim programının *içeriğinde* (1) akran zorbalığı konusunda farkındalık yaratma, (2) akran zorbalığı türleri, (3) akran zorbalığı konusunda ulusal ve uluslararası istatistikler, (4) akran zorbalığının tanımı, (5) akran zorbalığı konusunda doğru bilinen yanlışlar, (6) akran zorbalığı ile müdahale yöntemi olarak bibliyoterapinin tanıtımı, (7) örnek bibliyoterapi uygulamaları, (8) bibliyoterapi yönteminin Milli Eğitim Bakanlığının resmi eğitim programlarıyla bütünleştirilmesi, (9) akran zorbalığını fark etme ve önlemek için sınıf içinde kullanılacak öğretim materyallerinin tanıtılması ve tasarlanması ve (10) akran zorbalığını önleme ilkokul eğitim programının tanıtılması konularına yer verilmiştir.

Programın *öğrenme-öğretme etkinlikleri* hazırlanırken incelenen alan yazında yetişkinlere yönelik eğitim programlarında yaygın olarak kullanılan yaklaşımların; kendi kendine öğrenme (Tough, 1971), andragoji (Knowles, 1988), perspektif dönüşüm teorisi (Mezirow, 1978) ve deneyimsel öğrenme (Candy, 1980) olduğu görülmüştür.

Sorun merkezli bir yaklaşımla hazırlanan bu eğitim programının *ölçme ve değerlendirme* boyutunun kapsayıcı olmasına çalışılmıştır. Bu bakımdan "*…katılımcıların etkili bir iletişim kurarak kendilerini ifade etmeleri, güçlü ve zayıf yanlarını fark ederek gelecekteki öğrenmelerini planlamaları teşvik edilmiştir*" (Taneri, 2019, s. 105). Geleneksel değerlendirme yöntemleri yerine daha kapsayıcı olan öz-değerlendirme, poster hazırlama, sergi, yaratıcı yazma gibi değerlendirme yöntemleri ve tekniklerine yer verilmiştir.

Programın Denenmesi

Hazırlanan öğretmen eğitim programı 19-21 Kasım 2019 tarihleri arasında Çankırı ilinden seçilen dört ilkokulun (3 devlet 1 özel) sınıf öğretmenleri ve rehber öğretmenlerinden oluşan toplam 115 katılımcı ile uygulanmıştır. Programın her bir oturumu 40+40 dakikalık blok ders ve 10 dakikalık aralarla bir günde 6 ders olacak şekilde planlanmıştır. Program 09.00-13.30 saatleri arasında (yaklaşık 4,5 saat) uygulanmış ve eğitimler üç gün sürmüştür.

Programın Etkisinin Değerlendirilmesi

Eğitim programı uygulandıktan sonra katılımcılarla bireysel ve küçük grup görüşmeleri yapılmış, program hakkındaki görüşleri belirlenmeye çalışılmıştır. Program esnasında uygulanan sanat temelli etkinliklerde ve program tamamlandıktan sonra katılımcıların akran zorbalığını önleme programı hakkındaki görüşleri sorulmuştur.

Programın Düzeltmesi ve İyileştirilmesi

Bu aşamada öğretmenlerle yapılan yapılandırılmamış görüşmeler ve etkinlikler sırasında yapılan değerlendirmelerden elde edilen bulgular kullanılmıştır. Bulgulardan hareketle programın içeriği ve eğitim-öğretim etkinlikleri yeniden düzenlenmiştir.

Tartışma, Sonuç ve Öneriler

Bu çalışmada açıklanan hizmet içi eğitim programı, öğretmenlerin akran zorbalığı konusundaki farkındalıklarını artırmakta ve zorbalıkla mücadele etme konusunda öğretmen yetkinliklerini etkili bir şekilde geliştirmektedir. Etkileşimli bir öğretim yaklaşımı benimseyen bu hizmet içi eğitimin, öğretmenlere sınıf ortamını nasıl daha demokratik, daha kapsayıcı ve daha barışçıl hale getirecekleri ve öğrencilerin okulda ve sınıfta güvende hissetmelerini nasıl sağlayacakları konusunda kolay uygulanabilir stratejiler sağladığı görülmüştür.

Öğretmenler zorbalıkla baş etme konusunda yeterli derecede bilgi ve beceriye sahip oldukları zaman kendilerine daha fazla güvenmekte, zorbalık sorunuyla daha etkili bir şekilde ilgilenmek için stratejiler geliştirmekte ve sınıf zorbalığının azalmasını sağlayabilmektedirler. Bu bakımdan, öğretmenlere yönelik hizmet içi eğitim programlarının hazırlanması okullarda akran zorbalığının azaltılmasını ve önlemesini sağlayacaktır. Araştırmalar, öğretmenlere sunulan hizmet içi eğitimlerin hem kurumsal hem bireysel bakımdan yararlı olduğunu göstermektedir (Durmuş, 2003; George & Lubben, 2002; Kanlı & Yağbasan, 2002; Seferoğlu, 2001).

Gelecekte akran zorbalığına müdahale etmek için öğretmenlere sunulacak hizmet içi eğitim programlarının, özellikle uzaktan eğitim sürecinde siber zorbalığa maruz kalan, engeli olan ve ikinci dil olarak Türkçe öğrenen öğrenciler için yararlı müdahale stratejilerini de içermesi önerilebilir. Sonraki çalışmaların çevrim içi eğitim için uygun öğretim yöntemlerini benimsemesi de programların yaygınlığının artmasını sağlayabilir.

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Findings of Qualitative Studies on Understanding by Design: A Meta-Synthesis

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Abstract

Designed by the meta-synthesis method, the researchers examined the studies designed on the Understanding by Design (UbD) and implemented and their findings were qualitatively evaluated. It tried to obtain a comprehensive and holistic perspective on the effects and reflections of the model. 48 UbD studies were accessed from 6 databases, and 12 research findings were included after three criteria in this meta-synthesis. The findings were reached through a six-stage data analysis process; they were analyzed inductively with content analysis. The validity and credibility of this analysis process have been brought under control with the coding reliability processes and the audit technique. According to the conclusions, in the development of units based on UbD, teachers generally did not create goals/standards by collecting evaluation evidence of UbD; it was concluded that the inadequacy of this was mostly due to model inexperience, the school's facilities/conditions, teacher stagnation and emotional state, and inadequate pedagogy knowledge. Findings showed that teaching based on UbD improves students' cognitive development and participatory insights. This meta-synthesis study guides researchers who want to reference UbD as a design framework in a unit study in the overall assessment of UbD.

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Introduction

Teachers increasingly take a more active role as program makers in line with the expansion of teaching philosophies. Whether it is a textbook-based curriculum or a document-based curriculum that encourages learning, or a curriculum based on innovative program design models, it can be stated that they comprehensively participate in the planning process. Although there are many planning models and approaches, most of these include key elements such as aims, goals, and concepts that guide students' learning, (2) strategies and processes that address these concepts, (3) learning experiences related to goals and concepts, (4) teaching and learning resources (5) as well as evaluation strategies/processes/products. While many teachers discuss some of these components in their mental schema or plans, they explain the other components in their written unit plans (Langenbach, Hinkemeyer & Beauchamp, 1999; Schomberg, 1995).

These unit planning components involve being interconnected for dynamic teaching and meaningful learning. Each planning element is practical only to the extent that it relates to the entire unit. Traditionally, unit planning first requires focusing on the subject, defining the basic concepts and generalizations. Then, activities are designed to enable teachers to learn the concepts described. Once strong correlations are established between these components, students will have the opportunity to develop their targeted literacy skills or subject area knowledge. A robust and effective lesson design helps students' research concepts, access and synthesize information, and configure and solve problems (Seamon, 1999). In the planning of the traditional program, lesson, or unit, the program designer first; (1) defines the objectives of the lesson, (2) determines the learning experiences related to the objectives, (3) then organizes the experiences and activities, and (4) finally, evaluates the goals. This teaching method leads to subject-oriented teaching in which the subjects are controlled. In addition, it may lead to assessment at the end of a lesson, not to see whether students have understood the subject but because it is compulsory (Daugherty, 2006).

Moreover, John (2007) has argued that while program planning logic based on rational logic offers a limited perspective on teaching and learning, it is also a limited approach model in learning to teach. On the other hand, the Understanding by Design encourages transforming educators' perspectives from content-focused design to result-focused design. This design model is becoming increasingly popular as it is functional in effectively teaching the subject area and performance standards. (a) demonstrating teachers' knowledge in content and pedagogy, (b) showing students' learning, (c) choosing appropriate teaching objectives, (d) applying their material knowledge, (e) designing coherent teaching, (f) assessing student learning. It stands out that this design model differs from the traditional forward-based program design model in terms of design understanding, framework and logic. Eventually, the current meta-synthesis research examined this model's reflections and contributions and aimed to provide a holistic and in-depth knowledge of the model.

The Model of Understanding by Design

Understanding by Design (UbD) by Wiggins and McTighe (1998) is a curriculum design model that focuses on students' understanding and transferring to learning in a diverse context. The UbD takes place in three stages as shown in Figure 1 (Desired Results, Acceptable Evidence, Learning Plan) (Wiggins & McTighe, 1998).

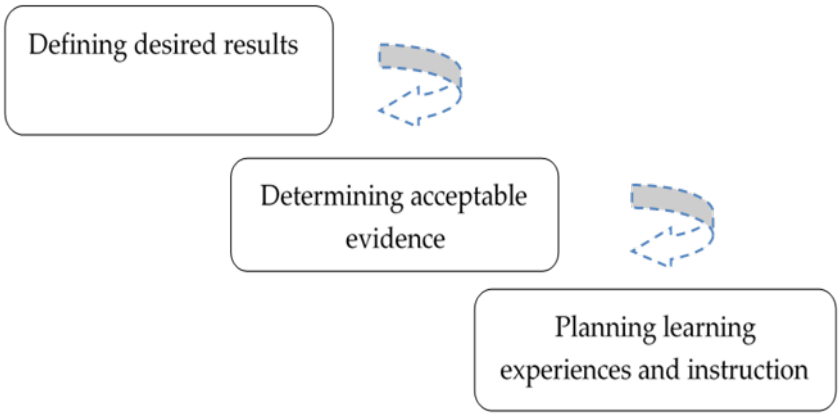

Figure 1. *Stages of Understanding by Design Model*

This design model provides a robust evaluation-focused design framework that contributes to people engaged in program development in that it allows them to design their programs in a systematic, planned, and purposeful manner, regardless of their level. In UbD, teachers involve presenting their goals or standards as a shred of assessment evidence before planning a unit or lesson. This process

begins with 'what evidence should I accept' for students to realize the desired learning and competencies before planning the teaching and learning experiences. Teachers who adopt this design model stated that it contributes to them in that it allows them to clarify the thought process about learning evidence like an evaluator and plan the teaching and learning process in a more effective manner.

Defining the Desired Results

The first stage of the curriculum design model involves defining the results or performances that students are expected to achieve or obtain at the end of the program. Some questions should be addressed when planning the program at this stage:

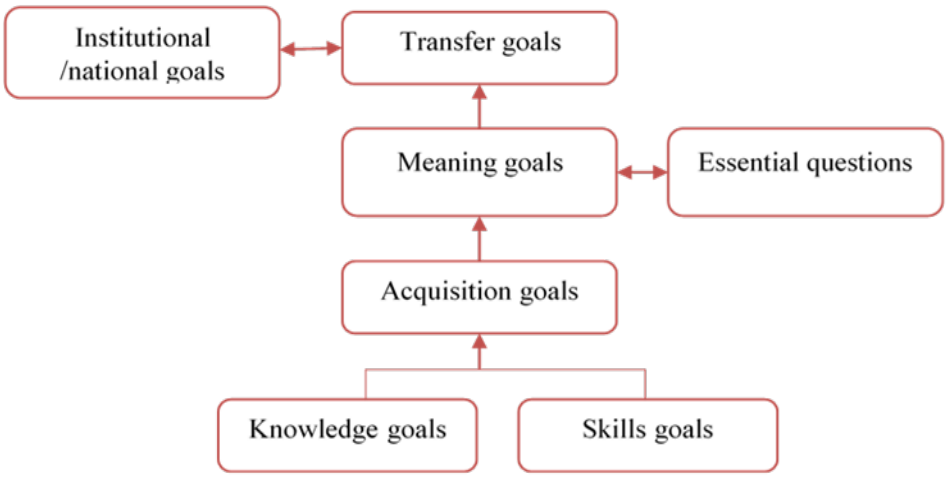

Figure 2. *Components of the Stage 'Defining the Desired Results'*

(a) What long-term transfer goals will the students achieve? (b) What learning objectives will students achieve at the level of understanding? (c) What fundamental questions are asked to support students' learning at the level of understanding? (d) What acquisitions (knowledge and skills) will more basic students have? The basic idea of UbD, 'understanding' at its focus, is reflected within the framework of these questions discussed in Stage 1. It comes first from students gaining basic knowledge, facts, concepts, and skills, then making inferences between these concepts and facts, understanding relationships through comprehension, and, ultimately, effectively applying and transferring the knowledge and skills learned to new situations. Figure 2 shows components of the stage 'defining the desired results.

Identifying Acceptable Evidence

Unlike the traditional design model, the UbD focuses on determining evaluation evidence regarding students' performance before planning the learning and teaching process. At this stage, the designer thinks like an "evaluator" to identify the foreseen evidence to determine to what extent the knowledge, skills, and insights identified in the first stage have been achieved. The essence of UbD is to demonstrate in a logical line to which assessment evidence (stage 2) and teaching plan (stage 3) the objectives identified in the first stage point (Wiggins & McTighe, 2011). The processes and elements of the stage 'Identifying acceptable evidence' are reflected in Figure 3.

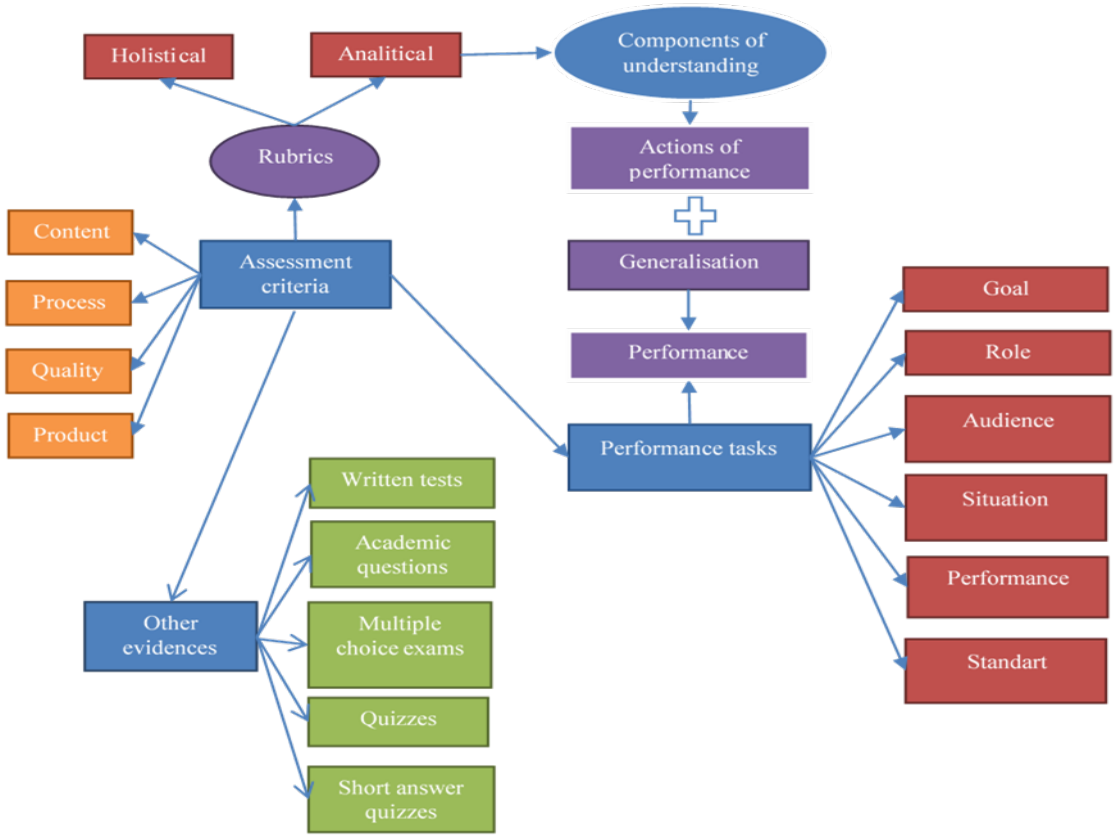

Figure 3. *The Processes and Elements of the Stage 'Identifying Acceptable Evidence'*

Wiggins and McTighe (1998) proposed several assessment methods shown below while planning to gather evidence concerning the design model's desired results. These methods include the tools that identify understanding (verbal questions, observations, dialogues, student records, self-assessments, and peer reviews), traditional quizzes, tests, open-ended exams, performance tasks, and projects. These methods differ in scope (from simple to complex), time-focus (from short- to long-term), environment (from out-of-context to authentic contexts), and structure (from well-structured to poorly structured) (Wiggins & McTighe, 1998). In each unit designed, assessment methods suitable to the desired results are adopted. Performance tasks and projects aimed at the practical realization of the learning objectives envisaged at the level of understanding and transferring are used to evaluate the complex situations and problems that reflect the issues and difficulties adults face daily. The conditions adopted in these tasks are close to reality (authentic). Cases involving multi-stage projects, from short-term to long-term assignments, require a concrete product or performance.

Appropriate Planning of Learning Experiences and Teaching

The final stage of UbD design is planning the program's learning experiences and teaching. At this stage, the aim is to reveal which learning experiences are needed to achieve the desired results. More importantly, the ultimate task for developing a detailed and serial lesson plan is to ensure that the program aligns with the objectives and evaluations (Wiggins & McTighe, 2011). Figure 4 demonstrates the stage 'Appropriate planning of learning experiences and teaching'.

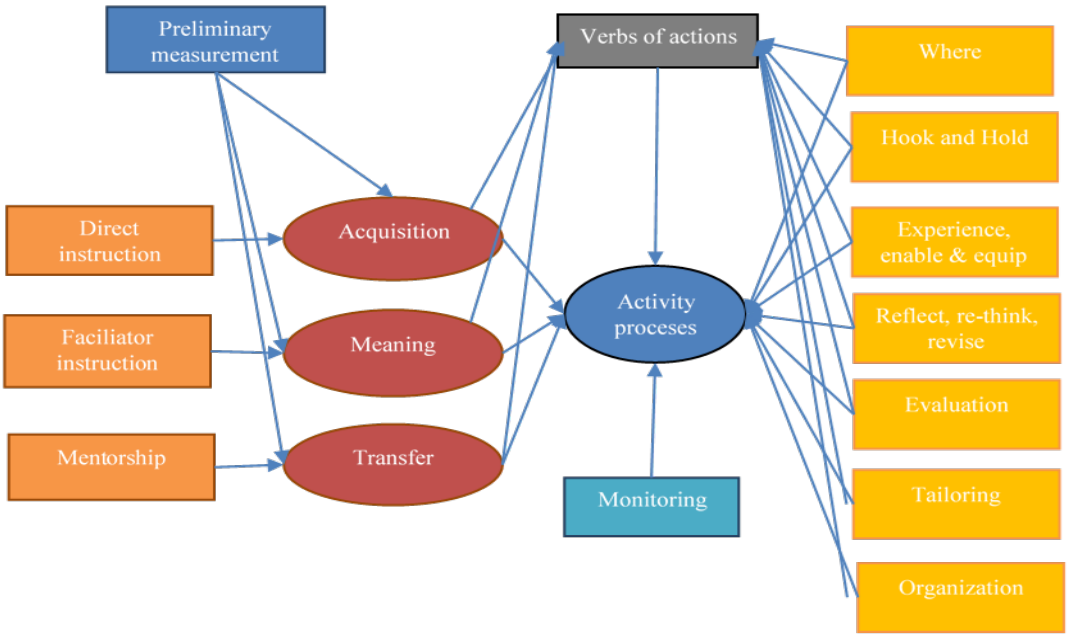

Figure 4. *Components of the Stage 'Appropriate Planning of Learning Experiences and Teaching'*

At this stage, Wiggins and McTighe (1998) abbreviated the learning and teaching process as "WHERETO." and followed this order. First, (Where) students are explained where the study will go and daily studies' aims. During the (Hook and Hold) phase, they will participate in activities that enable students to be more willing to research the basic ideas. In the third phase (Explore and experience, enable and equip), the teacher equips students with the knowledge and skills necessary to perform the final tasks successfully, research a topic and share basic ideas. The 'Reflect, rethink, revise' phase allows students to rethink basic ideas by reviewing their work again. The evaluation of work and progress enables students to make self-assessment regarding their performances, whereby the results are evaluated, and action plans are developed. Moreover, throughout tailor and personalizing the work, the designer differentiates teaching that considers the needs, learning styles, prior knowledge, and interests of students at different levels of development. In the last stage (Organize for optimal effectiveness), the thinking process is discussed what sort of ordering style in learning experiences facilitates students' understandings.

Reviewing Studies on UbD in Turkey

Although the studies on UbD in Turkey are not as much as the studies conducted in the international arena, there has been an increase in the number of these studies in our country in recent years. These studies focus on UbD-based unit design training as part of teachers' professional development (Yurtseven, 2016; Yurtseven & Altun, 2018; Yurtseven & Doğan, 2018) or the impact of UbD-oriented instructional design within a discipline on students (Durmaz, 2014; Geylan, 2021; Oflaz, 2019; Özyurt, Kan & Kıyıkçı, 2021; Uluçınar, 2018; Uluçınar & Dinç, 2021; Yurtseven, 2016; Yurtseven & Doğan, 2018; Yurtseven, Doğan & Altun, 2013;). Although it is stated that the results of these studies contribute to the professional competencies of teachers and significant developments in the characteristics of students such as success and attitude, it is observed that in most studies on UbD in Turkey, the basic steps and principles of UbD are not followed sufficiently or explanations about these processes are not made. In most studies, it is seen that the pattern of UbD is exceeded and the achievements are not expressed following the level of UbD's goals' classifications. In the second stage, it comes to the fore that the design of performance tasks related to evaluation evidence is not planned before the teaching

process and that explanations about these performances are insufficient. In general, the inability to realize this feature of UbD that distinguishes it from other models makes it difficult to transfer what is learned due to the nature of UbD (Wiggins & McTighe, 1998). Moreover, in the third stage, although the WHERETO process was clearly followed in the learning process in some studies, in some studies this process was not followed sufficiently or some of the studies only followed these stages. In the reviews, it can be said that very little research has enabled all elements of UbD to be implemented effectively with peer reflection and feedback in groups under the action research method.

Applicability and Use of UbD in the International Area

The application area of the UbD model is quite broad and widespread. Many studies have demonstrated the applicability of the model, unit development studies based on the model and its effectiveness. For example, Kang and Yi (2013) evaluated the second version of the UbD model's applicability. The results proved that the applicability of the version that Wiggins and McTighe (1998) proposed as Template 2 was influential in the change of teachers' understanding and their own formation community culture. It also facilitates students to use their talents in other contexts to acquire their knowledge and skills in the study. Additionally, it is stated that teachers improve their competence as program designers and practitioners as well as facilitate students' learning.

There are two main reasons for preferring the UbD in this meta-synthesis. Firstly, the UbD has been widely adopted in different disciplines or courses in recent years. As shown in the body of literature, many researchers conducted UbD based instruction design studies in several areas or themes such as art education, physical education, education for gifted children, STEAM applications, ratio-graphics in mathematics education, multiple intelligence education, and music education (Al-Abdulaziz, Chova, Belenguer & Martinez, 2011; Choi & Kang, 2008; Kang, 2014; Kim & Lee, 2013; Lee & Lee, 2015; Sohn, 2016). Secondly, instructional design studies on the UbD model, a wide range of usage in countries such as America, China, and Japan affect teachers' professional competence and also students' development. In particular, studies have found improvements in teachers' professional competencies as program designers, evaluators, and instructional designers (Cho, 2005; Choi, 2012; Kang, 2014; Kang & Yi, 2013; Park, 2013; Sohn, 2016; Viera & Magma, 2013). Furthermore, in a study by Aldridge (2010), a positive change was achieved in educators' attitudes and instructional strategies through the UbD-based professional development program.

What is more, Kang (2015) revealed that UbD based instructional design studies help develop responsible and professional school programs. At the same time, improvements were observed in teachers' pedagogical content knowledge (Park, 2013; Boozer, 2014), especially in their practical knowledge and skills. As a result, their self-efficacy beliefs and motivations also increased (Boozer, 2014; Wiessa, 2011). Units designed and implemented based on UbD seem to improve students' various knowledge and skills. For example, in his study, Cho (2005) found that UbD-based teaching improved students' high-level thinking skills. Similarly, Lee and Lee (2015) also revealed that UbD enables improvement in problem-solving skills. Moreover, it has been determined that UbD increases students' capacity to develop conceptual understanding, character and thought development, and gifted students' ability (Kang, 2014; Lee & Lee, 2014; Scott, 2015). The meta-synthesis focuses on this curriculum design model with a wide range of application and development areas. The present study, which was constructed in the qualitative meta-synthesis logic, focuses on studies that are designed, implemented, and evaluated qualitatively, specifically based on this model. Therefore, these three matters were taken into account as a criterion to include the studies; as a result of this review, unit development studies that provide qualitative data have been included. The reason for focusing on qualitative data is that due to qualitative research's exploratory nature, the phenomenon reveals the cause-effect relationships in detail and in-depth (Silverman, 2018).

Through the qualitative findings of the studies analyzed in meta-synthesis, a more holistic perspective on the effects of UbD on the teacher experiences and students' development was

obtained. It is thought that the meta-synthesis study carried out on the UbD model can guide teachers and researchers. In this way, it is expected that their pedagogical knowledge and skills can be increased by minimizing the problems they have encountered in the UbD supported instructional design process. Since UbD is a curriculum design model that few researchers have used in Turkey, exploratory, comprehensive, and holistic findings in the present meta-synthesis will provide a foundation for instructional design to improve teachers' professional developments and increase students' academic achievements. Hence, the meta-synthesis study enables to close the pedagogical gap that teachers and teacher educators have encountered in curriculum development areas and guide them for their instructional studies.

Research Questions

The study sought the following research questions.

1. How does the UbD-based instructional design training affect teachers' experiences and developments?

2. How does UbD-based instruction affect students' development?

Method

This study aims to systematically combine and synthesize qualitative research findings based on the Understanding by design model. As a result of the findings revealed by the model, it aimed to provide a comprehensive and holistic perspective on the model. Following the goal, the study was designed by using the qualitative meta-synthesis method. In this method, researchers aim to systematically review and integrate the findings of the studies set up in qualitative data-based design such as phenomenology, grounded theory, action research, case study (Gough, Oliver & Thomas, 2012; Hannes & Lockwood, 2012; Saini & Shlonsky, 2012). Ultimately, they reach more general conclusions and inferences about the phenomenon approached. While conducting a qualitative meta-synthesis study, the following steps were followed: (a) posing the research problem, (b) locating and obtaining resources from databases using keywords, (c) reviewing and identifying resources, (d) developing criteria for inclusion and exclusion of resources, (e) selecting and analyzing resources in line with relevant criteria, (f) creating common themes and sub-themes of these themes, revealing their similarities and differences, by analyzing the selected studies, (g) making inferences by synthesizing the findings obtained within the framework of the themes, and (h) reporting the process and findings in detail (Polat & Ay, 2016). The detailed explanations of these steps are presented in the headings below:

Literature Review and Accessing Resources

In this research, accessing and obtaining empirical studies on the UbD model mentioned above is the first step of the meta-synthesis study. The priority of this step is to decide which databases will be accessed. Thus, international databases (outside Turkey) have been preferred in scanning studies on the relevant model as little research is conducted in Turkey in unit or activity design based on the specified models. Hence, the scanning process was conducted on EBSCO, ERIC, ISI, Science Direct, WOS, and PROQUEST. The keywords, 'Understanding by design, UbD or Backward design,' which identify this model, was entered in databases and scanned. We saved available documents with full text in a folder as a result of the scanning. The documents were classified by the databases reviewed in the folder, and the number of studies on each database was reported. Table points out the numbers of studies on UbD by databases.

Table 1. *The Numbers of Studies on UbD by Databases*

	EBSCO	*ERIC*	*ISI*	*Proquest*	*Science direct*	*WOS*	*Total*
Backward design	5	14	15	10	1	3	48

As a result of the search, a total of 48 studies were accessed from 6 databases. Elimination criteria were designed to evaluate the accessed studies in terms of their suitability for the purpose and scope of this current study. These criteria are constructed as follows:

Preliminary criterion: Not to be repeated in other databases.

Criterion 1. It is a unit design or an example based on the relevant program design model.

Criterion 2. Designed in the relevant program design model; testing it on a study group.

Criterion 3. Designed in the relevant program design model; implemented; qualitative evaluation of application results with data.

The graphical display explaining the evaluation of studies based on UbD-based units following the inclusion criteria is as follows.

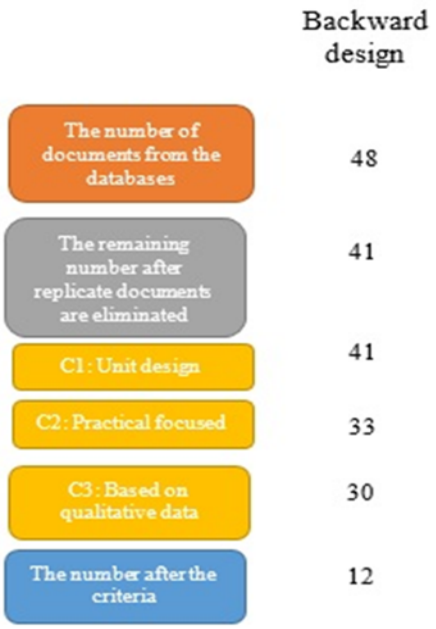

Figure 5. *The study exclusion process on the criteria*

A total of 48 studies have been accessed regarding this design model. In the first stage, seven studies were eliminated due to repetition. The evaluation process was initiated with 41 separate, unique studies. The first of these criteria is that the study is a sample or a unit study designed. Seven studies in the form of a literature review introducing the outline of the model were excluded from the study as they were not in line with this criterion. Criterion 2, on the other hand, covers the implementation of a study designed according to this model on a working group. Three studies were excluded from the study at this stage because how a unit would be designed based on the relevant model was explained in a one-course process only, and it did not include the application. The third criterion focuses on studies that qualitatively demonstrate the model's effects in studies that remain after two criteria. As a result of this process, 18 studies that quantitatively tested the effects of the model using an experimental method were also excluded from the analysis. At the end of this elimination process, 12 units or program studies designed and tested based on this model, whose findings were evaluated qualitatively, were obtained and included in the study.

Table 2. *The Study Characteristics Involved in the Meta-Synthesis*

	Study Identity	*Study type*	*Focus point*	*Moderator factor*	*Research design*	*Study group*	*Study group size*	*Data gathering tools*	*Analysis type*	*Validity/ reliability*
Backward design / Understanding by design /UBD	Young (2005)	Doctoral dissertation	Understandings of model	UbD & CBAM	Action research	High school teachers	39	[S], [I], [OB], [D]	Thematic analysis	[DT],[RV], [LTP],[AT], [RB]
	Boozer (2014)	Doctoral dissertation	Planning processes	UbD & PCK	Action research	Pre-service teachers	5	[I], [FN], [LP]	Grounded theory cod.	[DT]
	Açar, Ercan & Altun (2019)	Article	Attitudes of instruction	UbD	Embedded experimental	High school students	52	[I]	Descriptive analysis	[MT], [DT]
	Graff (2011)	Article	Planning experiences	UbD & PBL	Action research	Pre-service teachers	30	[OG]	Open coding	[CCA]
	Herro (2018)	Doctoral dissertation	Planning experiences	UbD	Case study	Teachers	4	[FN], [LP], [S]	Content analysis	[DT]
	Walters (2018)	Doctoral dissertation	Planning processes	UbD	Case study	In-service & pre-service	4	[S], [I], [OB], [SP]	Content analysis	[DT]
	Rubrica (2018)	Doctoral dissertation	Attitudes, and achievement of instruction	UbD	Action research	Middle school students	90	[S], [I], [SD]	Content analysis	[DT]
	Yurtseven & Altun (2016)	Article	Motivation and opinions of model	UbD	Mixed method	Students	10	[SD]	Content analysis	[RV], [CR]
	Yurtseven & Altun (2017)	Article	Understandings of model	UbD	Action research	In-service & pre-service	10	[AT], [I], [LP]	Content analysis	[CR],[LTP], AT]
	Jozwik & Lin (2017)	Article	Planning experiences	UbD	Case study	Pre-service teachers	37	[FN], [SD], [I]	Content analysis	[DT]
	Ostinelli (2016)	Article	Planning processes	UbD	Action research	Teachers	2	[S], [I]	Content analysis	[DT]
	Peters-Burton (2012)	Doctoral dissertation	Planning processes	UbD	Grounded theory	In-service & pre-service teachers	4 in-service & 18 pre-	[LP], [OB], [FN]	Grounded theory coding	[CR], [DT]
	Seeger, Wood & Romans (2018)	Article	Planning processes	UbD &Inquiry strategy	Action research	Pre-service teachers	4	[I]	Content analysis	

CBAM: Concern-based adoption model, PCA: Pedagogical content knowledge, PBL: Problem-based learning, RBISM: Research-Based Instructional Supervisory Model.
Data gathering tools: [S]: Survey, [I]: Interview, [FG]: Focus group, [LP]: Lesson plans, [OB]: Observation, [D]: Document, [FN]: Field notes, [SW]: Students work, [TD]: Teacher daily
Validity & reliability: [DT]: Data triangulation, [MT]: Method triangulation, [RV]: Respondent validity, [LTP]: Long term participation, [AT]: Audit trail, [RB]: Researcher bias, [CR]: Coding reliability.

After explaining the studies' evaluation process based on UbD with three relevant criteria, a data entry form including the identification information of the studies contained in the research and the research process information was structured. This login form includes identity information, study type, improved targeted structure (concept), research design, study group, size of the study group, data collection tool, data analysis format, and validity/reliability processes. This information regarding the studies included in the meta-synthesis research is shown in Table 2, respectively.

Data Analysis and Visualization

The analysis and visualization process of the studies included in this meta-synthesis research was conducted in six steps as below.

(a)Reading and refining codes. First of all, the findings of each research were read separately. Since the categories revealed in some qualitative studies are presented in a narrative format due to the nature of qualitative research, the meanings derived from the expressions read were coded. A hierarchical structure was established between the extracted codes and categories. The aim is to systematically and accurately combine or synthesize the research findings thanks to this arrangement.

(b)Re-reading the codes. The code and category structure of each research that was read and edited in itself was carefully re-read.

(c)Classifying codes by focal point. Studies specific to the nature of the study group (teacher, prospective teacher, student) were classified. For example, as seen in Table 2, teachers' and prospective teachers' experiences related to the UbD model were described as 'planning experiences'. In the case they emphasize the effects of this model on teachers' skills, they were described as 'planning skills.' On the other hand, if a middle school or high school student group was taught using this model, they were held subject to analysis separately with classifications such as attitude, success, motivation. This process also facilitated the combination of the codes.

(d)Combining and re-reading codes by classification. These codes, classified by labels like planning experiences, planning processes, and student reflections, were brought together. Then, findings were re-read and prepared for categorization.

(e)Transformation of codes into categories and the constant comparison method. The method was used while re-coding to combine similar and different codes and categories between studies (Neuman, 2009).

(f)Visualizing and reporting categories. Concept networks were drawn to reveal the correlations between the research identity, code, category, and themes found as a result of the coding and categorization process. In this way, the opportunity was found to see the causality related to the processes taking place from a holistic perspective.

Reliability and Validity of the Research

In this meta-synthesis study, audit trail and coding reliability were adopted to address reliability and validity issues.

Audit Technique

Since this meta-synthesis study is based on a systematic scanning and documentation process, the audit technique was used to ensure that each process has a specific reason and is clear and understandable. It includes the logic underlying the documentation and selection of the strategies used in each step of the research, its use, and development. This documentation process increases the study's credibility by transparentizing the steps taken and the judgments made throughout the research (Sandelowski & Barroso, 2007). The meta-synthesis processes were followed in this research as well for the UbD model. However, the documents accessed were stored in electronic folders because they systematically revealed the model's effects for research purposes. Each work saved in

the folders has been given pseudonyms such as authors' surnames and dates (e.g., Boozer (2014)). Inside these folders, a file folder was created for each criterion (e.g. not design; not applied; not qualitative). As a result of the elimination process from one criterion to another, these studies were placed in the relevant file folder. The characteristics, focal points, and strategies used in the studies' methodological processes included in the research as a result of examination and evaluation based on these criteria are reflected in a table. Via the technique, it seems possible to say that the systematic, intense and transparent description of all these processes is credible.

Coding Reliability

The findings of the studies in the meta-synthesis were subjected to content analysis and coded with an inductive understanding. Two researchers carried out this coding process at different times, thereby ensuring the reliability of coding. The coding formula (Coding reliability = Number of agreed codes/Number of agreed codes + number of disagreed codes) proposed by Miles and Huberman (2016) was adopted. In the coding process carried out on this formula, the number of agreed codes = 151; the number of disagreed codes is 7. A total of 158 codes were examined. Therefore, a coherence of 96% was achieved using the coding reliability = 151/151+7 * 100. Coding reliability of 80% consistency is accepted as reliable. Besides, the findings of the student group were similarly coded by another researcher. It has been concluded that it is 98% reliable (Miles & Huberman, 2016).

Results and Discussion

In this section, the findings of the studies are presented and interpreted. In the present meta-synthesis study, considering that the results and conclusions can be replicated, the results were collected under a single heading by discussing via the previous research findings.

The Findings and Discussion of the Effects of UbD-Based Instructional Design Training on Teachers' Experiences and Developments

The findings and discussion of the effects of UbD on teachers' experiences and developments regarding the first research problem were included in this section. The reflections on the teachers' processes of curriculum design based UbD model of teachers were gathered under 12 themes. The categories and codes specified under the themes mentioned later in this section were interpreted and discussed in light of the data in the body of literature. The graphical representation on synthesizing the findings of teachers' experiences and developments is shown in Figure 6.

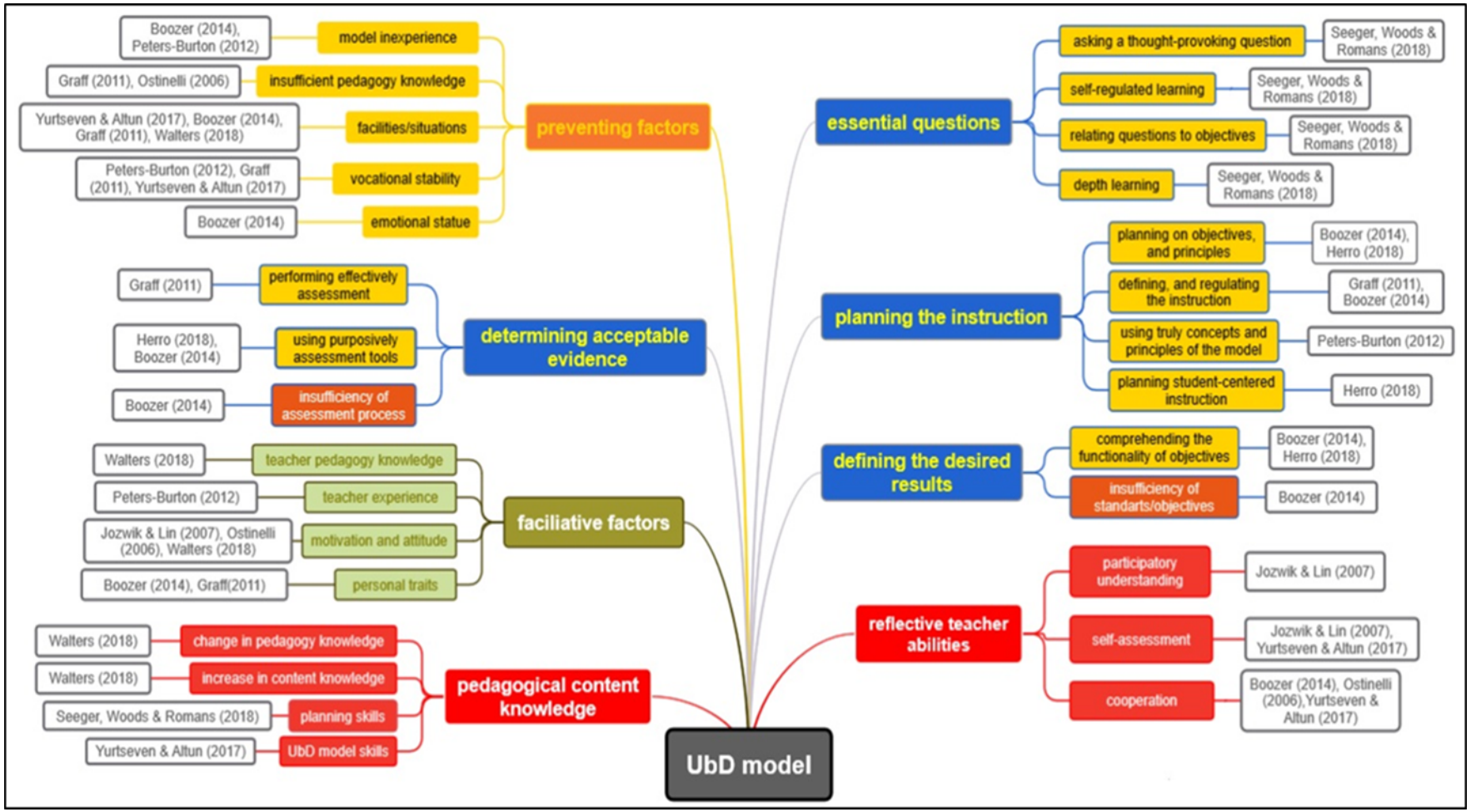

Figure 6. *The Graphical Representation on Synthesizing the Findings of Teachers' Experiences and Developments*

Theme 1: Model inexperience

Model inexperience comes first among the factors affecting teachers' and prospective teachers' planning processes and skills. The categories of the lack of information about the model, inability to use the concepts and principles of the model, and the difficulty of the model's structure were reached. It was also found that this model was a new experience for them; they did not have prior knowledge and could provide an ambiguous explanation of the model's processes (Boozer, 2014). In the context of their inadequacy to use the model's concepts and principles, it was observed that they were unable to use the model's design principles and could not explain how the primary questions are to be used (Peters-Burton, 2012). Another indicator explaining the inexperience of the model is the difficulty of the model's general structure. They mostly had problems in using the model and that the model required structuring the unit with a holistic approach instead of the modular approach they were accustomed to (Peters-Burton, 2012).

Contrary to the rational planning models designed in line with the objective, content, teaching process, and assessment, a retrospective design approach is in a model like UbD. As mentioned earlier, UbD is a retrospective planning in the form of primarily identifying the desired outcomes, performance tasks, and assessment evidence aimed at determining students' learning and planning teaching (Wiggins & McTighe, 2011). Therefore, as the model's framework is comprehensive, detailed, and systematic in terms of the concepts, processes, and principles it contains, it appears to be a challenging model for teachers to understand and apply (Wiggins & McTighe, 1998).

Theme 2: Insufficient pedagogy knowledge

Another factor affecting teachers' unit planning is the insufficiency of pedagogy knowledge. This theme revealed that teachers are inadequate, generally in the pedagogical sense, for making preparations suitable to students' class level, and their understanding of making a plan according to specific standards and strategies is insufficient (Graff, 2011). Teachers' low self-efficacy perception is another factor that affects their planning skills (Ostinelli, 2006). Ramaligela (2012) revealed that prospective teachers could not design a unit about a subject within their professional courses' scope. As a result of this study, it was understood that prospective teachers have deficiencies in necessary pedagogical knowledge and skills in the context of lesson design skills.

Similarly, the meta-synthesis study showed that many factors are affecting teachers'/prospective teachers' inadequacy concerning planning. In parallel with this finding, in their research, Al-Awidi and Aldhafeeri (2017) tried to identify the obstacles faced by Kuwaiti teachers in implementing the education program. The study revealed that time constraints, lack of pedagogical knowledge and skills, lack of infrastructure, and technical support make it difficult to implement the program. As mentioned earlier, it is a fact that teachers cannot apply the concepts and principles of the model correctly as the UbD model is relatively difficult to understand compared, particularly to rational planning models, and because they are not familiar with the model which has such intricate processes.

Theme 3: Facility/ situations

The most critical factor affecting unit planning adversely is the current challenges and conditions. These challenges include teachers' lack of practical planning strategies and lack of good resource books on unit planning. Teachers have a heavy lesson load at school. Thus, they do not have enough time for unit planning beyond their time giving their lessons. Even if they plan a unit based on such a model, it has been found that the time required for students' learning processes will increase (Boozer, 2014; Graff, 2011; Walters, 2018; Yurtseven & Altun, 2017). With these findings, in their grounded theory study, Jantarach and Soontornwipast (2018) explained the lesson planning processes of prospective teachers. Personnel and institution officials, from whom they received feedback on a lesson plan's components, revealed that factors such as pedagogy and subject area knowledge, principles related to the draft and form of the plan, the intensity of lesion load, and school conditions affect planning.

Theme 4: Occupational stagnation

Occupational stagnation appears as a factor affecting teachers' planning processes. Teachers being closed to innovation or change are included under this theme. In this context, there are four essential issues underlying teachers' planning based on UbD. Accordingly, teachers are used to using existing materials and are mainly dependent on the currently used programs. Moreover, that relatively more experienced teachers working in schools encouraging new teachers to use what exists prevents their use of UbD.

Furthermore, the school system formed due to dependency on this traditional structure limits teachers' understanding of UbD and unit planning in the general sense (Graff, 2011; Peters-Burton, 2012; Yurtseven & Altun, 2017). Moreover, teachers' professional stagnation can also adversely affect their unit planning skills. This is because teachers who reach a particular stage within the professional cycle become stagnant at the point of developing themselves (Huberman, 1989). Because teachers' burnout levels adversely affect their self-efficacy, job satisfaction, and teaching beliefs (Gholami, 2015; Skaalvik & Skaalvik, 2010), it is possible to say that motivation and likelihood to allocate time for lesson planning are low.

Theme 5: Emotional States

The emotional states experienced by teachers during the UbD planning processes also adversely affect their planning. It was understood that teachers with characteristically intense or states of concern, uneasiness, and confusion experienced for the first time with this model reduced their planning performances (Boozer, 2014).

Theme 6: Determining evaluation evidence

'Determining Evaluation Evidence,' an element of the UbD program design model, was adopted as a theme in the study. Teachers and prospective teachers use evaluation processes and evaluation tools effectively and have some inadequacies concerning the evaluation process. In the context of the first category, they showed teachers' performances in systematically gathering their evidence, using the course material as an element of evaluation, and evaluating the course material (Graff, 2011). On the other hand, teachers could effectively use the model's evaluation processes for formative and summative evaluation. Moreover, teachers used them as an authentic measurement tool of students' ability to transfer what they learned to everyday life. Some teachers identified what students learned with assessment tools such as checklists (Boozer, 2014; Herro, 2018).

On the other hand, teachers' inadequate performance in the assessment and evaluation process is also classified into separate categories. Teachers were unable to use the evaluation element at all, so they could not make an evaluation compatible with the determined targets. The understanding that the evaluation process in the UbD happens before the planning of learning was also not established. Finally, some teachers could not establish any connection between the assessment evidence and the teaching plan (Boozer, 2014).

Theme 7: Defining the desired results

The process of defining the desired results was specified as a theme in this study. Inadequacy for understanding the objectives' functionality and the objectives/standards are observed during this process. Defining the desired results in the first category allows teachers to see the big picture and that these objectives are student-centered. Furthermore, teachers have been able to grasp where to use the standards in knowing the ultimate goals expected to be reached and in constructing objectives. Another of the skills determined is that they can see the connection of lesson completion criteria with goals (Boozer, 2014; Herro, 2018). Teachers have some performance deficiencies. For example, inability to set goals for each standard, inability to create an interdisciplinary plan, inability to explain

the plan's reason, and inability to establish a standard suitable for the final goal can be listed (Boozer, 2014).

Theme 8: Planning the instruction

Teachers have exhibited their performances concerning planning teaching according to the goals and principles, defining and organizing instruction, correct use of the model's concepts and principles, and planning student-centered teaching. It was understood that teachers considered the principles of ordering activities from simple to complex and making a connection with previous learnings (Boozer, 2014; Herro, 2018). In defining and organizing teaching, they fulfilled tasks such as defining and planning the teaching needs, adapting the instruction, and monitoring the instruction (Boozer, 2014; Graff, 2011). Another category is their ability to use the model's concepts and principles correctly. It was found that teachers could use the concepts correctly, plan within a certain time interval and integrate and evaluate the topics (Peters-Burton, 2012). The last category includes planning student-centered teaching. They used the methods of organizing instruction suitable to the student, developing activities based on learning and getting the students to participate, planning based on cooperation, and differentiating teaching based on interest and ability (Herro, 2018).

Theme 9: Essential questions

Like UbD components, this element was also defined as a theme in research findings. The effective use of learning-supported essential questions based on the inquiry strategy integrated into the UbD model enabled the acquisition of the following skills: (a) being able to ask thought-provoking questions, (b) self-regulatory learning, (c) associating questions with goals, and, (d) its impact on deep learning.

In the context of the thought-provoking question category, they can ask questions, grasp the importance of inquiry, prepare questions that encourage the student to think and ask open and discussion questions about unit planning with a broader understanding. Another category is self-regulatory learning skills. Teachers gained the ability to learn and evaluate themselves according to specific measures by developing and assessing the skills appropriate for the student and enabling learning. Thirdly, teachers demonstrated the ability to relate the questions to the goals by considering the goals desired to be achieved by focusing on the concepts and questions in constructing meaning. Finally, it was revealed that the UbD instructional design study supported by inquiry strategy affects teachers' in-depth learning skills. In this context, teachers gained the skill to understand the extent correlation between concepts and application has developed, understand the importance of giving students time to think, establish meaningful correlations between subjects, establish discourse in classrooms, comprehend critical concepts and issues, and evaluate the suitability of the content to their interests (Seeger, Woods & Romans, 2018).

Theme 10: Factors affecting unit planning skills

The integrative results indicated that teacher pedagogy knowledge, teacher experience, motivation and attitude towards improving the design, and personality traits facilitate unit planning skills based on UbD. Among these factors, knowledge and skills related to the field and teaching methods and technical expertise of teachers and professional development constitute pedagogical knowledge. Another factor that facilitates unit planning is teacher experience (Walters, 2018). In this regard, the differences between teachers and prospective teachers in unit planning are mentioned in goal orientation in teaching, ordering and organizing the instruction, and perception of teaching. For example, while prospective teachers focus on state standards, teachers focus on measuring student learning.

Moreover, prospective teachers begin planning lessons with state goals and plan the activities accordingly. They consider state standards in their lesson plans; however, they have begun to form activities to measure what students have learned. Teachers plan to teach by considering students' prior knowledge in line with the UbD model while prospective teachers adapt the instruction by the subjects.

Moreover, instead of explaining the content, teachers start the lesson with student participation and participate in student activities. On the other hand, prospective teachers think students must learn the basic information before implementing the activities (Peters-Burton, 2012).

Motivation and attitude aimed at improving design is another factor that facilitates unit planning skills. Positive developments are observed in the UbD-based unit planning skills of teachers, who, in particular, are eager to come to class, make the lessons interactive and participatory, recognize the value of activity planning that is interesting and engaging, and suggest new ideas. Innovation- and science-oriented attitude and motivation, open-mindedness, and positive thinking facilitate unit planning abilities (Jozwik & Lin, 2007; Ostinelli, 2006; Walters, 2018).

Teachers' beliefs, practices, and attitudes are essential in understanding and improving their education processes. This is because they are closely related to their strategies in dealing with the problems they face in their professional life and their general well-being. These factors shape students' learning environment and boost student motivation and success (Organization for Economic Co-operation and Development, OECD, 2009). The findings also concluded that teacher personality traits are a feature that facilitates planning processes. Moreover, teachers' traits are a variable that both contribute to and prevents UbD-based unit planning. It was found that those who have a comfortable and calm trait structure are self-confident in planning and do not need to get help from someone else for planning. Similarly, those who are silent and shy do not need approval from others; they do not need to ask questions and direct support. On the other hand, teachers who are frustrated and outspoken need help because their characteristics of being detailed and perfect in planning are dominant (Boozer, 2014; Graff, 2011).

Theme 11: Reflective teacher competencies

UbD-based planning activities help to improve their reflective teacher competencies. Any increase was observed in teachers' adopting participatory understanding, self-evaluation, and cooperative learning skills. While preparing plans, particularly in adopting participatory understanding, they carried out meaningful and relevant actions that meet community and program needs and encourage a sense of social participation (Jozwik & Lin, 2007). It was found that teachers develop reflective thinking skills in the UbD-based planning process based on action research and that this process allows them to renew and evaluate themselves. It also enabled action research processes to review teaching practices (Jozwik & Lin, 2007; Yurtseven & Altun, 2017). An indicator of teachers' reflective teacher competencies is cooperative learning in unit planning. Mentoring teachers, peer support, and experiences improved teachers' unit planning skills. There was, therefore, an increase in collaborative learning and teaching approaches (Boozer, 2014; Ostinelli, 2006; Yurtseven & Altun, 2017). It is seen that the unit planning studies included in the research are primarily designed in the action research pattern. Action research is a way for teachers to understand their practices and improve student success. Such a professional learning community involving teachers is an effective platform where teachers share their knowledge, interact and learn from each other based on their applications (Chou, 2011). Action research provides practitioners the opportunity to assess their instructions' quality effectively. Action research supports the development of knowledge in the teaching profession (Yuen-Ling, 2008). Therefore, it can be said that teachers can increase their reflective teacher competencies in the process of action research in which they participate in designing, improving, and evaluating their lesson planning strategies (Carr & Kemmis, 2002).

Theme 12: Pedagogical content knowledge

After the unit planning processes based on UbD, it was seen that teachers' pedagogical content knowledge improved. For example, improvement in using problem-solving methods, establishing new learning goals for the unit plan, determining evidence for students' learning, as well as choosing appropriate and differing performance and teacher awareness took place in the context of pedagogy knowledge (Horzum, Akgün & Öztürk, 2014; Walters, 2018). The research conducted by Walters (2018)

demonstrated that there was an increase in teachers' mathematics knowledge as the pedagogy knowledge. Seeger, Woods & Romans (2018) showed that UbD contributed to improving teachers' lesson planning skills. The pedagogical content knowledge that teachers develop is the knowledge, skill, and experience gained from UbD. They also gained the ability and expertise to prepare the unit plan using the model. Furthermore, they developed an authentic teaching approach to teach their students how to use language in everyday life, guiding them in completing the subjects that are not in their textbooks and improving their speaking skills (Yurtseven & Altun, 2017).

The Findings and Discussion of the Effects of UbD-Based Instruction Training on Students' Experiences and Developments

The findings and discussion of the effects of UbD on students' experiences and developments related to the second research problem were presented. Figure 6 shows the graphical representation on synthesizing the findings of students' experiences and developments.

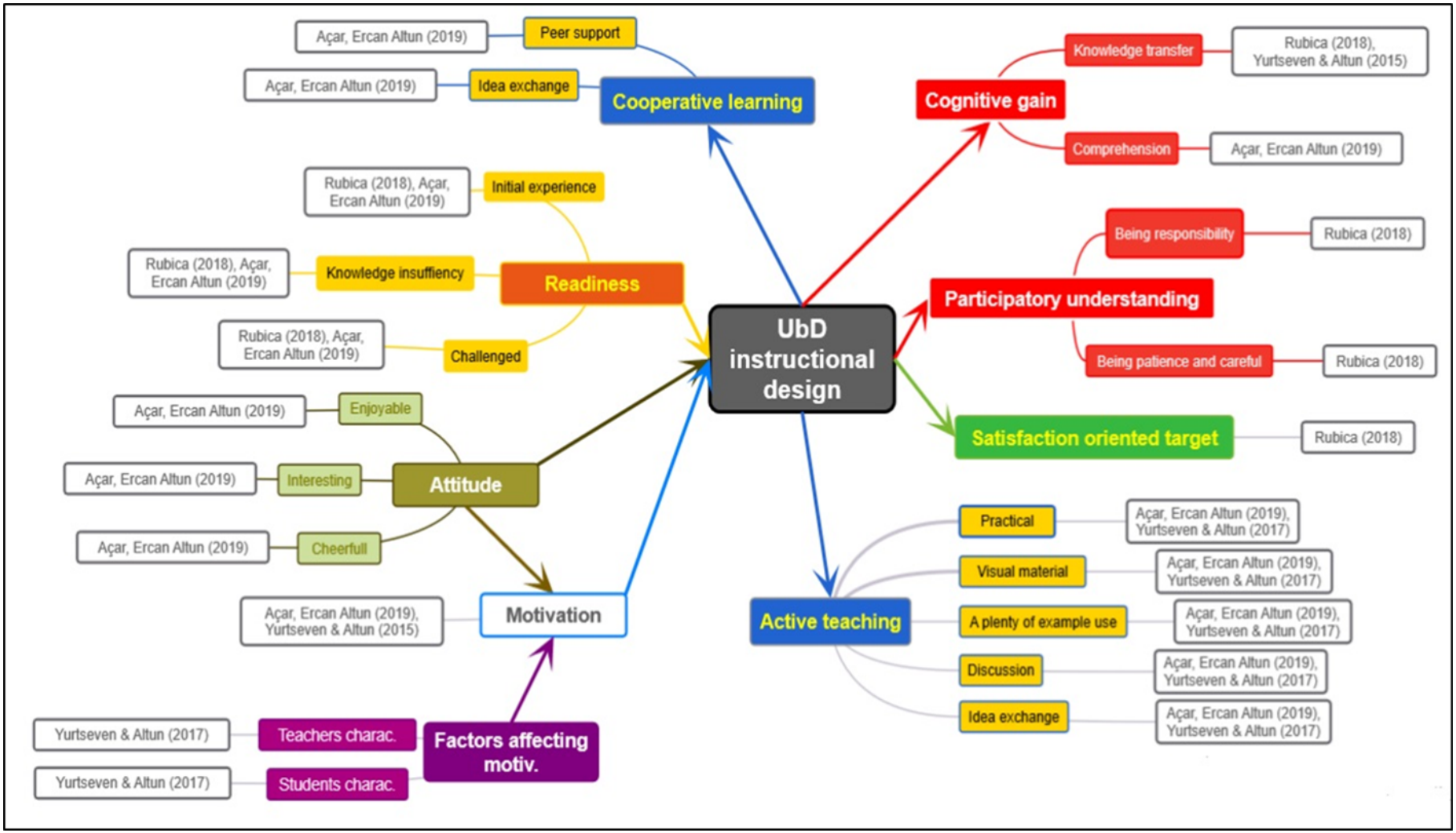

Figure 7. *The Graphical Representation on Synthesizing the Findings of Students' Experiences and Developments*

The report on the impact of UbD based instructional design on students' outcomes revealed seven themes: (a) factors affecting student motivation, (b) readiness, (c) effective factors, (d) understanding of the teaching design, (e) cognitive acquisition, (f) participatory understanding, and (g) goal-oriented satisfaction.

Firstly, teacher and student characteristics appear to affect student motivation (Yurtseven & Altun, 2017). Affective elements influencing students' participation in the course designed on UbD were described as themes. Students adopted the attitude that it was pleasant, exciting, and enjoyable (Açar, Ercan & Altun, 2019). Students' attitudes towards the course also positively affected their attendance or motivation (Açar, Ercan & Altun, 2019; Yurtseven & Altun, 2015). It offers effective teaching and collaborative teaching. The lesson on visual material and great activity-based discussion and exchange of ideas offer active learning (Açar, Ercan & Altun, 2019; Yurtseven & Altun, 2017). According to Troum (2015), effective learning happens with a good lesson plan. He also states that such a lesson plan allows both teachers to organize their classes effectively and students to focus on their lessons consistently. Also, it provides students the opportunity to learn better and develop a more positive attitude towards their performance (Manyarara, 2015). It also provides students with collaborative learning opportunities based on peer assistance and exchanging ideas. The UbD affects students' cognitive development. As students regard this teaching design as simple, understandable, and practical, it is easier for them to understand the subjects (Açar, Ercan & Altun, 2019). They could also transfer their knowledge by extending what they learned to daily life and using the spoken language (Rubica, 2018; Yurtseven & Altun, 2015). They learned to fulfill their duties and responsibilities by gaining patience and careful understanding via UbD (Rubica, 2018). Finally, this experience gained by students who achieved cognitive acquisition and participatory learning enabled them to feel happy due to their goals by following the project guidelines. Therefore, it contributed to their achievement of goal-oriented satisfaction (Rubica, 2018).

Conclusion and Implications

The results of the study demonstrated that UbD based instructional design positively affects teachers' professional development and students' successes. Students' outputs doubtfully depend on teachers' capabilities of designing UbD based instruction rigidly and effectively. It was concluded that internal and external factors could impact their unit planning abilities. External factors include agents that affect teachers' unit planning, but they do not directly result from them. For instance, external factors are the schools' conditions and facilities where teachers have worked. Interrelated internal factors cover professional stagnation, inexperience and insufficiency in UbD, lack of pedagogy, and mood, which resulted from external factors. Working at schools where the studies were carried out in the current meta-synthesis, teachers extensively employ available curricula prepared by the National Council of Curriculum Development. Since attempts about school-based curriculum development are absent, it causes teachers' professional stagnation, inexperience and insufficiency in UbD, lack of pedagogy, and mood. It was found that teachers and teacher candidates who are self-confident, self-renewing, open to learning, and highly motivated and attitude, either individually or as a group, can design effective and powerful teaching using UbD.

The meta-synthesis study combined and synthesized the qualitative findings revealed by studies that carried out UbD-based unit design, application, and evaluation research. In this context, based on the results, suggestions were made for teacher educators, teachers, and teacher candidates and researchers.

Suggestions for Teacher Educators

One of the most important aspects of this model that distinguishes it from other design models is that it is an evaluation-oriented design model. That is, the teachers should consider authentic performance tasks related to possible issues the students can encounter in their daily life before

planning the instruction. Considering these performances before teaching, in the synthesized findings, is one of the most common problems that teachers have encountered during the application process of the model. For this reason, it is recommended to implement professional development programs focused on authentic learning and assessment for teachers and student teachers. In these programs, for teachers and student teachers to understand the theoretical background of this model, they should focus on situational learning and problem-based learning along with authentic learning. In these learning approaches, students should be able to think about real problems and understand the nature of hands-on activities. Apart from this, they need to design authentic performances more concretely, especially on subjects in disciplines that are more related to daily life (science, social studies, mathematics, etc.).

The scholars should also implement regional professional development projects and new program design and practices like UbD for teachers to ensure that all teachers reach the integrity of their knowledge, skills, and understanding of instructional design. Besides, these designs and practices should be audited and evaluated with specific standards and accreditations. In this way, it can be ensured that its use becomes widespread by obtaining a holistic understanding of UbD as a design model.

Suggestions for Researchers

As mentioned above, one of the most important problems is the inability to design the performance tasks envisaged to achieve the transfer targets. Therefore, it is recommended that teachers examine the source of the underlying causes of their pedagogical inadequacy in designing these performances. To improve teachers' competencies in this regard, by organizing action research projects, teachers' design practices based on UbD should be monitored and recorded. It is suggested to reveal the errors and/or deficiencies observed through the common feedbacks of the researchers/s and colleagues, taking into account the UbD design standards of the teacher's design process with the video recording watched in this process. For this reason, it is thought that the effective implementation of cooperative action research in which the microteaching method is integrated can be a way to overcome the pedagogical gaps or inadequacies encountered in the model.

Suggestions for Decision-makers

In the results, it is seen that apart from the pedagogical inadequacies of the teachers, the factors affecting the UbD-oriented design skills of the teachers are the occupation stagnancy and mood and the current conditions. For this reason, it is envisaged that as designer teachers, they should be open to innovation on UbD, feel good, be curious, and therefore, the current conditions should be favorable for self-development. For this reason, it is recommended that school principals and administrators encourage teachers to participate in UbD-oriented unit design studies and provide the necessary time, opportunity, and conditions in this regard. An opportunity should be provided to develop teachers' attitudes and understandings towards renewing their teaching processes after improving teachers' current conditions.

Acknowledgments

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Tasarıma Dayalı Anlama Modeline Dayalı Nitel Araştırmaların Bulguları: Bir Meta-Sentez Çalışması

Giriş

Wiggins ve McTighe (1998) tarafından geliştirilen ve kapsamı ortaya konulan Tasarıma Dayalı Anlama Modeli, anlamayı merkeze alan bir program tasarım modelidir. Bu tasarım modeli, program geliştirme çalışmaları ile uğraşan kişilerin hangi seviyede olursa olsun programlarını sistematik, planlı ve amaçlı biçimde tasarlamalarına katkı sağlayan değerlendirme odaklı güçlü bir tasarım çerçevesi sunar. Oldukça geniş bir uygulama alanına ve gelişim alanlarına sahip bu program tasarım modeli, bu meta-sentezin odağında yer alır. Nitel meta-sentez mantığında kurgulanan araştırma, özellikle bu modeli temel alarak tasarlanmış, uygulanmış ve bulguları nitel olarak değerlendirilmiş çalışmalara odaklanmıştır. Bu yüzden, çalışmaları dâhil etme ölçütü olarak bu üç husus dikkate alınmış; bu inceleme sonucunda nitel veri sunan ünite geliştirme çalışmaları dâhil edilmiştir. Nitel verilere odaklanılmasının sebebi ise, nitel araştırmaların keşfedici doğası nedeniyle olgunun neden-sonuç ilişkilerini ayrıntılı ve derinlemesine bir şekilde ortaya koymasıdır (Silverman, 2018). Meta-sentezde analize tabi tutulan çalışmaların nitel bulguları sayesinde, modelin öğretmen deneyimleri ve gelişimleri ile öğrencilerin gelişimlerine ilişkin daha bütüncül bir bakış açısı elde edilmiştir. Bu bakış açısı ve anlayışın bu modele dayalı ünite tasarım çalışmalarını kolaylaştıracağı düşünülmektedir.

Yöntem

Bu araştırma; Tasarıma Dayalı Anlama (Understanding by Design) modeline dayalı nitel araştırmalarda ortaya konulan bulguları sistematik bir şekilde bir araya getirmeyi ve sentezlemeyi amaçlamıştır. Dolayısıyla, modelin ortaya koyduğu bulgular sonucunda modele ilişkin kapsamlı ve bütüncül bir perspektif ortaya koymayı hedeflemiştir. Bu amaç doğrultusunda araştırma nitel meta-sentez yöntemi ile kurgulanmıştır. Bu yöntemde araştırmacılar; fenomenoloji, gömülü teori, eylem araştırması, durum çalışması gibi nitel veriye dayalı desenlerde kurgulanan çalışmalarda ortaya konulan bulguları sistematik olarak gözden geçirmeyi ve bütünleştirmeyi amaçlarlar (Sandelowski ve Barroso, 2007). Nihayetinde ise ele alınan olgu ile ilgili daha genel sonuç ve çıkarımlara varırlar (Saini ve Shlonsky, 2012). Bir nitel meta-sentez çalışması gerçekleştirirken şu adımlar takip edilmiştir: (a) araştırma problemini oluşturma, (b) anahtar kelimeler kullanarak veri tabanlarından kaynakları bulma ve elde etme, (c) kaynakları gözden geçirme ve tanımlama, (d) kaynakları dâhil etme ve hariç tutma ölçütleri geliştirme, (e) ilgili ölçütler doğrultusunda kaynaklara uygun olarak kaynakları seçme ve analiz etme, (f) bu temaların ortak temalarını ve alt temalarını oluşturma, seçilen çalışmaları analiz ederek benzerlik ve farklılıklarını ortaya çıkarma, (g) temalar çerçevesinde elde edilen bulguları sentezleyerek çıkarımlarda bulunma ile (h) süreci ve bulguları detaylı olarak raporlama (Polat ve Ay, 2016).

Bu meta-sentez araştırmasına dâhil olan çalışmaların çözümlenme ve görselleştirme süreci altı adımda gerçekleşmiştir: (a) kodları okuma ve rafine etme, (b) kodları yeniden okuma, (c) kodları odak noktasına göre sınıflama, (d) sınıflamaya göre kodları birleştirme, (e) kodları kategoriye dönüştürme ve sürekli karşılaştırmalı analiz yöntemi ile (f) kategorileri görselleştirme ve raporlaştırma. Bu meta-sentez çalışmasında güvenirlik ve geçerlik sorunlarını ele almada denetleme tekniği (audit trail) ile kodlama

güvenirliği benimsenmiştir. Bu kodlama işlemlerine göre öğretmenlerin gelişim süreci ile ilgili bulgular için kodlama güvenirliğinin %96; öğrenci başarısına ilişkin bulguların güvenirliğinin ise %98 oranında olduğu bulunmuştur.

Bulgular

Bu nitel meta-sentez çalışmasında ulaşılan verilerin analizi sonucunda UbD modelinin öğretmen ve öğretmen adaylarına olan yansımaları 12 tema altında toplanmıştır. Öğretmen ve öğretmen adaylarının planlama becerilerini olumsuz olarak etkileyen 5 temaya ulaşılmıştır: (1) model deneyimsizliği, (2) yetersiz pedagoji bilgisi, (3) imkânlar / koşullar, (4) mesleki durağanlık ve (5) duygu durumu. İkinci tema bloğu ise planlama süreçlerinde modelin bileşenleri olan (6) istenilen sonuçları tanımlama, (7) değerlendirme kanıtlarını belirleme, (8) öğretimi planlama, (9) temel soruları kullanabilme temalarından oluşmaktadır. Öğretmen ve öğretme adaylarının gelişimlerine etkileri; (10) yansıtıcı öğretmen yetkinlikleri ve (11) pedagojik alan ve becerileri temalarında toplanmıştır. (12) Planlama becerilerini gelişimini kolaylaştıran etmenler de son tema olarak yer almıştır. UbD temel öğretim tasarımının öğrencilerin gelişimlerine etkisini inceleyen araştırmaların nitel bulguları incelenmiştir. Bu inceleme sonucunda, UbD ile ilgili ulaşılan 7 tema: (a) öğrenci motivasyonunu etkileyen faktörler, (b) hazırbulunuşluk durumu, (c) duyuşsal faktörler, (d) öğretim tasarımı anlayışı, (e) bilişsel edinim, (f) katılımcı anlayış ile (g) amaç yönelimli doyumdur.

Tartışma, Sonuç ve Öneriler

Bulgulara bakıldığında öğretmenlerin bu modele dayalı ünite planlamada, özellikle öğrenme sürecinin planlanmasının öncesinde değerlendirme kanıtlarının belirlenmesi ile hedef/ standartların ilişkisini kurmada yetersizlik yaşadıkları görülmektedir (Boozer, 2014). Ramaligela (2012) çalışmasında öğretmen adaylarının mesleki dersleri kapsamında bir konu ile ilgili bir ünite tasarlayamadıklarını ortaya çıkarmıştır. Bu çalışma sonucunda öğretmen adaylarının ders tasarlama becerisi bağlamında gerekli pedagojik bilgilerden ve becerilerden yoksun oldukları anlaşılmıştır.

Ayrıca öğretmenlerin çalıştığı okullarda sorumluluklarındaki iş yükünün fazla oluşu ve yeterince sürelerinin kalmayışı, ünite planlamalarını engelleyen unsurlar olarak gösterilmektedir (Boozer, 2014; Graff, 2011; Walters, 2018; Yurtseven & Altun, 2017). Dahası okullarda pratik stratejilerinin yokluğu, planlama ile ilgili kaynakların yokluğu gibi mevcut koşullar/ olanaklar da öğretmenlerin planlama becerilerinde yetersizliğe neden olabilmektedir.

Dahası, öğretmenlerin mesleki açıdan durağanlığı da ünite planlama becerilerini olumsuz etkileyebilmektedir. Çünkü mesleki döngü içerisinde belirli bir aşamaya gelen öğretmenler, kendilerini geliştirme noktasında durağan bir hale gelmektedir (Huberman, 1989). Bu mesleki durağanlık kıdemli öğretmenleri mevcut programları ve ders kitap ya da kaynaklarını kullanmaya yöneltirken, aynı zamanda yeni öğretmenleri de hali hazırdaki program ya da kaynakları kullanmaya sevk etmektedir. Nitekim bulgularda da mesleki olarak durağanlığa geçen öğretmenlerin daha geleneksel bir öğretmen anlayışında olduğu, bunun da yeni öğretmenleri de UbD gibi program planlama modellerini kullanmada tembelliğe ittiği bulunmuştur (Graff, 2011; Peters-Burton, 2012; Yurtseven & Altun, 2017).

UbD temelli ünite geliştirme çalışmalara ait nitel bulgular, UbD'nin öğretmenlerin pedagojik alan bilgilerinde önemli artışa katkı sağladığını göstermiştir. UbD'nin öğretimi planlama sürecinde ortaya koydukları performansları yansıtan bulgularda da görüleceği gibi, öğretmenler öğrencilerin öğrenme düzeyine uygun olarak öğretimi düzenleyebilme, öğrencinin performansını nasıl ölçeceğini bilme, öğrencilerin özelliklerine göre uygun öğretim stratejileri, yöntemleri ve teknikleri seçebilme gibi pedagoji bilgisini gösterip bu bilgilerini iyileştirebilmişlerdir (Horzum, Akgün & Öztürk, 2014; Walters, 2018;). Ayrıca, öğretmenlerin kendi disiplin alanındaki yeni gelişmeleri ilgili bilgi kaynaklarından takip ederek kavramları öğrenmesi de alan bilgisinin iyileştiğini göstermiştir (Horzum, Akgün & Öztürk, 2014; Walters, 2018).

UbD'nin öğretmen deneyimlerine olan etkilerinin dışında öğrencilerin edindiği yaşantılara ve gelişimlerine de etkileri söz konusudur. Böyle bir modele dayalı tasarlanan öğretimin onların arkadaşları ile fikir alışverişi yapmalarını sağladığı ve böylece onlara akran desteği aldıkları iş birlikli bir öğrenme ortamı sunduğu göze çarpmaktadır (Açar, Ercan, & Altun, 2019). Öğretmenin bilgileri bol miktarda örnekle açıklayıp görsellerle desteklediği, ayrıca öğrencilerin birbirleriyle fikir alışverişi yaptığı uygulamalı etkinliklere dayalı etkin bir öğretim tasarımı sağlamaktadır (Açar, Ercan, & Altun, 2019; Yurtseven & Altun, 2017).

Bu bağlamda, öğretmenlerin mesleki gelişimlerinin bir parçası olarak program tasarımına daha fazla dâhil olmaları önerilmektedir. Öğretmenlerin mevcut koşullarını iyileştirdikten sonra öğretmenlerin öğretim süreçlerini yenilemeye yönelik tutum ve anlayışlarını geliştirme fırsatı sağlanmalıdır. Öğretmen eğitimcileri de onlara bu modelin diğer klasik modellerden farklı olduğunu öğretmelidir. Bu modelin kullanımını teşvik etmek için özellikle kıdemli öğretmenler için seminerler düzenlemelidirler. Bu şekilde, kıdemli öğretmenlerin hazır programları ve materyalleri kullanmak yerine bir program tasarımcısı gibi düşünmelerini sağlamak için hazırbulunuşlukları ve motivasyonlarını artırmaları ile kendilerini yenilemeleri önerilmektedir.

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Investigation of 8th Grade Students' Mathematics Anxiety[2]

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Abstract

The aim of this research study is to determine how students define their anxiety about learning mathematics, to determine the symptoms of anxiety and to define how anxiety occurs. The phenomenology research design was used in the study. A semi-structured interview form was used as a data collection tool in the research. The data were analyzed through the content analysis. The study group of the research consists of four male and four female 8th graders in two public secondary schools in Uluborlu district of Isparta. According to the results, students predominantly defined mathematics anxiety as frightening/scary. Also, students identified the symptoms of mathematics anxiety mostly as the theme of physical/physical symptoms. Students stated that sociological, psychological and philosophical dimensions were effective in the emergence of mathematical anxiety. Some students expressed common views on the sociological dimension-psychological and psychological-philosophical dimension. The effects of mathematics anxiety have been examined under two titles as the effects related to the psychological and sociological dimensions. While the effects related to the psychological dimension are discussed in terms of course achievement and effects on themselves, the effects related to the sociological dimension are discussed in terms of their effects on their relationship with their family and friends.

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Introduction

For many years, the concept of anxiety that has persisted since the existence of humanity has been considered. According to Cüceloğlu (2005), anxiety is defined as a concept that includes one or more of the emotions such as fear, grief, distress, feeling of failure, inability and judgment. Many definitions have been made in the literature about the concept of anxiety until today. According to Kierkegaard,

[2] This study was produced from the first author's master's thesis "Investigation of the Mathematical Anxiety of Middle School 8th Grade Students" and this study was presented as an oral presentation at the Eighth International Congress on Curriculum and Instruction, 25-27 March 2021.

who first stated that people have an anxious existence and researched this situation, anxiety is the mood that people create to get rid of the feeling of nothingness they are in (Manav, 2011). According to Heidegger, who is also one of the representatives of existentialist philosophy, anxiety is a long inner distress that will last until death. Baltaş (2004) defines the concept of anxiety as fear of uncertain source; Baymur (1989) expresses anxiety as the tense emotional state that occurs in individuals in the face of unmet need. As for Tekindal (2009), he stated that anxiety disrupts human behaviors, prevents effective learning from occurring, and this situation harms individuals. Anxiety, which is accepted as one of the basic emotions of human beings, emerges as a situation that negatively affects effective learning. Due to mathematics anxiety, it is thought that individuals stay away from mathematics lesson because they think that they do not like, hate and cannot do mathematics (Baloğlu, 2001). As a result, there is insecurity in individuals due to, their thoughts and abilities that they cannot do mathematics (Yenilmez & Özbey, 2006). It is inevitable that students who move away from the mathematics course do not succeed in this course. It is thought that investigating the underlying causes of anxiety causing failure is important in achieving the desired level of success in mathematics education both in terms of students and school education. Considering the related literature, the causes of mathematics anxiety can be examined under three groups. These are sociological, psychological and philosophical dimensions (Bayram, 2020).

The Sociological Dimension

At the heart of the social dimension, which is defined as people being afraid of being criticized, humiliated by others in social settings and therefore avoiding these environments, is mostly the negative experiences that students have experienced with their environment (such as the teacher, family and friends) (Zorbaz, 2013). Teachers' attitudes and behaviors such as lecture methods, competence in the subject matter, and leaving the student in a passive state are seen as important factors in the formation of anxiety in students (Deniz & Üldaş, 2008). Another factor affecting the sociological dimension is the family dimension. Parents have high expectations of their children, and accordingly, their attitudes and behaviors such as pressure, benchmarking, and punishment cause anxiety in students (Alkan, 2011).

The Psychological Dimension

The first person to look at anxiety from a psychological perspective was Sigmund Freud, the founder of psychoanalytic theory. According to Freud, anxiety is a psychological process and a reflection of the ego which performs tasks such as warning people against the stimuli coming from the social and physical environment, adapting to the situation, and continuing on with their lives (Geçtan, 1992). Yet, negative experiences are important factors that reveal anxiety in human beings (Arem, 2010).

Once again, the attitudes towards mathematics lesson, subject matter competency, and working methods are also shown to be among the reasons for the anxiety (Bekdemir, 2007). The inability of the students to ask their teachers what they do not understand during the lesson, their prejudice towards the lesson, their giving up immediately in the face of hard-to-solve problems, and as a result, low motivation are the dimensions of the psychological factors stemming from the individual.

The Philosophical Dimension

According to Kierkegaard, who is considered among the founders of existentialism, anxiety is defined as a mood that a person creates to get rid of the feeling of nothingness, an inevitable part of life and a disease that can last until death (Manav, 2011). In this dimension, factors such as students' prejudices towards mathematics, lack of knowledge, beliefs that mathematics is unnecessary, low motivation, and giving up quickly are the philosophical dimensions that create anxiety. Again, the fact that the mathematics is abstract and logical in nature makes it difficult for students to understand this lesson. According to Eldemir (2006), the fact that Maths, which is already defined as difficult by the students, is not offered by the teachers with appropriate learning methods also causes further anxiety.

Therefore, teachers are expected to take individual differences of students into account in the instructional processes and to organize the educational environment in a way that they can better understand Maths.

The Research Context

Most research studies in the literature on the level of mathematics anxiety, gender, grade level, parents' educational status, overall success of teachers, attitude, and socio-economic status have been examined with quantitative research methods (Adal & Yavuz, 2017; Akgül, 2008; Ateş & Güler, 2016; Baban, 2018; Borlat, 2018; Bozkurt, 2012; Doğru & Arslan, 2008; Eldemir, 2006; Kılıç, 2011; Şentürk, 2016; Taşdemir, 2013; Tuncer & Yılmaz, 2016; Yenihayat, 2007). According to the findings of these studies, no significant differences were found in the attitudes and anxiety of the students towards the mathematics lesson based on gender. A negative moderate correlation was found between students' mathematics course grades and their mathematics anxiety. Examining the grade level variable, it was seen that as the grade level increased, the anxiety level of the students also increased. In their study titled "Content analysis of graduate theses conducted with mathematical concern in Turkey", Toptaş and Gözel (2018) concluded that only quantitative methods were used in all of the 43 graduate theses obtained from the National Thesis Center database. Again, Bayram (2020) in his master's thesis named "Evaluation of research on anxiety in mathematics education", he found that 84 studies on mathematical anxiety between 2005 and 2018 were conducted using six qualitative, two mixed, and 76 quantitative methods.

In the light of relevant literature review above, it can be said that the number of studies on mathematics anxiety is considerably high. However, it is seen that the studies are generally carried out using quantitative research methods, while qualitative research methods are less in number. Based solely on quantitative studies, it may not be sufficient on its own to explain what mathematics anxiety means for the student, what triggers and how it emerges, and what effects it has on students' friends, family, and course success. Therefore, qualitative research methods which focus on such questions and reveal in depth what mathematics anxiety means are of significance (Yıldırım & Şimşek, 2005). Thus, the aim of the present study is, by utilizing qualitative methods, to determine how students define their anxiety about learning mathematics, to determine which symptoms of anxiety, and how anxiety occurs.

The purpose of the study is to examine how the psychological, sociological, and philosophical dimensions together affect the formation of mathematics anxiety and to define the resulting effects which have not been quite emphasized until now. Again, it is aimed to reveal how mathematics anxiety affects students' relationship with themselves as well as with their environment. In this context, the problem to be adressed by the present study is "How do middle school eighth grade students define their Mathematics anxiety?" In accordance with this problem, answers were sought for the following research questions:

1. How do students describe the mathematics anxiety they experience?
2. What are the components of the resulting anxiety and how do they relate?
3. How do students describe the effects of their mathematics concerns on their course success, family and environment, and themselves?

Method

In this study, it is aimed to recognize anxiety as a meaning structure and to define the formation and transformation processes of anxiety. In this respect, phenomenological research design as is one of the qualitative research methods was utilized in the study since it allows for identification based on the experiences, narratives, and opinions of students with mathematics anxiety problems. The phenomenon we work on in the research is the fear of Maths. We tried to define this phenomenon

within the context of learning mathematics aths and operationalized it as to be able to answer Mathematics questions in the lesson and in the exams. We also tried to define how the mathematics anxiety occurs, as well as its components and consequences.

Participants

The data source to the study consisted of 8th grade students studying in two secondary schools affiliated to the Ministry of National Education in the Uluborlu district of Isparta. The data have been collected during the second semester of the 2019-2020 academic year. Four male and four female participants have been included in the study sample. Parents' permission has been sought.

Participants were selected using convenient sampling where the researcher identifies cases that are close to him and are easy to reach (Yıldırım & Şimşek, 2005). The researcher normally attends the classes of 40 students at the school, but since eight of the students stated that they had mathematics anxiety and that they could participate in the study voluntarily, these students constituted the cases in the study. Since these students were going to sit in the national High School Entrance Exam, they were readily available as anxious about learning mathematics. Due to research ethics, students' real names were not included, instead, code names have been assigned to each case.

Data Collection Instrument

In this study, we collected data from middle school 8th grade students on the phenomenon of "mathematics anxiety" by using a semi-structured interview form. Before the interview form was prepared, pilot interviews were conducted with 3 students in order to check the suitability, clarity, and understandability of the questions. After the pilot interviews, the interview form was finalized in line with the student views and the recommendations of an expert on qualitative research. The form consisted of 3 questions that guided the interviews:

1. What does mathematics anxiety look like?
2. How does mathematics anxiety occur (influencing factors and who triggers it)?
3. How does mathematics anxiety affect your Mathematics success, your relationships with friends and family?

No information about mathematics anxiety has been shared with the students before the interviews. Only questions about whether they experienced mathematics anxiety or not have been posed to determine their anxiety level. The interviews were recorded with permission and transcribed for the main analysis. The transcribed interviews were then asked to be confirmed by the participants in order not to leave any room for any kind of misunderstanding.

Data Analysis

Each participant's perspective was examined separately according to the case study method, and then the relationships between events were analyzed to establish semantic connections between them. To this end, data were analyzed through content analysis. The basic process in content analysis is to gather similar data around specific themes and codes and transfer them in a way that the reader can understand. This thematizing and coding process was carried out according to Colaizzi's (1978) phenomenological data analysis approach which consists of seven stages. Audio recordings and notes taken during the interview were transcribed by the researcher. As a result of individual interviews, meaningful data that can be an answer to the research questions were determined by the researcher, and then codes and themes were created in the content analysis process. In order to find the common themes, the codes have been put together and studied first. Themes were created by finding similar aspects among the codes. The themes have been categorized under main headings. We then summarized and interpreted the generated codes, themes, and categories through graphs and tables.

Results

The results of the study are presented in line with the research questions.

Results of the First Research Question

The first research question of the study was "How do students describe the mathematics anxiety they experience and what are the components of the resulting anxiety and how do they relate?" and has been examined in four sub-headings. In the first part, we included student views on how mathematics anxiety is defined and what its symptoms are. The other part covers what are the components of the resulting anxiety and the relationships between them.

Defining mathematics anxiety.

Students' views on the definition of mathematics anxiety have been grouped under three themes: Difficult, scary/creepy, and emotional/mental state. The data obtained can be seen in Table 1.

Table 1. *Analysis of the Answers Given by the Students for the Definition of Mathematics Anxiety*

Themes	*Codes*	*Participants*
1. Grisly/Scary (*n* = 5)	Dog	Hilmi
	Insect	Eda
	Vortex	Mustafa
	Thinner and fire	Mustafa
	Drowning	Berna
	Horror	Nalan
2. Difficult (*n* = 3)	Fishing	Nalan
	Labyrinth	Veli
	Mountain	Furkan
3. Emotional/Mental State (*n* = 3)	Stress	Nalan
	Bias	Havva
	Aggressive, depressed	Mustafa

When Table 1 is examined, five of the students have been observed to tend towards the grisly /scary theme, three to the difficult theme, and three to the emotional/mental state theme. It was seen that the students predominantly expressed their views on the frightening/scary theme. In addition, students expressed their mathematics anxiety as a difficult and emotional/mental state.

Some quotes from the students who define their mathematics anxiety as scary/frightening and the assigned codes are as follows:

Hilmi: "Mathematics anxiety is the fear of being ruined if I can't do it in our future exams. I can compare mathematics anxiety to a dog. Just like a dog, mathematics anxiety can bite us and get rabies." [code: dog]

Mustafa: "Mathematics anxiety is like a whirlpool for me. The more you try to do it, the more you get into it; the more you get into it, the more your hope and determination run out and the vortex swallows it. As a result of this vortex, I am afraid of mathematics." [code: swirl]

Eda: "Mathematics anxiety is being afraid that I will not be able to solve mathematics and that I will not be able to do it in the future. The insect looks a lot like anxiety in my opinion. Being afraid of

the insect as if the insect will bite you is just like what I have experienced in mathematics." [code: insect]

Quotes and codes from students who define mathematics as difficult are as follows:

Veli: "I think Mathematics anxiety is like an unknown labyrinth. I am having a hard time reaching the result in mathematics." [code: labyrinth]

Furkan: "I compare the anxiety of mathematics to a mountain because it is easy to climb the mountain first, that is, the subjects are few and easy, but the mountain gets steeper and more difficult. It becomes unattainable." [code: mountain]

Quotations and codes from students who define mathematics as emotional/mental states are as follows:

Nalan: "As the fear of not being able to complete the mathematics questions continues over time, it creates stress for me and when I see the mathematics questions, I get around my feet." [code: stress]

Havva: "For me, mathematics anxiety is a prejudice originating from thinking that I cannot do it. So my situation is a bit psychological." [code: bias]

Symptoms of mathematics anxiety.

Based on data from student interviews, the symptoms of mathematics anxiety were collected under three themes. These are physical/physical symptoms, cognitive symptoms, and affective symptoms. The data obtained are presented in Table 2.

Table 2. *Analysis of the Answers Given by Students for the Symptoms of Mathematics Anxiety*

Themes	*Codes*	*Participants*
1. Physical/Physical symptoms (*n* = 6)	Headache and dizziness	Mustafa
	Nausea	Hilmi
	Sweating, abdominal pain	Veli
	Cold sweating	Havva
	Freezing of hands and feet due to cold sweating, abdominal pain	Berna
	Being unable to breathe due to depression	Eda
2. Cognitive symptoms (*n* = 1)	Low motivation	Furkan
3. Affective symptoms (*n* = 1)	Feeling of failure	Nalan

When Table 2 is checked, 6 of the students chose the Bodily/Physical Symptoms theme, one of the students the Cognitive Symptoms theme, and one of the students the Affective Symptoms theme. The majority of the students stated that the symptoms of mathematics anxiety were mainly the physical/physical symptoms.

Some of the quotations and codes from students who physically/physically expressed the symptoms of mathematics anxiety are as follows:

Mustafa: "My head hurts a lot and my head starts spinning, especially when I can't do Mathematics questions." [code: headache and dizziness]

Hilmi: "The anxiety that arises when I am not sure, it is as if you eat pastry and sit on your stomach and then you get sick." [code: nausea]

Berna: "When I see Mathematics questions, and especially when I'm between two choices, I get cold sweat, my hands and feet are freezing, my stomach hurts." [code: cold hands and feet due to cold sweat, abdominal pain]

Quotations and codes from students who cognitively expressed the symptoms of mathematics anxiety are as follows:

Furkan: "Mathematics, which is the lesson I have difficulty with, seems to me like climbing a mountain. This leads to a low motivation for my lessons." [code: low motivation]

Quotations and codes from students who affectively expressed the symptoms of mathematics anxiety are as follows:

Nalan: "Hurrying through an exam I want to train can cause anxiety. This creates the idea that I cannot do the questions and I cannot get rid of this thought. This creates a feeling of failure in me." [code: feeling of failure]

Dimensions of mathematics anxiety.

Students' views on the emergence of mathematics anxiety were grouped under three themes: sociological dimension, psychological dimension, and philosophical dimension. The data obtained are presented in Table 3.

Table 3. *Analysis of the Answers Given by Students for the Emergence of Mathematics Anxiety*

Themes	*Codes*	*Participants*
1. Sociological dimension (*n* = 5)	Circle of friends	Furkan
	Class climate	Havva
	Social media news	Berna
	The family's commitment to the idea that the child cannot meet the expectations of the child by comparing it with others	Berna
	Teacher's attitude towards doing wrong	Nalan
	Boredom of teachers' teaching style - students' disaffection from lessons	Mustafa
2. Psychological dimension (*n* = 4)	Hard or even impossible barrier	Furkan
	Lack of acceptance/self-esteem	Hilmi
	Failing	Eda
	Prejudiced attitude of students towards mathematics lesson	Veli
3. Philosophical dimension (*n* = 2)	Feeling worthless and losing the meaning of his existence	Hilmi, Eda

When Table 3 is examined, it can be seen that five of the students highlighted the sociological dimension theme, four of them highlighted the psychological dimension theme, and two of them highlighted the philosophical dimension theme. According to the opinions of the students, it is observed that the sociological dimension and the psychological dimension themes are predominant in the emergence of mathematics anxiety.

Some of the quotations and codes from the students who expressed the emergence of mathematics anxiety as a sociological dimension are as follows;

Havva: "*The biggest reason for my mathematics anxiety to arise is to talking to each other in the classroom environment about the difficulty of mathematics lessons. Also, in the 6th grade, our teacher wrote a problem on the blackboard. Those who knew the question would go to the*

recess, and those who did not would sit in the classroom. I did not know the question and my friends were making fun of me from the classroom door.'' [code: classroom climate-social dimension, humiliation through teasing-psychological effect]

Berna: *"I am always reminded by my family of successful children on TV news or people who are successful in their lessons in our immediate environment (e.g. our neighbor's son). Seeing what my family has done in their time of lack of resources and saying that everything is complete but you are not working increases my anxiety." [code: The family's processing of the idea that the child cannot meet the expectations from the child by comparing it with others-social dimension-crush-psychological effect]*

Mustafa: *"when I said that the subjects were going well, all of a sudden there were things like equations, numbers, coordinate systems, and all the desire for the lesson went away. The teacher talks all the time, and you listen all the time. After a certain period of time, you already ignore what the teacher says. I think the reason for the anxiety is the teachers, because they do very boring lessons." [code: the boredom of teachers' way of processing lessons-the cooling off of students from lessons - the social dimension]*

Quotes and codes of students expressing the emergence of mathematics anxiety as a psychological dimension are as follows;

Eda: "*It comes up in situations where we want to do but can't. When fear and anxiety are combined together, I can't stop thinking that I'll never succeed in mathematics, which makes me move away from mathematics. Again, when I try to solve a question, the number of questions I solve daily also decreases. It can also be called anxiety about not being able to raise it in trials. Rushing a test I want to train can cause anxiety. That's the idea that I can't do the questions, and I can't get rid of that thought. " [code: Fail/Fail-psychological dimension]*

Veli: "*I think the main reason for mathematics anxiety is our prejudices in our minds. It's impossible to solve mathematics questions when we can't get rid of these prejudices." [code: students' biased approaches to mathematics course-psychological dimension]*

Speech quotations and codes of students who express the emergence of mathematics anxiety as a philosophical dimension are as follows;

Hilmi: *"Unless a person can do mathematics, his work does not come, and when he does, I cannot do it anyway. This situation affects me psychologically and I do not even come to mathematics class, it is heartbreaking. I feel worthless about mathematics. It so happens that I am left alone in the world, as if there is no purpose for me to be in the world. These situations also make me feel bad." [code: failure/failure - psychological effect, feeling worthless and losing the meaning of his existence - philosophical dimension]*

Eda: *"Mathematics is a difficult course or it is difficult for me, I don't know. But I am sure that mathematics is a lesson that I failed. The mathematics class I failed makes me feel worthless. Because as I see people who are successful in mathematics class, the thought of being the only one that comes to mind. So, the thought arises that I have one short-coming from the people who are successful in this course. This makes me feel worthless and aimless." [code: acceptance/lack of self-confidence-psychological effect, feeling worthless and losing the meaning of his existence- philosophical dimension].*

Results of the Second Research Question

Components of emerging anxiety and the relationship between these components.

The second research question of the study is "What are the components in the formation of mathematics anxiety?" Regarding this problem, the findings were examined under three themes,

namely the psychological dimension, the philosophical dimension and the sociological dimension, and which or which of these dimensions were effective together was evaluated within the framework of the opinions of the students to the first question. The distribution of the common components of the anxiety is presented in Figure 1.

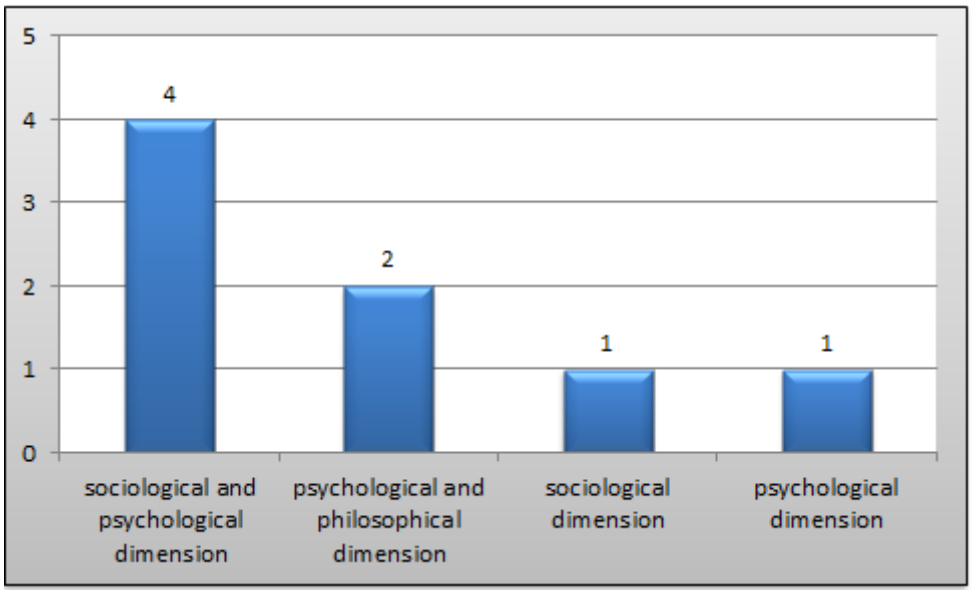

Figure 1. *Distribution of Common Components of Emerging Anxiety*

When Figure 1 is analyzed, it is understood that the students Furkan, Havva, Berna, and Nalan stated that the formation of mathematics anxiety is both sociologically and psychologically two-dimensional. For example, the student named Eve points out that the social dimension that emerges as mocking him within the framework of the classroom climate created by his classmates triggers the effects of the psychological dimension in the form of embarrassment, boredom and humiliation. Berna, on the other hand, stated that she had low self-esteem within the framework of the social dimension formed by her family and social media news and emphasized the relationship between the social dimension and the psychological dimension.

It is understood from the students that Hilmi and Eda stated that mathematics anxiety is two-dimensional both philosophically and psychologically. These students stated that the reason for mathematics anxiety is the psychological effect of not being able to do it in the social environment and the feeling of being worthless and losing the meaning of their existence by going beyond. In these students, it is observed that the psychological effect caused by failure to do the mathematics lesson and the psychological effect triggering the philosophical dimension, losing the meaning of their existence.

Mustafa, one of the students, stated the reason for the occurrence of mathematics anxiety only as a sociological dimension. Also, one of the students, Veli, expressed the reason for mathematics anxiety as the psychological dimension.

Results of the Third Research Question

The third research question of the study was "How do students define the effects of their mathematics anxiety on their academic achievement, family environment and themselves?". The second sub-problem has been examined under two subtitles. The first part examines the effects of anxiety in relation to the psychological dimension while the other covers the effects of anxiety related to the sociological dimension.

Effects of mathematics anxiety related to psychological dimension.

The effects of anxiety related to the psychological dimension are examined under two sub-headings. These are in terms of course success and in terms of self/personal effects.

Perceptions of the effects in terms of course success.

Students' perceptions of the effects of mathematics anxiety on academic achievement were found to emerge under two themes, positive and negative. Three codes were determined for the theme determined as negative. These are poor performance, not attending the lesson, and the effect on other lessons. The data obtained are presented in Table 4.

Table 4. *Analysis of the answers given by students to the effects of mathematics anxiety on academic achievement*

Themes	*Codes*	*Participants*
1. Negative effects (*n* = 7)	Low performance	Hilmi, Veli, Nalan, Furkan, Havva, Berna, Eda
	Reluctance to attend class	Hilmi, Veli, Nalan, Havva, Berna
	Effects on other lessons	Hilmi, Furkan, Eda
2. Positive effects (*n* = 1)	A motivating power	Mustafa
	Increasing willingness to study	Mustafa

When Table 4 is examined, all of the students except Mustafa stated that mathematics anxiety has a negative effect on academic success. Again, all of the students in the negative effects theme stated that mathematics anxiety caused them to decrease performance. 5 students stated the reluctance to participate in the course code under the negative effective theme, and 3 students stated the code for the effect on other courses.

Some quotes and codes for the negative effects theme are presented below.

Hilmi: *"Thinking about mathematics at any time due to anxiety about mathematics or taking only mathematics as a lesson can cause my performance in other courses to decrease. Because of this over thought, your brain is very full and can cause frequent headaches. The headache dulls my desire to study mathematics. As a result, I am not studying this course and I am failing." [code: low performance, reluctance to participate in classes, effects on other lessons]*

Nalan*: "Mathematics anxiety has a negative effect on my academic performance, of course. Actually, I can solve the questions with our teacher in the classroom, but I cannot do the questions, especially in the trials for LGS. Because these questions are very difficult for me and I do not want to do the questions. At that moment, my anxiety is so high that I don't even go to mathematics class later. In the end, this anxiety causes me to fail because it slows down my willingness to work." [code: low performance, unwillingness to attend class]*

Eda: "*Mathematics anxiety starts the moment I attend the class at school. In the lesson, thoughts such as if I cannot understand the subject or if I cannot do it begin and this prevents me from listening and understanding the lesson. As a matter of fact, this emotional state affects my lesson performance in mathematics negatively and decreases my course performance. This situation in mathematics can be generalized to all lessons later. Especially when I see something about numbers in science class, I leave that subject and I fail." [code: low performance, reluctance to participate in classes, effects on other lessons]*

The theme of positive effects was determined only by Mustafa from the participants. The speech excerpt and codes of this student are presented below.

Mustafa: *"Mathematics anxiety has many aspects in terms of academic success, both good and bad. It affects me in a good way. Because the good thing is, the constant thinking of mathematics in*

my mind and inside me prompts me to study. This situation is a force that constantly pushes me." [code: a motivating force, increased willingness to study]

Perceptions in terms of self/personal effects.

Students' perceptions of the personal effects of mathematics anxiety were grouped under four themes: comparing themselves with others, fear of making mistakes, negative experiences, and inability to meet expectations. The data obtained are showed in Table 5.

Table 5. *Analysis of the Answers Given by Students for the Personal Effects of Mathematics Anxiety*

Themes	*Codes*	*Participants*
1. Fear of doing wrong (*n* = 4)	Avoiding mathematics	Furkan, Mustafa, Havva, Berna
	Being in continuous moral-mood disorder due to failure	Furkan, Mustafa, Havva, Berna
	Lack of self confidence	Furkan, Mustafa, Havva, Berna
2. Failure to meet expectations (*n* = 2)	Failure to meet family expectations	Eda, Hilmi
	Failing to meet individual expectations	Eda, Hilmi
3. Comparing themselves with others and negative experiences (*n* = 2)	Comparing themselves to others	Nalan
	Negative experiences	Veli

When Table 5 was examined, four of the students stated the theme of fear of doing wrong, two of failure to meet expectations, two of comparing themselves to others and negative experiences. According to the opinions of students, their perception of the personal effects of mathematics anxiety is mainly dominated by the fear of making mistakes.

Here are some quotes and codes from students who express their perception of the personal effects of mathematics anxiety as a fear of making mistakes;

Mustafa: *"It leads to a lack of self-confidence. It scares me to be treated like an idiot by those around me, especially if my name is in the last place on the lists that hang as a result of the exams. So, I think it really affected us as a personality. We can also be in an introverted mood, or we can also be in an aggressive state. This, in turn, significantly reduces my course success, and I don't even want to go to mathematics class. Even if I go to class, I often worry that I will make mistakes." [code: lack of self-confidence, abstinence from mathematics, constant morale-mood disorder based on failure]*

Berna: "*I am happy when I do the mathematics questions, and when I cannot, I become unhappy, depressed, and anxious. This causes a loss of self-esteem. After all, it makes me an unhappy person and I don't want to solve mathematics questions anymore. I've become afraid of mathematics." [code: being in constant morale-mood due to failure, lack of self-confidence, avoiding mathematics]*

Some of the quotations and codes of students who express their perceptions of the personal effects of mathematics anxiety as not meeting the expectations are as follows;

Hilmi: *"The people around me and myself have a lot of expectations from me, so I work hard in order not to upset them. But when I can't pay for my work, I go crazy and go crazy." [code: family and individual Failure to meet expectations]*

Eda: "*Of course, mathematics anxiety has a lot of effects on myself. Especially when I cannot do the questions, I get nervous, sad and my self-confidence decreasesd. As these feelings grow over time, of course I cannot do the mathematics. When I fail, I regret that the efforts of my teachers*

and my family will be wasted. I don't want to be embarrassed about them." [code: family and individual Failure to meet expectations]

Quotations and codes of students who express their perceptions of the personal effects of mathematics anxiety as comparing themselves with others and negative experiences are as follows;

Nalan: "*I put a lot of effort into mathematics lessons. However, when those who do not make as much effort get higher marks than me, I get very angry and anxious. I feel depressed when I see students who get better grades than me. Thoughts like"He's doing it, why can't I do it?" eat off my brain. Since I constantly compare myself with others, I avoid solving questions in mathematics." [code: do not compare themselves with others]*

Veli: "*I do not like and do not understand mathematics lesson. The reason for this lies in the fact that I have bad experiences with mathematics lessons in the past, and this affects today. My teachers have a great influence on these events I have experienced. I do not understand what he is telling me and when he asks me a question and cannot answer, they get very angry with me. I am sad when I fail, and if this does not improve as time passes, there is silence in the lessons." [code: negative experiences]*

Effects of mathematics anxiety related to the sociological dimension.

The effects of anxiety related to the sociological dimension are examined under two subtitles. These are the perception of its effects in terms of relations with family and relationships with friends.

Perceptions of its effects in terms of relations with the family.

Students' views on the effects of mathematics anxiety on family relationships were grouped under three themes: criticism, high expectation, and comparison with others. The data obtained are presented in Table 6.

Table 6. *Analysis of Students' Answers Regarding the Effects of Mathematics Anxiety in Terms of Relations with Family*

Themes	*Codes*	*Participants*
1. High expectation (*n* = 4)	High expectation	Nalan, Havva, Berna, Eda, Hilmi
	Getting angry, no willing to study	Furkan
2. Comparison with others (*n* = 2)	Comparison with siblings, lack of self-confidence, thinking not being hardworking, getting angry, no willing to study, worry about what if I don't read/not like them	Mustafa
3. The theme of criticism (*n* = 2)	Warning, fear, inability to say something, inner stress	Berna
	Pressure, punishment, breaking ties with family	Veli

When Table 6 is studied, five of the students stated the theme of high expectation, two of them to compare with others, and two of them to be criticized. Accordingly, the participants mostly commented on the high expectation theme.

Some of the speech quotations and codes of the students who express their perceptions about the effects of mathematics anxiety on family relations as high expectations are as follows;

Berna: "*My family has expectations from me in mathematics class. I believe there is verbal intelligence too, but they expect me to enroll in science high school in numerical field. However, I cannot do the mathematics. The more I succeed in mathematics, the higher my value in their eyes; the more the failure the less my value. Since my father is a construction worker, he works*

day and night without complaining about if it's winter and there's snow and he always tells me you study and don't experience financial difficulties like me. I do not want to frustrate my father's efforts. That's why I'm very worried if I can't do it either." [code: high expectation]

Eda: "*Mathematics class is the biggest problem affecting my family relationships. Because when you do mathematics, you don't have any problems in other classes. My parents are very upset that I failed. I can't stand seeing them sad, and I'm very sad. My parents really want me to read, especially my mom. My mother never went to school, and my daughter tells me that I couldn't read, you read. So I especially want to fulfill my mother's expectations of me." [code: high expectation]*

Hilmi: "*Because my mother and father are teachers, especially because my father is a mathematics teacher, I constantly get warnings from my parents that I should study, and they do not tolerate even 1 mistake. My father keeps saying that I'm the son of a mathematician, and that's why I have to do mathematics. It makes me worry so much, I'm so worried about what I'll say to my father if I do it wrong on exams. Because of the way I think about it, I can't concentrate too much on other questions. I wish my parents weren't teachers..." [code: high expectation]*

Some of the quotations and codes of the students who express their perceptions about the effects of mathematics anxiety on family relations as a comparison with others are as follows;

Furkan: *"Mathematics negatively affects my family relationships. When I get a low score in mathematics experiments, he immediately starts to compare with our neighbor's son Hasan. Here is Hasan, good and good words like this annoys me. This situation makes me very uncomfortable and causes both my anxiety to increase and not to study." [code: getting angry, not wanting to study]*

Mustafa: *"I am the youngest child of my family. My brother is studying medicine and my sister is studying law. This is why my family is always comparing me to them. You don't work like your brother or sister; I hear words like they work hard. This situation really lowers me. Okay, I am not hardworking like them, but it annoys me that they always compare me with them and I do not study because of this situation. I am constantly thinking about myself; if I cannot study like my older sister, I am worried…" [code: comparison with siblings, lack of self-confidence, thinking that they are not hardworking, getting angry, not wanting to study, or worrying if I do not read like them]*

Speech quotations and codes of students who express their perception of the effects of mathematics anxiety on family relations as being criticized are as follows;

Berna: "*When I score low on mathematics exams and tests, I am subject to harsh verbal warnings by my family. I can not say anything about these conversations, but it is eating up my heart. I am very scared and intense. This generally affects my relationships with my family (in terms of communication) negatively." [code: warning, fear, inability to say anything, constriction]*

Parent: *"Academic failure, especially in the mathematics lesson, causes pressure from my family. They constantly warn me why you are not working, why you are not successful, you will not be successful. Later, it causes some prohibitions against me. There are penalties such as taking the phone and computer away from me and not allowing me to go outside with my friends. This causes the bond between me and my family to break, and tension builds up between us." [code: repression, punishment, break with family]*

Perceptions about the effects in terms of relationships with friends.

Students' views on the effects of mathematics anxiety in terms of their relationships with friends were grouped under two themes: having an effect (mocking and being excluded from the group) and no effect. The data obtained are presented in Table 7.

Table 7. *Analysis of the Effects of Students' Mathematics Anxiety in Terms of Their Relationship with Friends*

Themes	*Codes*	*Participants*
1. Has an effect (*n* = 6)	Being ridiculed (*n* = 3)	*Nalan, Havva, Eda*
	Exclusion from the group (*n* = 3)	Furkan, Mustafa, Hilmi
2. No effect (*n* = 2)	Does not affect	Berna, Veli

When Table 7 is analyzed, three of the students stated the theme of being ridiculed and three of them were excluded from the group. Two of the students stated that mathematics anxiety did not have any effect on relationships with friends.

Quotations and codes of students who express their perceptions of the effects of mathematics anxiety in terms of their relationships with friends as mocking are as follows;

Havva: *"The biggest reason my mathematics anxiety arises is the classroom environment. Our class is very crowded. Although there are many people in our class, the number of students participating in the class is very small. I do not want to throw myself in the middle of the class because few people participate. If I jump and do it wrong, I don't want to be the subject of fun of my friends. That's why I do not participate in the lesson very much." [code: mocked]*

Eda: "*Of course, it affects my friendships. As people with mathematics anxiety, we tend to be aggressive, angry, and violent towards all people around us. We treat all our friends badly; I mean bad behavior. I use strong language even if I do not speak to them. Because failing something pisses me off. I also do not get a voice in the classroom. Especially, I am afraid that my friend next to me will make fun of me." [code: mocked]*

The quotations and codes of the students who express their perceptions of the effects of mathematics anxiety in terms of their relationships with friends as exclusion from the group are as follows;

Furkan: *"Mathematics anxiety affects the circle of friends. Since I can do mathematics, I have a better quality and orderly circle of friends around me. This will positively affect my career in all aspects and I want to be a leader in the group. The way to do this is that I am very good at mathematics. However, I also know that when I cannot do mathematics, I will be ignored by my circle of friends." [code: exclusion from the group]*

Mustafa: "*I am unsuccessful in mathematics class, but I am a leader person who is listened to in a friendly environment. In my circle of friends, I do not open much of the conversations about mathematics, I change the subject if there is any. Because I know this lack will hurt me. I don't want my place in the group to change. In the eyes of my friends, I am a person who knows and does everything and I do not want this to change. That's why I took mathematics out of my life." [code: exclusion from the group]*

Speech quotes and codes of students who express their perception of the effects of mathematics anxiety in terms of their relationship with a friend as having no effect are as follows;

Berna: "Friends don't affect my relationships because all my friends usually fail Mathematics." *[code: does not affect]*

Veli: *"It has no effect on my friend relationships. Because we don't talk about lessons in a friendly environment, and even if we do, it doesn't affect our relationship." [code: does not affect]*

Discussion, Conclusion and Implications

Students compared mathematics anxiety to scary/frightening situations. In addition, students express their mathematics anxiety as a difficult and emotional/mental state. Considering the codes created based on the opinions of the students; it is seen that students are afraid of mathematics lesson; they have difficulty and this affects their emotional state. In parallel with our study, there are studies in the literature that show that mathematics lesson is difficult (Başar, Ünal, & Yalçın, 2002; Baykul, 2004). Again, in the study conducted by Işık, Çiltaş and Bekdemir (2008), students in our country and around the world stated that they were afraid of, disliked, and anxious about mathematics. Studies that found mathematics anxiety as scary and frightening by students (Lewis & Aiken, 1970; Baloğlu, 2001; Bourne, 1995; Chipman, Krantz, & Silver, 1992; Gierl & Bisanz, 1995; Izard, 1972; Skiba, 1990; Şahin, 2004; Tobias, 1978; Zettle & Houghton, 1998) support the results of the current study. Again, some of the students who participated in the study described mathematics anxiety as difficult. Mc Leod and Adams (1989) and Yetkin (2003) stated in their study that students had difficulties in understanding and learning the mathematics lesson.

It has been determined that the emergence of anxiety has physical/physical, cognitive and affective symptoms. In the relevant literature, parallel to the study, it is stated that anxiety has physical/physical, cognitive and affective symptoms (Cüceloğlu, 2005; Deniz & Üldaş, 2008; Köknel, 1989; Köroğlu, 2006; Semerci, 2007; Tolan, 2002; Yeşilyurt, 2006). As a result of the interviews with the students, the symptoms of mathematics anxiety were stated as physical/physical symptoms. Students who describe the symptoms of the emergence of anxiety as physical/physical; They reported sweating, dizziness, abdominal pain, ice cold hands and feet, inability to breathe, and nausea. In the study of Cüceloğlu (2005), there are physical symptoms of anxiety and these are; sweating, headaches, dizziness, dry mouth, chest tightness, shortness of breath, heart palpitations. Again, Deniz and Üldaş (2008) stated that anxiety causes the emergence of some physiological symptoms such as anxiety, panic, fear, stress, stomach problems, difficulty in breathing, sweating of the palms, and shame. These negative situations that arise due to anxiety cause the academic success of students to be limited.

Another result of the study is "What are the dimensions in the formation of mathematics anxiety?" Concerning this problem, the findings were examined under three themes: psychological dimension, philosophical dimension, and sociological dimension. In this sub-problem, which was created based on the answers given by the students to the first question, it is seen that the students mostly expressed their opinions on the sociological dimension and psychological dimension themes. In the subthemes of the sociological dimension; friend circle and classroom climate, family and teacher, in the sub-themes of the psychological dimension; A flat wall that is difficult or even impossible to overcome, lack of acceptance/self-confidence, Failure/Failure, Prejudiced attitudes of students towards mathematics lesson. In the research studies, it is expected that there will be an increase in their academic success with the increase in social support perceived by students (Erden & Akgül, 2010; Yıldırım, 2006). Social support perception is a powerful factor in solving, preventing, and treating individuals' sociological and psychological problems (Yıldırım, 2006). Therefore, the social support system is a situation that can decrease or increase the mathematics anxiety levels of individuals. Alkan (2011) stated in his study that students who do not receive support from their families have mathematics anxiety. Again, Uzman (2004) stated that families 'supportive role is an important factor in students' overcoming anxiety. Social support offered to students not only improves psychologically and physiologically but also has positive contributions to academic success (Erden & Akgül, 2010; Ergene & Yıldırım, 2003; Yıldırım, 2006). When students' perception of social support increases, students' motivation levels also increase (Şentürk, 2016). It is thought that students who are supported by their friends, families, and especially teachers will be well motivated in the education process.

Considering the results regarding the relations between the dimensions of the emerging anxiety; the sociological-psychological dimension and the psychological-philosophical dimension themes occur

together or trigger each other. This shows the complexity of the concept of anxiety. In the studies conducted so far, the concept of anxiety has been examined through scales prepared in the form of dimensions-factors. However, life itself is not a rather simplified form of anxiety, but rather a state of complexity, seen as, for example, lowering the dignity and status of the family; The family, which is called the immediate social environment, does not trust the child or accept him as it is, and this situation leads to the child's self-confidence-psychological deficiency and this situation also causes them to feel himself as a threat to their existence, which is a worthless-philosophical dimension.

One of the findings of the interviews with the students is that they negatively expressed the effect of mathematics anxiety on academic achievement. Students who stated that it had a negative effect on course achievement stated that mathematics anxiety caused situations such as low performance, not attending the class, and its effect on other lessons. All of the students who stated that mathematics anxiety affected negatively stated that mathematics anxiety caused poor performance. In the relevant literature, there are studies explaining that there is a negative and significant relationship between academic achievement and mathematics anxiety (Arıkam, 2004; Bekdemir, 2007; Erden & Akgül, 2010; Erktin, Dönmez, & Özel, 2006; Erol, 1989; Oksal, Durmaz, & Akın, 2013; Peker & Şentürk, 2012; Richardson & Suinn, 1972; Sapma, 2013; Şahin, 2004; Şentürk, 2010; Tan & Solak, 2015; Yenilmez & Özbey, 2003). Studies and this research show us that students with high levels of anxiety fail in mathematics lessons. As a matter of fact, when students are anxious, they fail in mathematics lesson, when they fail, they are afraid of mathematics and this failure situation becomes permanent. Yüksel and Şahin (2004) concluded in their study that as the level of success of students increases, their anxiety levels decrease. Therefore, it is seen that the mathematics performance of students with mathematics anxiety decreases and there is a negative relationship between anxiety and achievement.

The students stated that the reason for their mathematics anxiety might be their own. The students especially stated that they had a fear of making mistakes and they attributed this to their lack of self-confidence. It can be seen in this finding that students have a self-efficacy problem against mathematics lesson. Due to this self-efficacy problem, students do not solve mathematics problems and do not even want to attend classes. It is an expected but psychologically unwanted result that students do not want to solve mathematics problems and avoid class, and therefore worry. The students stated that they had a lot of difficulty especially in the questions that require logic and reasoning, which were asked under the name of new generation questions, and their anxiety levels increased more when these questions were asked in the mathematics and mock exams. They stated that as a result of the bad results, they were mentally and physically worn out, and this caused communication disorders with their environment. As a matter of fact, the anxiety levels of the students towards the mathematics lesson increase due to the decrease in the self-confidence of the students. The category of perceiving oneself as worthless as a result of the study also shows us that anxiety is an ontological concept. According to Kierkegaard, ontology is defined as a threat to its existence (hurt, feeling bad, insecure person, hence perceiving as worthless) (Flow, 2014). What is meant by the threat here is that the family, which we will call the close social environment, does not trust the child or accept him as it is, and the feeling of self-worth due to the lack of self-confidence in the child. Işık, Çiltaş and Bekdemir (2008) stated in their study that because of the fear of mathematics, students cannot learn mathematics knowledge in lessons and instead memorize the information. In the findings obtained from the study, the students stated that their anxiety would decrease when they have a good command of the field knowledge and they have confidence in themselves. Doruk, Öztürk and Kaplan (2016), on the other hand, found in their research that as students' self-confidence increased, their anxiety would decrease. Aschraft and Krause (2007) stated that the reason why students with high anxiety level fail in mathematics lesson is not only anxiety, but also insufficient mathematics knowledge will increase anxiety. Again, low self-esteem and memory deterioration in people are also a factor that increases anxiety. Koca (2011) stated in his study that students who consider themselves competent have lower mathematics anxiety. As a result, the reason behind the students' fear of doing

wrong is the lack of self-confidence. The anxiety levels of the students decrease with the increase of their self-confidence, and their anxiety levels increase with the decrease of their self-confidence.

When the effects of mathematics anxiety in terms of family relations are examined, it is seen that the mathematics lesson is effective in the deterioration of students' family relationships. The students stated that their relations with their families had deteriorated due to the mathematics lesson. Students stated that their anxiety increased especially because their families had high expectations from them. According to Bayer (2005), Money and reputation are among the reasons for families to have high expectations from their children. People who have fame, reputation and money in the society are regarded as "a man", while those who are the opposite are regarded as "nothing". Alain de Botton (2003) stated that not having high status does not only mean financially limited, individuals' self-esteem decreases. Material gains come at the top of the status understanding in modern societies. Changing this dominant thought in societies is as difficult as changing the direction of rotation around the sun. Therefore, it is inevitable that people who do not have high status will receive limited respect from others in the society. Indeed, according to Alain de Botton (2003), high status is like a key that opens the door to many wealth. Families today also support the statements of Alain de Botton and expect their children to be individuals of high status. Therefore, families put pressure on their children. Again, the students stated that their anxiety increased due to the situation of being compared with others and being criticized by their families. According to the information received from the students, families put pressure on students, whether they want to or not. It is observed that there are oppressive demands by their families that students should always get the highest score. For this reason, parents want students to spend more time in mathematics lesson and to be successful. However, families do not realize that these behaviors will further increase the level of anxiety in their students. As a matter of fact, one of the results of our study revealed that the students were more anxious due to these oppressive attitudes of the families and they also moved away from the mathematics course. Children of families with oppressive attitudes have a lack of self-confidence (Sertelin Mercan & Yavuzer, 2007). An individual with low self-esteem is more likely to experience anxiety than a person with high self-esteem (McKay & Fanning, 2008). Therefore, when parents take an active role in their children's education, the sense of trust in their children will develop.

As a result of interviews with students, it is seen that mathematics anxiety has negative effects on friendship relations. The students who stated that it had negative effects on their friendships defined this situation as being mocked and excluded from the group. Students are not able to actively participate in the lesson, not even wanting to speak in the classroom environment, especially because they fear being ridiculed. Again, because students match their place in the peer groups with being good or bad in mathematics lesson, they think that being successful in mathematics lesson is very important for them and if they fail in mathematics lesson, they will be excluded from peer groups. Therefore, students stated that people who are successful in mathematics lessons are respected in their peer groups, their words are listened to and they are seen as leaders. In addition, the students stated that they were angry, quarrelsome, and contemplative due to their math anxiety and that this situation negatively affected their friendship relations. In these times we live in the communication age, everyone or everything has positive or negative effects on our lives. Students' thoughts of getting reactions from their friends in the classroom and feeling themselves under pressure can lead to mathematics anxiety. In the studies conducted in the literature, it has been determined that the mathematics anxiety levels of the students who are not seen as hardworking by their friends and who think that they will be mocked by them will increase (Alkan, 2011; Bekdemir, 2007; Cantimer, 2016). As a result of this study, it was found that the students had mathematics anxiety because they feared being mocked and excluded by their friends, and this is similar to the results of the studies in the literature.

Based on the results related to the first problem, the social help the students get from their friends, families and teachers increases their academic successes. Therefore, the people in the social help

extent should make the students feel that they help her. One of the reasons of mathematics fear seen on the students is that the mathematics is seen frightening and difficult. There is a common belief that Mathematics lesson is difficult in Turkey. This shows that there is a prejudgement against the Mathematics lesson among the students. So exercises related to get rid of this prejudgement can be done. One of the reasons of the fear the students feel is to have mistakes and be laughed at. It's mostly the teacher's duty to get rid of this fear. The teachers should prepare democratic and supportive classroom environment to reduce the fear of making mistakes and make the students reply with courage. The current study is limited with the eighth grade students and phenomenology research design. Different class levels with other qualitative designs may be studied in the future.

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TÜRKÇE GENİŞ ÖZET

Sekizinci Sınıf Öğrencilerinin Matematik Kaygılarının İncelenmesi

Giriş

İnsanlığın var oluşundan itibaren süregelen kaygı kavramı üzerinde uzun yıllar düşünülmüştür. Cüceloğlu'na (2005) göre kaygı; korku, tasa, sıkıntı, başarısızlık hissi, acizlik, yargılanma gibi duygulardan birini veya birçoğunu içeren kavram olarak tanımlanmıştır. İnsanların temel duygularından biri olarak kabul edilen kaygı, etkili öğrenmeyi olumsuz biçimde etkileyen bir durum olarak karşımıza çıkmaktadır. Matematik kaygısı nedeniyle bireylerin matematik dersini sevmedikleri, nefret ettikleri ve bu dersi yapamayacaklarını düşünmeleri sebebi ile matematik dersinden uzaklaştıkları düşünülmektedir (Baloğlu, 2001). Bu durumların sonucu olarak da bireylerde güvensizlik, matematiği yapamayacağına dair düşünce ve yeteneklerinin farkına varamama durumları oluşmaktadır (Yenilmez & Özbey, 2006). Matematik dersinden uzaklaşan öğrencilerin bu dersten başarılı olmamaları da kaçınılmaz bir durumdur. Başarısızlığa yol açan kaygının altında yatan nedenlerin araştırılmasının, matematik eğitiminde gerek öğrenciler gerekse okul eğitimi bakımından istenen başarı düzeyine erişebilmek için önemli olduğu düşünülmektedir. Literatürdeki çoğu araştırmada öğrencilerin matematik kaygı düzeylerinin cinsiyet, sınıf düzeyi, anne baba eğitim durumu, genel başarı durumu, öğretmenlerin tutumu ve sosyo ekonomik düzeyleri arasında değişiminin nicel araştırma yöntemleriyle incelendiği görülmektedir (Adal & Yavuz, 2017; Akgül, 2008; Ateş & Güler, 2016; Baban, 2018; Borlat, 2018; Bozkurt, 2012; Doğru & Arslan, 2008; Eldemir, 2006; Kılıç, 2011; Şentürk, 2016; Taşdemir, 2013; Tuncer & Yılmaz, 2016; Yenihayat, 2007). Matematik kaygısıyla ilgili yapılan çalışmaların sayı bakımından azımsanmayacak kadar çok olduğu söylenebilir. Ancak yapılan çalışmaların genellikle nicel araştırma yöntemlerinin kullanılarak yapıldığı, nitel araştırma yöntemlerinin ise göz ardı edildiği görülmektedir. Yapılan bu nicel araştırmalar; matematik kaygısının öğrenci için ne anlama geldiğini, matematik kaygısını nelerin tetiklediğini ve nasıl ortaya çıktığını ve öğrencilerin arkadaş, aile, ders başarılarında nasıl bir etkiye sahip olduğunu açıklamada tek başına yeterli olmayabilir. Bu yüzden nitel araştırma yöntemleri bu tür sorulara odaklanarak matematik kaygısının ne anlama geldiğini derinlemesine ortaya çıkarmaktadır (Yıldırım & Şimşek, 2005). Nitekim nitel yöntemler kullanılarak yaptığımız bu çalışmanın amacı, öğrencilerin matematik öğrenmeye yönelik kaygılarını nasıl tanımladıklarını saptamak, kaygının hangi belirtilerinin olduğunu belirlemek ve kaygının nasıl ortaya çıktığını tanımlamaktır. Araştırmada matematik kaygısının oluşmasında psikolojik, sosyolojik ve felsefik boyutların birlikte nasıl etkili olduğu incelenerek şimdiye değin üzerinde durulmayan bileşke etkilerin tanımlanması amaçlanmaktadır. Bu kapsamda çalışmanın problem cümlesi "Ortaokul sekizinci sınıf öğrencileri matematik kaygılarını nasıl tanımlamaktadır?" olarak ifade edilmektedir. Bu araştırmaya uygun olarak aşağıdaki alt problemlere yanıtlar aranmıştır:

1. Öğrencilerin yaşadıkları matematik kaygısı nasıl tanımlanmaktadır?
2. Matematik kaygısının bileşenleri nedir ve aralarında nasıl bir ilişki bulunmaktadır.
3. Öğrenciler yaşadıkları matematik kaygılarının ders başarılarına, aile ile çevresine ve kendisine yönelik etkilerini nasıl tanımlamaktadır?

Yöntem

Çalışmamızda nitel araştırma yöntemlerinden fenomenoloji araştırma deseni kullanılmıştır. Katılımcılar, amaçlı ve kolay ulaşılabilir durum örneklemesi tekniğiyle belirlenmiştir. Her bir katılımcı, örnek olay yöntemine göre ayrı ayrı incelenmiş, sonrasında aralarında anlamsal bağlar kurmak için olaylar arası ilişkiler saptanmaya çalışılmıştır. Araştırmada veri toplama aracı olarak yarı yapılandırılmış görüşme formu kullanılarak ortaokul sekizinci sınıf öğrencilerinin "matematik kaygısı" olgusu hakkında veri toplanması amaçlanmıştır. Görüşme formu hazırlanmadan önce soruların amaca uygunluğu, açıklığı ve anlaşılabilirliğini kontrol etmek amacıyla 3 öğrenci ile pilot görüşme gerçekleştirilmiştir. Veriler, içerik analizi tekniği yoluyla çözümlenmeye çalışılmıştır. Tema ve kodlama süreci Colaizzi'nin (1978) yedi aşamadan oluşan fenomenolojik veri analizi yaklaşımına göre yürütülmüştür.

Bulgular

Araştırmada elde edilen bazı önemli bulgular aşağıda sunulmaktadır:

- Öğrencilerin matematik kaygısını ağırlıklı olarak ürkütücü/korkutucu durumlara yönelik tanımladıkları görülmektedir.
- Öğrenciler matematik kaygısının belirtilerini bedensel/fiziksel belirtiler olarak belirtmişlerdir.
- Matematik kaygısının ortaya çıkmasında sosyolojik ve psikolojik boyutun baskın olduğu gözlenmektedir.
- Ortaya çıkan kaygının boyutları arasındaki ilişkilere bakıldığında; sosyolojik- psikolojik boyut ve psikolojik-felsefik boyut temalarının birlikte ortaya çıktığı veya birbirini tetiklediği görülmektedir.
- Öğrenciler matematik kaygısının ders başarısı açısından olumsuz bir etkiye sahip olduğunu belirtmişlerdir.
- Öğrenciler yaşadıkları matematik kaygısının nedenini kendilerinden kaynaklı olabileceğini belirtmişlerdir. Öğrenciler özellikle yanlış yapma korkusu yaşadıklarını söylemişlerdir ve bunun gerekçesini de kendilerindeki özgüven eksikliğine bağlamışlardır.
- Öğrenciler matematik dersinden dolayı aileleriyle ilişkilerinin bozulduğunu ifade etmişlerdir. Öğrenciler özellikle ailelerinin kendilerinden yüksek beklenti içerisinde olmalarından dolayı kaygılarının çok arttığını ifade etmişlerdir.
- Öğrencilerle yapılan görüşmeler neticesinde matematik kaygısının arkadaşlık ilişkilerine olumsuz etkileri olduğu görülmektedir. Arkadaş ilişkilerine olumsuz etkilerde bulunduğunu belirten öğrenciler bu durumu alay edilme ve gruptan dışlanma olarak tanımlamaktadırlar.

Tartışma, Sonuç ve Öneriler

Öğrenciler matematik kaygısını korkutucu/ürkütücü olan durumlara benzetmişlerdir. Ayrıca öğrenciler matematik kaygısını zor ve duygusal/ruhsal durum olarak da ifade etmektedirler. Öğrencilerin görüşlerinden hareketle oluşturulan kodlara bakıldığında; öğrencilerin matematik dersinden korktukları, zorlandıkları ve bunun duygusal durumlarına etkilerde bulunduğu görülmektedir. Çalışmamızla paralel olarak alan yazında da matematik dersinin zor olduğuna yönelik bulgulara sahip araştırmalar bulunmaktadır (Başar, Ünal, & Yalçın, 2002; Baykul, 2004).

Kaygının ortaya çıkmasının fiziksel/bedensel, bilişsel, duyuşsal belirtileri olduğu saptanmıştır. İlgili literatürde de çalışmamıza paralel olarak kaygının fiziksel/bedensel, bilişsel, duyuşsal belirtilerinin olduğu ifade edilmektedir (Cüceloğlu, 2005; Deniz & Üldaş, 2008; Köknel, 1989; Köroğlu, 2006; Semerci, 2007; Tolan, 2002; Yeşilyurt, 2006). Kaygının ortaya çıkmasının belirtilerini fiziksel/bedensel olarak tanımlayan öğrenciler bu belirtilerin; terlemek, baş dönmesi, karın ağrısı, el ve ayağın buz gibi olması, nefes alamamak, mide bulantısı olarak belirtmişlerdir.

Öğrenciler matematik kaygısının ortaya çıkmasında sosyolojik ve psikolojik faktörlerin etkili olduğunu belirtmişlerdir. Sosyal destek algısı bireylerin sosyolojik ve psikolojik sorunlarının çözümlenmesinde, önlenmesinde ve tedavi edilmesinde güçlü bir etkendir (Yıldırım, 2006). Uzman (2004), ailelerin destekleyici rolünde olmasının öğrencilerin kaygının üstesinden gelmesinde önemli bir faktör olduğunu belirtmiştir. Öğrencilere sunulan sosyal desteğin psikolojik ve fizyolojik olarak iyi gelmesinin yanında akademik olarak da başarısına olumlu katkıları bulunmaktadır (Erden & Akgül, 2010; Ergene & Yıldırım, 2003; Yıldırım, 2006). Öğrencilerdeki sosyal destek algısı arttığı zaman öğrencilerin güdülenme düzeyleri de artmaktadır (Şentürk, 2016). Arkadaşları, aileleri özellikle de öğretmenleri tarafından desteklenen öğrencilerin eğitim sürecinde iyi motive olacakları düşünülmektedir.

Ortaya çıkan kaygının boyutları arasındaki ilişkilere ilişkin sonuçlara bakıldığında; sosyolojik-psikolojik boyut ve psikolojik-felsefik boyut temalarının birlikte ortaya çıktığı veya birbirini tetiklediği görülmektedir. Bu da kaygı kavramının karmaşıklığını göstermektedir. Zaten şimdiye değin yapılan araştırmalardaki incelemelerde kaygı kavramına boyutlar-faktörler şeklinde hazırlanmış ölçekler aracılığıyla bakılmıştır. Oysa hayatın kendisi kaygının oldukça basite indirgenmiş haliyle değil, tersine örneğin ailenin itibarını-statüsünü düşürme şeklinde görülen kaygı tam bir karmaşıklık halidir; yakın sosyal çevre olarak adlandırılan ailenin çocuk üzerindeki güvenmeme veya onu olduğu gibi kabul etmeme ile bu durumun çocukta özgüven - psikolojik eksikliğine ve bu durum aynı zamanda kendini değersiz - felsefi bir boyut olan ontolojik başka bir ifadeyle varlığına tehdit olarak hissetmesine yol açmaktadır.

Öğrencilerle yapılan görüşmelerin bulgularından biri de matematik kaygısının ders başarıları üzerindeki etkisini olumsuz olarak ifade etmeleridir. Ders başarılarına olumsuz etkileri olduğunu belirten öğrenciler matematik kaygısının performans düşüklüğüne, derse katılmama durumuna, diğer derslere etkisi gibi durumlara yol açtığını belirtmişlerdir. Öğrencilerden matematik kaygısını olumsuz etkiler şeklinde belirtenlerin tamamı matematik kaygısının performans düşüklüğüne yol açtığını belirtmişlerdir.

Öğrenciler yaşadıkları matematik kaygısının nedenini kendilerinden kaynaklı olabileceğini belirtmişlerdir. Öğrenciler özellikle yanlış yapma korkusu yaşadıklarını söylemişlerdir ve bunun gerekçesini de kendilerindeki özgüven eksikliğine bağlamışlardır. Çalışmamızın sonucunda oluşan kendini değersiz olarak algılama kategorisi de bize gösteriyor ki kaygı ontolojik bir kavramdır. Kierkegaard'a göre ontoloji, varlığına yönelik (incinme, kötü hissetme, güven vermeyen kişi, dolayısıyla değersiz olarak algılama) tehdit olarak tanımlanmaktadır (Akış, 2014). Buradaki tehditten kasıt, yakın sosyal çevre olarak adlandıracağımız ailenin çocuğuna güvenmemesi veya onu olduğu gibi kabul etmemesi ile bu durumun çocukta oluşturduğu özgüven eksikliğine bağlı olarak ortaya çıkan kendini değersiz hissetme durumudur.

Matematik kaygısının aile ile ilişkiler açısından etkileri incelendiğinde, öğrencilerin aile ile ilişkilerinin bozulmasında matematik dersinin etkili olduğu görülmektedir. Öğrenciler özellikle ailelerinin kendilerinden yüksek beklenti içerisinde olmalarından dolayı kaygılarının çok arttığını ifade etmişlerdir. Alain de Botton'a (2003) göre ailelerin çocuklarından yüksek beklenti içerisinde olma nedenleri arasında para, ün ve itibar gelmektedir. Alain de Botton'a (2003) göre yüksek statü birçok zenginliğin kapısını açan bir anahtar gibidir. Günümüzdeki aileler de Alain de Botton'un anlattığı ifadeleri destekler nitelikte hareket etmekte ve çocuklarının yüksek statülü bireyler olmalarını beklemektedirler. Bu yüzden de aileler çocukları üzerinde baskı kurmaktadırlar.

Öğrencilerle yapılan görüşmeler neticesinde matematik kaygısının arkadaşlık ilişkilerine alay edilme ve gruptan dışlanma olarak olumsuz etkileri olduğu görülmektedir. Öğrenciler özellikle alay edilme korkusu yaşadıkları için sınıf ortamında söz hakkı dahi istemeyerek derse aktif katılım gösterememektedirler. Yine öğrenciler arkadaş gruplarındaki yerlerini matematik dersinde iyi ya da

kötü olmakla eşleştirdikleri için matematik dersinde başarılı olmanın onlar için çok önemli olduğunu ve eğer matematik dersinde başarısız olurlarsa arkadaş gruplarından dışlanacaklarını düşünmektedirler.

Çalışmanın birinci alt problemine yönelik elde edilen sonuca göre öğrencilerin arkadaş çevresi, aile, öğretmenler tarafından algıladıkları sosyal destek akademik başarılarını arttırmaktadır. Bu yüzden sosyal destek kapsamı içerisindeki kişiler, öğrencilere destek olduklarını hissettirmelilerdir. Öğrencilerde oluşan matematik kaygısının sebeplerinden birisi matematik dersinin korkutucu ve zor olarak görülmesidir. Zaten Türkiye'de matematik dersinin zor olduğuna dair yaygın bir inanış vardır. Bu da öğrencilerde matematik dersine karşı bir önyargı olduğunu göstermektedir. Bu yüzden öğrencilerde bulunan bu ön yargılarını ortadan kaldırmaya yönelik etkinlikler yapılabilir. Öğrencilerde oluşan kaygının sebeplerinden birisi de ders esnasında yanlış yapma ve alay edilme korkusudur. Burada oluşan kaygının ortadan kaldırılması için en büyük görev öğretmenlere düşmektedir. Öğretmenlerin demokratik ve destekleyici sınıf ortamı oluşturmaları öğrencilerin yanlış yapma korkularını giderecektir ve cesaretle cevap vermelerini sağlayacaktır. Çalışma sekizinci sınıf öğrencilerle ve fenomoloji deseniyle sınırlandırılmıştır. Farklı sınıf düzeyleri ve diğer nitel araştırma desenleri kullanılarak da çalışılabilir.

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The COVID-19 Pandemic, University Students in Turkey, and Emergency Online Learning

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Abstract

In this study, we determined how university students in Turkey, a developing country, were able to transition into emergency online learning during COVID-19, what challenges they faced, and the positive experiences that may have come out of this process. We also explored how their positive and negative emotional states may have changed as a result of COVID-19. The sample included 125 students studying in different universities across Turkey who answered an online questionnaire. Results indicated that students' positive emotions decreased and negative emotions increased significantly. Results also showed that the students experienced the following challenges during emergency online learning: not benefiting from online classes, lack of motivation in following online classes, problems related to family life and finances, increased levels of homework, and problems related to Internet access. In terms of positive experiences, students indicated spending more quality time with family, time for hobbies and personal development, examining life and personal existence, increase in the level of academic development due to homework assignments, and increase in grade-point-average. Students' answers also revealed that their instructors may have been going through some difficulties as well. Students highlighted complaints related to their instructors' lack of interest in teaching, not holding lectures, or not uploading class notes or slides, and their difficulty in getting in touch with their instructors. Implications are discussed.

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Introduction

The global COVID-19 pandemic, which started in the first quarter of 2020 and continues presently, has affected education globally (Dhawan, 2020). Educational institutions around the world had to rearrange

their academic calendars and education methods (Liguori & Winkler, 2020). This rearrangement has also entailed a transition to online learning in higher educational institutions in terms of learning methods (Aguilera-Hermida, 2020). This transition has manifested as an abandonment of traditional learning methods in the classroom and a focus of faculty members on the transition to online education in a short period of time (UNESCO, 2020). Academic institutions have also started to consider factors in the adoption of online learning methods, as well as educational quality (Liguori & Winkler, 2020).

Before the pandemic, many higher education institutions that offered online education had a supportive infrastructure for learners and teachers, but during the pandemic, all institutions had to implement something called emergency online learning (Hodges, Moore, Lockee, Trust, & Bond, 2020). The institutions with limited technological infrastructure or knowledge faced challenges as they tried to deliver high-quality education (Crawford et al., 2020). As the literature indicates, delivery of effective online education requires planning and a consideration of the needs of different entities (e.g., students, instructors, administrators, etc.) involved in the process (Aguilera-Hermida, 2020; Hodges et al., 2020; Muller, Goh, Lim, & Gao, 2021).

Online learning is defined as learning activities carried out in online environments through the use of various devices with Internet access (Singh & Thurman, 2019). Rapid developments in technology have increased diverse methods of the delivery of education, which also led to the use of different terminology to describe these methods (McBrien, 2009; Singh & Thurman, 2019). Some of these terms that are also used in this article are online learning, open learning, web-based learning, computer-aided learning, and blended learning (Cojocariu, Lazar, Nedef, & Lazar, 2014). The two common characteristics of all of these terms are having an electronic device to access online content and participating in online learning from any physical place (Cojocariu et al., 2014).

Online teaching can be delivered through synchronous learning environments or asynchronous learning environments. Littlefield (2018) defines synchronous learning as the participation and interaction of students and teachers in live courses where this interaction results in real-time communication and feedback. In defining asynchronous learning, on the other hand, Littlefield (2018) states that this type of learning does not include live interaction as course content is accessed at different times based on the student's availability. Littlefield (2008) also explains the advantages of synchronous learning as providing an opportunity for social and academic interaction among the instructor and the students, ensuring that students participate in the course interactively, and making it possible to return to in-person courses once it is safe to do so. The disadvantages of synchronous learning, however, are that it requires having Internet access to online platforms, having knowledge of how to use these platforms, and having a computer and/or mobile phone to access live lectures (Basilaia, Dgebuadze, Kantaria, & Chokhonelidze, 2020).

Due to the COVID-19 outbreak, education stakeholders (students, academic personnel, etc.) are required to consider various factors such as emotions and thoughts, technological infrastructure, presentation of the course curriculum, and measurement and assessment to adapt to this mandatory transformation period in higher education (Chick et al., 2020). Among these factors, it is emphasized that students' perceptions about online learning are important to ensure their adaptation to the process and increase their efficiency (Song, Singleton, Hill, & Koh, 2004). Problems like the lack of social interaction in the learning process, theoretical course content not allowing for functional practice, and structuring only presentation-oriented course contents cause negative perceptions about online learning (Song et al., 2004). Complexity, lack of information, and the unexpected beginning of the transition to online education may particularly bring about feelings such as disappointment and failure.

Young et al. (2021) analyzed the emotional experiences and coping strategies between younger and older adults during the pandemic. The authors found that older adults showed a greater perception of vulnerability, but younger adults experienced more stress and negative affect in response to the pandemic. Similarly, the literature indicates that the pandemic had a negative effect on young adults. Zhang and Ma (2020) found that the pandemic had a mild stressful impact on adults' lives. More than half of the participants in their study felt horrified and apprehensive, but they did not feel helpless, probably because they were with family members and had more time to rest and relax. Kazmi, Hasan, Talib, and Saxena (2020) explored the impact of COVID-19 on the mental health of adults between 15 and 50 years old. Their study found that young adults between 21 years to 25 years showed the highest levels of stress and anxiety compared to the other age groups. Other studies in the literature indicate that college students experienced distress due to the uncertainty and abrupt transition to online learning. Many students had to cease their internships and/or delay graduation (Zhai & Du, 2020). In one particular study, Denisov, Petrenko, Koretskaya, and Bencic (2021) compared the levels of anxiety and depression of higher education students in Russia and Turkey. Both groups had similar levels of anxiety and depression at the beginning of the pandemic, but in November 2020, Turkey enforced more restrictive rules (e.g., schedules for going outside based on age, curfew, etc.). The authors collected a second set of data in December 2020 and found that Turkish students had a significant increase of depression and anxiety compared with Russian students after the COVID-19 restrictions became stricter. This study made it clear that the pandemic and the governmental measures had a negative effect on students' mental health.

The emotional state of learners while pursuing online learning affects their learning outcomes (Pekrun, 2014; Yu, Huang, Han, & Li, 2020). Students experience emotions (while learning), or they bring them from life outside school. These emotions can be positive or negative and vary in intensity and frequency. Both positive and negative emotions influence learning by affecting students' attention, motivation, metacognition, and self-regulation (Yu et al., 2020). Positive emotions are those experienced as pleasant such as enjoyment, satisfaction, hope, sense of belongingness, and feelings of competency. Positive emotions enhance flexible thought, increase motivation, and positively appraise one's competence. Sense of belongingness is associated with social connectedness: an individual's opinion of self in relation to others. Social connectedness also plays a positive role in developing confidence and higher-order thinking skills among university students (Sultan, Hussain, & Fatima, 2020). Yu et al. (2020) found that, in the online learning environment, social connectedness increases the students' willingness to complete learning objectives and tasks (learning persistence) and decreases students' anxiety. Similarly, Sultan et al. (2020) found that the use of the internet for learning purposes increases students' social connectedness and life satisfaction. Both, use of the internet and social connectedness, were positively connected with learning achievements.

Conversely, intense and/or frequent negative emotions obstruct students' learning. Negative emotions such as anxiety, stress, shame, apathy, or boredom are perceived as unpleasant. Experiencing these emotions reduces interest, attention, and the use of learning strategies in both face-to-face (Pekrun, 2014) and online learning (Engelmann & Bannert, 2019; Yu et al., 2020). Experiences of low control about online learning can decrease students' positive emotions and lower their motivation for completing online academic qualifications. Furthermore, anxiety has a negative association (Heckel & Ringeisen, 2019). Therefore, it is important to analyze students' emotional states because they might affect students' learning and cognitive processes (Engelmann & Bannert, 2019; Heckel & Ringeisen, 2019).

The literature indicates that there was a different set of international responses to COVID-19. China, which reported the first case of COVID-19, is considered a country that has had a short time to prepare for online higher education (Qu, 2020). In Germany, for example, Crawford et al. (2020) stated that similar to

many other countries, each university first acted on its own to figure out how to respond to the outbreak. One German university suspended residential education in March, with a decision to return to residential education toward the end of April 2020. However, the German government's ban on social contact at a later time forced all higher education institutions to act in a more uniform way. Previous experience with SARS in Hong Kong and previous experience with MERS in South Korea, on the other hand, helped universities in these places to quickly respond to COVID-19 and know what steps to implement for a smoother transition to emergency online learning (Crawford et al., 2020). In Georgia, the higher education system, which was face-to-face, was challenged when, from March 2nd of 2020, the education process was suspended in universities and schools countrywide due to the spread of COVID-19 at the recommendation of the National Center of Disease Control of Georgia (Basilaia et al., 2020). Countries and institutions that had a better technological infrastructure also responded more effectively to the outbreak and experienced a relatively smooth transition to emergency online learning (Crawford et al., 2020).

Following global trends, the universities of Turkey also started to rapidly apply online education. Previously, 123 out of 207 universities had Distance Education Application and Research Centers (UZEM) and had experience in distance education. These universities continued their education via a complete distance education. However, many others started to provide distance education with only 3 weeks of preparation (Tosun, 2021). The Council of Higher Education in Turkey announced its first resolution on distance education on March 18, 2020. In this resolution, which was presented as a road map for distance education, distance education was structured in terms of regulation, infrastructure, human resources, content, and implementation. It was specified that universities would be able to use synchronous and asynchronous teaching methods in practice. Undergraduate and associate degree programs were asked to particularly focus on asynchronous practices depending on the difficulties that arise in the process (Higher Education Council [YÖK], 2020).

In Turkey, different studies analyzed the experiences of teachers and administrators of K-12 public schools during the transition to emergency online learning (Albiser et al., 2020; Çilek, Uçan, & Ermiş, 2021; Han, Demirbilek, Demirtaş, 2021). Regarding higher education, Tuson (2021) presented an analysis of the problems and solutions that the Turkish universities faced during the transition to online learning. Karadag (2021) analyzed how the pandemic affected grade inflation in higher education and found that during the pandemic, students received higher grades than before. Güven and Uçar (2021) evaluated the opinions of students at a college of education who were taking an internship course and completing their pre-service internship training at a K-12 school. The results of their study showed that these pre-service interns perceived emergency online learning as having deficiencies in terms of communication and they were concerned that emergency online learning was not preparing them enough for the real world. They, however, found their college instructors to be competent in this process. In another study, Kahya (2021) analyzed the students' acceptance or rejection of the emergency online learning. However, to the extent of our knowledge, there are no studies that explored the students' experiences and emotional states in Turkey during the transition to emergency online learning due to the pandemic. In the literature, there are studies about the students' experiences and challenges during the transition to online learning, but the results vary depending on the country or the students' particular circumstances. Trout (2020) examined the perception of the transition among ninety-two U.S. college students who have not taken online courses in the past. In Trout's study, students reported a decline in motivation due to the absence of in-person interaction with peers and instructors. However, the willingness to take courses in the future depended on their experience during the pandemic. Students who perceived that online classes were effective and increased their schedule flexibility were more likely to take future online courses.

Students' experiences vary based on the country and the accessibility to technology. Lassoued, Alhendawi, and Bashitialshaaer (2020) explored the students' experiences in distance learning during COVID-19, but they focused on a few Arab universities and their respective countries. They found that the major obstacle to achieving quality distance learning was the lack of capabilities to communicate remotely (devices, internet, apps), problems with the internet flow (speed), and students' difficulty understanding some subjects due to the absence of classroom interaction. Similarly, Adnan and Anwar (2020) conducted research to review the opinions of university students studying in Pakistan on the transition to online education during the COVID-19 outbreak. The results showed that online learning was challenging for students due to lack of access to the internet, ineffective technology, and difficulty of interaction (contact between students and professors). Adnan and Anwar (2020) concluded that online learning may not be effective for "underdeveloped countries like Pakistan" (p. 49), because of difficulty accessing the internet.

Emergency online learning created unique circumstances. The process of the transition to online education during the COVID-19 pandemic has affected university administrators, students, and academics at different levels (Toquero, 2020; Tosun, 2021). Therefore, it is emphasized that academic institutions should determine and evaluate the needs and thoughts of all parties involved in this transition process. Among these parties, students are the ones who are affected the most. The current research study is a follow-up analysis of an international research project aimed to determine the students' use and acceptance of online education during the transition period of the COVID-19 pandemic (Aguilera-Hermida et al., 2021). The current study aimed to explore the experiences of Turkish students during COVID-19, the specific challenges that they faced, and how students' positive and negative emotional states changed. We defined positive emotional states as life satisfaction, happiness, feeling competent, and social connectedness. We defined negative emotional states as anxiety, stress, and apathy. Therefore, our research questions were (1) what were the challenges and positive aspects that the Turkish college students experienced while studying online due to COVID-19, and (2) did students perceive changes in their emotional states?

Method

Research Design

This was a cross-sectional quantitative study with a qualitative component. The study analyzed the experiences of Turkish students while studying in emergency online learning due to COVID-19. A questionnaire asked students to indicate their experiences related to different variables.

Participants

Participants of this research study consisted of 125 undergraduate students studying in Turkey, recruited using convenience and snowball sampling methods. Seventy-eight students were from one university located Ankara where one of the authors is a lecturer, and 47 students were from 29 other universities around the country. Students were enrolled in the departments of the faculties of education, science and letters, engineering, health sciences, economics, administrative sciences, and law. The sample included 108 (86.4%) women and 17 (13.6%) men. Students' ages ranged from 19 to 26 years, and 88.8% of the students were living with their families during the COVID-19 outbreak. Among the students participating in the research, 20.8% were in their first year of the degree program, 44% in the second year, 28.8% in the third year, and 6.4% in the fourth year.

Data Collection Instruments

Online Questionnaire (Self-Report) – Data were collected using Google forms during Fall 2020, when Turkish students were receiving education completely online. The questionnaire was developed by the

first author to capture the students' experiences with online learning during the emergency online learning due to COVID-19. Answers were based on students' perceptions (self-report). The online survey asked students about activities, attitudes, emotions, and their educational experience after they transitioned to emergency online learning. The questionnaire had the informed consent on the first screen/page and indicated that the study was exploring college students' perceptions about how COVID-19 government measures (stay-at-home orders and/or physical distance) and remote learning has affected their learning process. It included demographic information such as the year of study, sex, age, department of study, university, and the students' living situation.

Information about the variables related to positive emotions (life satisfaction, happiness, feeling competent, social connectedness) and negative emotions (stress, anxiety, apathy) was also gathered through this questionnaire. The instructions said,"Describe how your emotional states have changed after the stay-at-home period related to Covid-19 " and each emotional state was listed with a brief description (e.g., feeling competent – able to do things; anxiety – feeling of apprehension, uneasiness). Students were asked to indicate the change that they experienced for each of them based on a 5-point scale: (1) decreased significantly, (2) decreased slightly, (3) no change, (4) increased slightly, and (5) increased significantly. Students were not asked about their emotional states before the COVID-19 outbreak. They were asked about their perception of change related to their emotions after COVID-19 happened. Therefore, no change (3) was considered neutral.

In addition, there were two open-ended questions in the questionnaire which made up the qualitative component of the study. These questions were as follows: "Please explain the difficulties you experienced related to your online education during the COVID-19 outbreak" and "What are the positive aspects of the online education process you started due to the COVID-19 outbreak?"

The questionnaires were answered anonymously. Students could stop participating in the study at any time. No monetary rewards were given for completing the questionnaire.

Data Collection Process

Permission from the Ethics Commission of a large public university was received before starting to collect the data. An email was sent through a listserv to invite students to participate in the survey. The link to the online questionnaire was included in this email. Furthermore, we asked the students to send the information about the study and the link to the survey to other students that they knew. Once a participant clicked on the link to access the online survey, they were first presented with a consent form. After they read the form and agreed to participate in the study, next they were shown the questionnaire.

Data Analysis

For the quantitative portion of the study, statistical analyses were performed using SPSS to analyze the data. Means, standard deviations, and frequencies (percentages) were calculated for each variable. Moreover, the means were compared using a *t*-test and number 3 (no change) to observe if the level of variables related to positive emotions and negative emotions increased or decreased. Even though we had a strong Cronbach's Alpha for both constructs (positive emotions, .84; negative emotions, .86), we considered it more helpful to analyze the items individually. One student was not included in some of the analyses because the participant did not answer the majority of questions but answered the open-ended questions and items related to the demographics.

For the qualitative the data, we used content analysis and used codes to review facts from the text, and then presented the findings in the form of frequency of key categories or themes (Bengtsson, 2016). More specifically, the answers from the two open-ended questions were analyzed manually with the use

of Excel (Microsoft Office). Codes for data were created and analyzed. Four stages were followed: 1) encoding data, 2) finding themes, 3) arranging codes and categories, and 4) identifying and interpreting findings (Yıldırım & Şimşek, 2013). Answers were encoded by two researchers; then codes and categories were collected and arranged by the same researchers. Statements were counted, and then frequency was obtained. As an additional step, the data were triangulated to ensure trustworthiness. The third researcher reviewed the categories and codes against the original data to confirm the validity of the analysis (Long & Johnson, 2000).

Results

Changes to the Emotional States

All of the results were significant when the positive and negative emotions were compared with the value 3 (no change). Students' responses showed that life satisfaction, happiness, feeling competent, and being socially connected significantly decreased while learning online due to COVID-19. On the contrary, negative emotions that were expressed as stress, anxiety, and apathy increased significantly (see Table 1).

Table 1. *Emotions Compared with Neutral (3)*

Item	*n*	*M*	*SD*	*t*	
Life satisfaction	124	2.49	1.26	-4.49	**
Happiness	124	2.24	1.15	-7.34	**
Feeling competent	124	2.75	1.40	-1.99	**
Socially connected	124	1.79	1.00	-13.49	**
Stress	124	4.12	1.20	10.40	**
Anxiety	124	4.10	1.12	10.94	**
Apathy	122	3.74	1.24	6.50	**

*Significant at the $p < .05$ level, ** Significant at the $p < .001$ level

As mentioned before, during COVID-19, people had to stay at home and reduce social contact as much as possible. Many students expressed that the feeling of being socially connected decreased significantly ($M = 1.79$, $SD = 1$, $t = 13.49$, $p < .001$). This item was so important that we analyzed the correlation between being socially connected and the other items through Spearman correlation analyses. Being socially connected showed a moderate positive correlation with life satisfaction ($M = 2.49$, $r_s = .47$, $p < .001$), happiness ($M = 2.24$, $r_s = .50$, $p < .001$), and feeling competent ($M = 2.75$, $r_s = .40$, $p < .001$).

Social connectedness showed a low negative significant correlation with stress ($M = 4.12$, $r_s = -.19$, $p < .05$) and anxiety ($M = 4.10$, $r_s = -.20$, $p < .05$), but not with apathy. The lack of social interaction not only had a role in the feeling of connection with others, but also the students' emotions. There was a negative moderate relation between the constructs of positive and negative emotions ($r_s = -.37$, $p < .001$). This is very relevant because all positive emotions decreased and negative emotions increased significantly.

Difficulties and Positive Aspects Related to COVID-19

We analyzed students' responses to the open-ended questions about the difficulties and positive aspects they experienced while studying online during the COVID-19 concerning their emergency online learning. We looked at the challenges and positive aspects and reported the frequency, so we can see the most prominent challenges and positive aspects.

Among the 125 students, nine students indicated not having any difficulties, but the rest did. The five most common themes based on the students' responses were 1) not being able to benefit from online classes, 2) a lack of motivation in following online classes, 3) observations related to the academic personnel, 4) problems related to family life and finances, and 5) increased homework assignments. The coded categories with examples of the students' statements are presented in Table 2.

Table 2. *Difficulties Students Faced*

Categories	*f*	*%*	*Sample statements from the participants*
Not being able to benefit from classes	34	27.2	"Since I study in the department of social services, face-to-face education is much more beneficial to us. In this way, I think we cannot understand the basics of courses completely. So, I think online education will not be good for us".
Lack of motivation in following classes	31	24.8	"I could not be as serious about my courses in online education as in face-to-face education. I felt like I wasn't a student anymore. I ignored my courses and did not take them seriously".
Observations related to the academic personnel	22	17.6	"Instructors' lack of attention to their courses"; "Some teachers did not hold class meetings"; "Difficulty in reaching instructors";
Problems related to family life and finances	19	15.2	"Problems related to family life increased and financial income decreased"
Increased homework assignments	15	12	"Class meetings are not productive, and instructors are not so attentive; courses have become much more difficult with the increased level of homework assignments".
Difficulties in communicating with instructors	12	9.6	"We had difficulty with getting in touch with the academic personnel".
Problems related to having more asynchronized classes and fewer synchronized classes	12	9.6	"Even though the instructors did not hold synchronized class meetings for each class and I ended up getting better grades because the learning assessment was based on class notes the instructor uploaded, the foundational knowledge I needed to establish as a first-year student could not be accomplished".
Time management problems	12	9.6	"Not being able to manage the time in terms of participation in online classes".
None	9	7.2	"None"
Difficulties related to synchronized class meetings as a result of the student not having access to a computer or to a private room	9	7.2	"I have a younger sibling and I do not have my own room, so I had difficulty in focusing and studying".

The second open-ended question aimed to determine what types of positive experiences students may have had as a result of the emergency online learning they had started. Four students did not answer the question. It is important to emphasize that 20 students (16%) answered that there were no positive aspects of the online education process, and this response was the third highest in terms of frequency. Among the other most common themes were: 1) the opportunity to create time for hobbies and personal

development, 2) an increase in the level of academic development due to homework assignments, 3) an increase in grade-point-average (GPA), 4) an increase in quality of time with family, and 5) examining life and personal existence. In Table 3, we list all categories and frequencies in order.

Table 3. *Positive Aspects of the Online Education Process*

Categories	*f*	*%*	*Sample statements from the participants*
Opportunity to create time for hobbies and personal development	28	22.4	"I learned to do yoga. I read more and focused on my hobbies"
Increase in the level of academic development due to homework assignments	20	16	"I accomplished a deeper level of knowledge related to different subjects by doing homework on a regular basis".
None	20	16	"No positive aspects" "There's not a single situation that I've experienced in a positive way, but on the contrary, I feel completely alienated from life".
Increase in grade-point-average (GPA)	16	12.8	"My average academic score increased thanks to assignment-weighted courses".
Spending more quality time with family	16	12.8	"Our family bonds strengthened".
Examining life and personal existence	15	12	"I started to think about the meaning of life and my place in the world".
Development of competence in time management	14	11.2	"I learned how to be organized".

Discussion

This research study asked a group of Turkish university students to share how their emotional states changed during COVID-19 as they transitioned to emergency online learning. Students were also asked to indicate the difficulties they experienced and the positive aspects of the online education process they started during the COVID-19 outbreak.

The quantitative results showed that the students' emotions were affected. Similar to what other researchers have found (e.g., Denisov, et al., 2021), the pandemic had a strong effect on the emotional state of the Turkish students. In this study, positive emotions decreased, and negative emotions such as stress, anxiety, and apathy increased. As shown by the qualitative responses from the students, there are many reasons that may have influenced the increase of students' negative emotions. As one study by Kılınçel, Kılınçel, Muratdağı, Aydın, and Usta (2021) showed, anxiety among adolescents in Turkey increased during the pandemic. The main reasons associated were having a COVID-positive patient in the vicinity or having previous mental health issues. The authors also found a positive correlation between loneliness and anxiety. This indicates that the pandemic itself represents a stressor that has to be considered as a part of the educational process.

We found that the level of social connectedness decreased the most among the positive emotions. Sense of connectedness reflects emotional connection and is a subdimension of sense of community. Connectedness is highly contingent on face-to-face contact and is a central human need (Landmann & Rohmann, 2021). The results of this study show that contact restrictions, such as those adopted during the COVID-19 pandemic, contributed to a decrease in the feeling of being socially connected in Turkish

students. This is similar to a study developed in Germany where the researchers found that feeling connected positively predicted psychological well-being and negatively predicted perceived stress (Landmann & Rohmann, 2021). The decrease in social connectedness is associated with students' lowered levels of life satisfaction, happiness, and feeling competent.

Our study also identified that students' level of social connectedness was positively correlated with happiness, life satisfaction, and feeling competent. The students who had higher levels of social connectedness also had higher levels of happiness, life satisfaction, and feeling competent. Social connectedness is relevant for the overall wellbeing of students.

Sense of connectedness may vary depending on the type of group with whom people maintain contact, with family being the most important one (Landmann & Rohmann, 2021). But we should not assume that students' level of social connectedness will not be affected if they have continuous contact with their family members. Because, as the findings showed, the students reported enjoying their family life, but their level of feeling of being socially connected still went down.

Related to the qualitative portion, this study showed students believing that the experiential learning they were accomplishing in a classroom setting was missing from online education. They were concerned that the foundational knowledge/experience they needed to succeed in their career may be missing. Students also found themselves not taking their online classes as seriously as they did their face-to-face classes. This finding is in line with previous research developed in Turkey where students found emergency online learning to be inadequate (Güven & Uçar, 2021). The transition from the face-to-face education process to the online education process may bring about cognitive difficulties and this may affect students' motivation toward learning (Bower, 2019). In addition, as Heckel and Ringeisen (2019) state, high anxiety is a factor affecting motivation and success. As the data indicated, students in our study experienced more anxiety due to COVID-19 and this anxiety, in turn, may have affected their level of motivation in following their online classes.

Students emphasized their complaints related to their instructors' lack of interest in teaching, instructors not holding lectures or uploading class notes or slides, and difficulties in getting in touch with their instructors. This indicates that, similar to students, instructors may have also been negatively affected by COVID-19. This finding is in line with a previous research study (Flaherty, 2020) that identified that instructors experienced anxiety at the beginning of the COVID-19 outbreak which later turned into chronic stress. The same study identified that while dealing with the challenges of emergency online learning, many professors had a lack of knowledge related to online technologies and online teaching, felt incompetent, and experienced burnout and financial difficulties and challenges related to childcare. As Tosun (2020) stated, the rapid transition to emergency online learning may have negative effects on faculty members and students.

Results also identified that students suffered from problems related to family life and finances. They stated that due to COVID-19, their income decreased. In addition, they needed to attend to the chores at home, which took time away from studying. The presence of guests and small children caused noise. All these challenges may have negatively affected students' learning. The instructors may need to be informed about these new difficulties students face as they are trying to navigate their learning in a challenging environment and financial situation so that these instructors could respond to these students in a more holistic way rather than only from a teaching focus.

Regarding homework and grades, the qualitative results showed that some students complained about having to face an increased amount of homework assignments when they transitioned into emergency online learning. It is possible that the instructors may have relied on an increased level of homework to promote learning. But other students considered among the positive experiences an increase in the level of academic development due to homework assignments and an increase in grade-point-average (GPA). Some students enjoyed completing more homework as it led to regular studying and learning the relevant

knowledge at a deeper level. Because the grading was changed from being exam-based to assignment-based during COVID-19, some students found it easier to get higher grades in their courses. This is an important factor that requires more research. Karadag (2021) analyzed the effects of COVID-19 on grades and, compared with a year ago, there was a 41% increase in the highest grade (AA) in Turkey. The author mentioned that instructors may have tried to compensate (lenient grading) for the negative circumstances experienced by the sudden switch to emergency online learning. This would explain why students were not satisfied with the level of knowledge acquired even though they reported an increase in their GPA.

Students also expressed difficulty related to accessing the internet and a computer. These experiences were likely mentioned by the students whose household could not afford a separate computer for each student or subscribe to an internet service that could support several electronic devices at the same time. This particular finding is in line with previous research which also identified that students in Turkey (Han et al., 2021) and in different parts of the world experienced difficulty having access to a computer device and accessing the Internet due to socioeconomic conditions (Adnan & Anwar, 2020; Zhong, 2020). Particularly in Turkey, The Council of Higher Education encouraged universities to offer open access to digital course content and, while all universities transitioned to emergency online learning, not all of them had the same resources to support students and faculty members (Tosun, 2021). So, how could these students be helped? One university we know, for example, lent a laptop to students in need and expanded the Wi-Fi connection to the parking lots on campus for students to use. Similar solutions could be utilized by institutions and local agencies to facilitate the learning process for students in need. Furthermore, it is important to continue analyzing students' experiences during the pandemic and after the pandemic. The Council of Higher Education should continue supporting universities so knowledge can be accessible to everyone.

When COVID-19 is under control and the restrictions are lifted, it is likely that online education will continue. In addition, having experienced the level of online education and seeing endless online teaching possibilities, we could assume that there will be more online education after this particular pandemic compared to the level of online education before the pandemic. Therefore, education stakeholders need to pay close attention to technological accessibility and the physical learning environment so that students' learning could be facilitated in the best way possible.

Besides the problems mentioned above and the decrease in their level of positive emotions, our results also showed that some positive experiences came from the COVID-19 outbreak and emergency online learning. Students mentioned the most common positive experiences as having the opportunity to create time for hobbies and personal development, increase in quality time with family, and an examination of life and personal existence. It may be that living under the COVID-19 restrictions helped students have the extra time to reflect on their lives. They also took advantage of this extra time to learn new activities, such as yoga, and engage more in their hobbies. It also seems like the COVID-19 conditions helped strengthen the family bonds for some students. Some students were able to see that good things could also come from unfortunate situations. A sign of resilience is to be able to survive in a stressful/unexpected situation by being able to adapt to change and focus on the positive things in a person's life.

Conversely, some students were not able to find any positive experiences to share. In addition, as an answer to the item about the positive aspects of the COVID-19 process and the emergency online learning, some students wrote more negative aspects that they were experiencing. This result may be related to students' mental health. As we found in the study, the pandemic increased students' levels of stress and anxiety. These students may have felt overwhelmed with these negative emotions and not be able to see any positive aspects of the COVID-19 process as the other students did. The pandemic has had a strong impact on students' emotions (Denisov et al., 2021).

Implications for Practice

Based on the findings in this study, there are additional implications and recommendations the higher education institutions should consider. As Filius et al. (2019) posit, an effective online education is complex and goes beyond simply showing PowerPoint slides or giving assignments. Utilizing and including other types of instructional methods, such as oral interaction between the students through audio peer feedback or videotape of a short lecture, could provide the students with a sense of community, increase interaction time among the professors and the students, and increase students' level of social connectedness.

Furthermore, it is important that instructors seek periodic feedback from their students related to their course and make modifications accordingly so that the students' feelings of being overwhelmed could be decreased while, at the same time, ensuring that the targeted level of learning is reached, and a fair grade is obtained. Professors can promote students' enjoyment and excitement with different approaches such as creating an art piece or a unique product that can be used to fulfill the teaching and educational needs in their own settings. Also, depending on the preference and access of the individuals involved, different options such as the use of 'TikTok' for short videos, use of a smartphone, or a voice recording are among these options. Versatility will promote interaction even during the use of an online environment.

Higher education institutions need to particularly pay attention to online programming to increase the level of social connectedness. This programming might help students with other positive emotions, which, as the literature mentioned (e.g., Engelmann & Bannert, 2019; Heckel & Ringeisen, 2019), could help with a better learning process.

Limitations and Future Research

While our study presents important findings, these findings should be interpreted in light of its limitations. Due to the sampling method we used (majority of students from one university), and the self-report questionnaire, the generalizability of our results is limited. Furthermore, this study focused on the perception of change in the students' emotions. Therefore, there was not an objective measure that can compare emotions before the pandemic and during or after. In addition, the sample came only from Turkey. Therefore, the results should be interpreted cautiously when applying the findings to other countries. Future research could examine how online learning has transformed as a result of the current pandemic and in what ways online learning will continue to exist after the pandemic is over. Future studies could also examine how the number of online learning activities could be increased to facilitate more social interaction among the students, which then might increase students' level of social connectedness.

Conclusion

Different countries had different experiences during the COVID-19 emergency online learning transition based on access to technology, previous experience with online learning, and the major of study students might be pursuing. Emergency online learning was especially difficult for countries like Turkey who did not have much experience and infrastructure related to online education. Emphasizing that emotional states will have an impact on the learning process, we invite instructors and students to approach online learning and teaching as a fun exploration of different options that create a culture that raises students' confidence, promotes positive emotions, and encourage social interaction. As Sultan et al., (2020) mentioned, student-student online interaction is the strongest predictor of feeling socially connected.

Individual circumstances need to be considered in the creation of teaching/learning methods that would address the unique needs of institutions, depending on the country and the students, including becoming aware of the changes in emotional states that they may experience. We are recommending that

institutions design online teaching to be inclusive of especially disadvantaged groups. When that is the case, then, every student will end up benefiting from online education and may feel more socially connected.

The COVID-19 process has shown college institutions that teaching/learning can be handled in many different ways. Even if the pandemic is under control and we go back to fully residential learning, online technologies will continue to be used to supplement residential teaching. So, continued faculty training is a must.

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TÜRKÇE GENİŞ ÖZET

COVID-19 Salgını, Türkiye'deki Üniversite Öğrencileri ve Acil Durumda Çevrim içi Öğrenme

Giriş

COVID-19 salgını, eğitim sistemini küresel düzeyde derinden etkilemiştir. Tüm eğitim kademelerinde yüz yüze eğitim yöntemi askıya alınarak kısa sürede çevrim içi eğitime farklı yöntemlerden yararlanılarak geçiş yapılmak zorunda kalınmıştır (Dhawan, 2020). Rieley (2020), diğer eğitim kademelerinde olduğu gibi yükseköğretimde de kısa sürede geçiş yapılan çevrim içi eğitim sürecinin ortaya çıkabilecek olumsuz sonuçlarını en aza indirmek için yükseköğretim kurumlarının etkili akademik politikalar üretmelerinin gerekliliğine işaret etmektedir. Çevrim içi öğrenme, internet erişimi olan çeşitli cihazların kullanılmasıyla çevrim içi ortamlarda gerçekleştirilen öğrenme etkinlikleri olarak tanımlanmaktadır (Singh & Thurman, 2019). Çevrim içi eğitimde iki temel nokta, çevrim içi içeriğe erişmek için elektronik bir cihaza sahip olmak ve herhangi bir fiziksel bir mekandan çevrim içi öğrenmeye katılmaktır (Cojocariu, Lazar, Nedef ve Lazar, 2014). Çevrim içi öğrenme, eş zamanlı (senkron) öğrenme veya eş zamansız (asenkron) öğrenme aracılığıyla sağlanabilir. Littlefield (2018), eş zamanlı öğrenmeyi, derslere öğrenci ve öğretim elemanlarının eş zamanlı katıldığı ve buna bağlı olarak da eş zamanlı iletişim ve geri bildirimin gerçekleştiği çevrim içi öğrenme şekli olarak tanımlamaktadır. Diğer taraftan eş zamansız öğrenme, eş zamanlı etkileşimi içermediği, ders içeriklerine öğrencilerin kendilerinin belirlediği zamanlarda erişebildiği çevrim içi eğitim şekli olarak tanımlanmaktadır (Littlefield, 2018).

COVID-19 salgını nedeniyle, eğitim paydaşlarının (öğrenciler, akademik personel, vb.) yaşadığı bu zorunlu değişime uyum sağlamalarını kolaylaştırmak için tüm paydaşların duygu, düşünce ve algıları, teknolojik altyapı ve bu alt yapıya ulaşım, öğretim programı, ölçme ve değerlendirme gibi faktörlerin ele alınması gerekliliği vurgulanmaktadır (Chick ve diğ., 2020). Bu faktörler arasında öğrencilerin çevrim içi öğrenmeye yönelik algılarının belirlenmesinin etkili bir çevrim içi eğitim sisteminin yapılandırılmasında en önemli faktörlerden biri olarak görülmektedir (Song, Singleton, Hill ve Koh, 2004).

Türkiye'de de dünyada birçok ülkede olduğu gibi COVID-19 salgınıyla birlikte yükseköğretimde hızlı bir şekilde çevrim içi eğitime geçiş yapılmak zorunda kalınmıştır. Yükseköğretim Kurulu, 18 Mart 2020'de uzaktan eğitime ilişkin ilk kararını açıklamıştır. Uzaktan eğitime ilişkin yol haritası olarak sunulan bu kararda üniversitelerin mevcut alt yapılarına bağlı olarak eş zamanlı ve eş zamansız çevrim içi eğitim yöntemlerini kullanabilecekleri ifade edilmiştir (Yükseköğretim Kurulu , 2020).

Sonuç olarak COVID-19 salgını sırasında çevrim içi eğitime geçiş süreci üniversite yöneticilerini, öğrencileri ve öğretim elemanlarını farklı düzeylerde etkilemektedir (Toquero, 2020). Bu nedenle akademik kurumların bu geçiş sürecine dahil olan tüm tarafların ihtiyaç ve düşüncelerini belirlemesi ve değerlendirmesi gerektiği önemli görülmektedir. Bu araştırmada da buna bağlı olarak Türkiye'de öğrenim gören lisans öğrencilerinin COVID-19 salgınıyla birlikte geçiş yaptıkları çevrim içi eğitime ilişkin görüşlerinin belirlenmesi amaçlanmaktadır.

Yöntem

Bu çalışmada, çevrim içi eğitim almaya başlayan lisans öğrencilerinin bu süreçle ilgili deneyimlerini ve duygu durumlarındaki değişikliği belirlemek amacıyla nicel ve nitel araştırma yöntemi kullanılmıştır. Araştırmanın katılımcıları, Türkiye'deki 31 üniversitede farklı fakülte ve bölümlerde öğrenim gören 125 lisans öğrencisinden oluşmuştur. Katılımcılara araştırmanın amacı doğrultusunda iki açık uçlu soru sorulmuştur. Ayrıca da yedi ayrı alanla ilgili duygu durumlarının nasıl değiştiğini belirtmeleri istenmiştir. Pozitif duygu durumları yaşam memnuniyeti, mutluluk, kendini yetkin hissetmek ve sosyal bağlılıktan oluşmuştur. Negatif duygu durumları stres, anksiyete ve ilgisizlik olarak belirlenmiştir. Öğrencilerin, yaş, üniversite, sınıf, bölüm, fakülte ve yaşadıkları yeri belirlemeye yönelik kişisel bilgi formu kullanılmıştır. Veri toplamaya başlamadan önce etik komisyon izni alınmış ardından çevrim içi platformda öğrenciler açık uçlu soruları yanıtlamışlardır. Açık uçlu sorulardan elde edilen veriler bilgisayara aktarıldıktan sonra kodlar ve kategoriler belirlenmiştir. İki araştırmacı tarafından elde edilen kod ve kategoriler karşılaştırılarak veriler düzenlenmiştir.

Bulgular

Öğrencilerin, COVID-19 sürecinde çevrim içi eğitim süreçleriyle ilgili olarak yaşadıkları zorluklarla ilgili açık soruya verdikleri yanıtları incelendiğinde 15 kategori bulunmuştur. İlk beş kategori; 1) Çevrim içi derslerden yararlanamama, 2) Çevrim içi derslerde motivasyon eksikliği, 3) COVID-19 salgından etkilenen akademik personelle ilgili gözlemler, 4) Aile yaşamı ve finansmanı ile ilgili sorunlar, 5) Artan ev ödevleri, şeklindedir. Öğrencilerin COVID-19 sürecinde çevrim içi eğitim süreçleriyle ilgili olarak yaşadıkları olumlu deneyimleri belirlemeye yönelik yöneltilen açık soruya verdikleri yanıtlar incelendiğinde ise 13 kategori bulunmuştur. İlk beş kategori olarak 1) Hobiler ve kişisel gelişim için zaman yaratma fırsatı, 2) Ev ödevleri nedeniyle akademik gelişim düzeyinde artış, 3) Not ortalamasında (GPA) artış, 4) Aile ile geçirilen zamanın kalitesinde bir artış ve 5) Yaşamı ve kişisel varoluşu incelemek şeklindedir. Son olarak, istatiksel analizler öğrencilerin pozitif duygu durumlarının alçaldığını ve negatif duygu durumlarının da yükseldiğini göstermiştir. Öğrenciler, COVID-19 nedeniyle pozitif duygu durumlarının (yaşam memnuniyeti, mutluluk, kendini yetkin hissetmek ve sosyal bağlılık) alçaldığını ve negatif duygu durumlarının (stres, anksiyete ve ilgisizlik) yükseldiğini belirtmiştir.

Tartışma, Sonuç ve Öneriler

Bu araştırmanın sonucunda, öğrencilerin COVID-19 salgınıyla geçiş yaptıkları çevrim içi eğitim ile ilgili yaşadıkları zorluklara ilişkin ilk sırasında çevrim içi derslerden yararlanamama ardından çevrim içi dersleri takip etmede motivasyon eksikliği bulgusu elde edilmiştir. Bir diğer bulgu ise sınıf ortamında gerçekleştirilen eğitim sürecine göre çevrim içi eğitimin yetersiz olduğuna ilişkin görüştür. Çevrim içi derslerin yüz yüze dersler kadar ciddiye alınmadığı tespit edilen bir diğer noktadır. Bu bulgu, yüz yüze eğitim sürecinden çevrim içi eğitim sürecine geçişin bilişsel zorluklara yol açabileceğini ve bunun öğrencilerin öğrenmeye yönelik motivasyonunun olumsuz şekilde etkilenebileceğini gösteren araştırmalarla uyumludur (Bower, 2019).

Duygu durumlarındaki değişikliğe bakıldığında, en çok değişikliğin sosyal bağlılıkla ilgili olduğu görülmüştür. Öğrencileri her dört alandaki pozitif duygu durumlarının alçaldığını belirtmekle birlikte, en fazla sosyal bağlılıkta alçalma olduğunu belirtmişlerdir. Bu nedenle, yüksek öğrenim kurumları, öğrencilere online ortamda sosyal bağlılık duygusu yaşayabilecekleri farklı programlar sunmalıdır.

Araştırmada elde edilen bir diğer önemli bulgu ise öğretim elemanlarına ilişkindir. Öğretim elemanlarının COVID-19 salgınından muhtemel etkilenmeleri öğrenci ifadeleriyle dolaylı olarak ulaşılabilen

bir diğer bulgudur. Öğrenciler zorluklar kapsamında öğretim elemanlarının öğretime yönelik ilgisizliği, ders işlememe, öğretim elemanları ile iletişim kurmada ortaya çıkan sıkıntılar olduğunu ifade etmektedirler. Bu durum öğrenciler gibi öğretim elemanlarının da COVID-19 sürecinden olumsuz etkilenmiş olabileceğini göstermektedir. Bu bulgu COVID-19 sürecinde öğretim elemanlarının başlangıçta anksiyete olarak ardından kronik stres yaşadıklarını gösteren araştırma bulgularını desteler niteliktedir (Flaherty, 2020). Elde edilen bir başka bulgu, öğrencilerin bu süreçte aile hayatı ve olumsuz ekonomik durumlara bağlı ortaya çıkan zorlanmalardır. COVID-19 nedeniyle ekonomik gelirin azalması gibi stres kaynaklarının öğrencileri olumsuz olarak etkilediği ortaya çıkmıştır. Çevrim içi eğitim sürecinde artan ödev yükü, internet ve bilgisayar kaynaklarına ulaşımda yaşanan zorluklar, gerçekleştirilen benzer çalışma bulgularıyla uyumludur (Adnan & Anwar, 2020; Zhong, 2020).

Olumlu deneyimler ise; hobiler ve kişisel gelişim için zaman yaratma fırsatına sahip olma, aileyle geçirilen zaman kalitesinin artması, yaşam ve kişisel varoluşun incelenmesi kategorileri öncelikli kategorilerdir. COVID-19 kısıtlamaları altında yaşamak, öğrencilerin hayatlarını sorgulamak ve açısından etki sağlamış olabilir. Olumlu deneyimler arasında, ev ödevleri nedeniyle akademik gelişim düzeyinde artış ve not ortalamasında (GPA) artış elde edilen diğer bulgulardır. Filius ve ark. (2019), etkili bir çevrim içi eğitimin sadece sunum odaklı değil iç içe geçmiş bir yapıda olduğunu ifade etmektedir. Örneğin sesli akran geribildirimi, farklı öğretim yöntemlerinden yararlanmak öğrencilere topluluk duygusunu hissettirebilecek iletişim kanallarından yararlanmak önemli görülmektedir. Kısa sürede çevrim içi eğitime geçiş alt yapı ihtiyacını beraberinde getirmektedir. Bu durum Türkiye gibi daha önce benzer deneyim yaşamamış ve alt yapı eksikliği çeken ülkeler açısından zorlanmalı bir durum ortaya koymaktadır. Bu nedenle kurum ve politika yapıcıların özellikle dezavantajlı grupları kapsayacak şekilde tasarlanması önemli görülmektedir.

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Curriculum Theory: A Review Study

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Abstract

The aim of this literature review study was to examine the historical development of the concept of curriculum theory, its reflections on curriculum development studies, and teaching-learning processes and also to attract the attention of the researchers to the area of curriculum theory which was seen to be left aside for years. The research was designed by reviewing the literature, and different theoretical perspectives on curriculum development studies in the USA which historically dominated the field since the early 1900's and Turkey were examined. In the first phase, the explanation of the concepts of curriculum, theory, curriculum theory, the chaotic structure, and discussions in the literature regarding the terminology of these concepts were given. It was concluded that in the literature the concept of curriculum theory has been used synonymously with the concepts of curriculum beliefs, educational value orientations, curriculum ideologies, and curriculum orientations. In addition, the classification of curriculum theories, curriculum development studies in which the reflections of curriculum theories could be seen, and the studies conducted in Turkey and abroad on this subject were included in the study. Taking the limited number of studies on curriculum theories and their lack of variety into account, future studies on curriculum theory are considered to feed the intellectual background of the field and attract the attention of the researches to theories of curriculum, which will fill the gap in the literature.

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Introduction

The curriculum is the constitution of education that directs an education system and defines the individuals to be raised in the society. Curricular decisions offer important clues that will affect the entire teaching-learning process. During the curriculum-developing process, what knowledge is of most worth, what should we teach? (Spencer, 1884); why should we prefer to teach one thing over another?, who can reach what knowledge?, in order to obtain a whole from the different parts of the curriculum, how should these parts be interrelated? (Kliebard, 1977) are important questions to answer. In addition, what should be taught and to whom, under what conditions, for what purpose should it be taught, and what processes should be exploited when taking curriculum decisions? are also the other important questions to be asked (Null, 2016). There is a need for deep inquiries and

questions asked to curriculum are of great importance. Such questions include: Is the nature of the knowledge in the curriculum sourced from didactic teachings, individual interpretations, abilities and competencies, or cultural and moral perspectives? Is learning handled from the perspective of the person receiving the knowledge or the person transmitting it? Are the students passive or active subjects of the teaching-learning environment? Are the teachers in the role of the transmitter or the supervisor of the teaching and learning environment? What is the goal of evaluating students? Is it to determine their future success in the discipline, to show that a student has certain skills, to determine students' capacities to ease their growth, or to evaluate students' development in their abilities? (Schiro, 2012) The questions like these can find their answers only after intense thinking processes (Null, 2016).

These deep inquiries show which intellectual planning, infrastructure, ideological and philosophical perspectives are at the heart of the curriculum. This process is shaped around the answers obtained during the curriculum making process. In this sense, curriculum theory deals with these ideological views and beliefs which form the infrastructure of curriculum within a systematic thinking. In order to touch on points, such as: What is curriculum theory, what are the different curriculum theories, what are the principles of these theories?, how curriculum theories were handled and are being handled in the world and in our country, primarily, it is necessary to explain what the concept of curriculum theory is.

After elaborating on what curriculum theory is and its classifications by different curricular theorists, how curriculum theory reflected on Turkish and American education systems was touched on. The field of curriculum emerged in the United States in the early 1900s, and the American scholar Bobbit's (1918) works were seen as the birth of the field. In addition, the start of the curriculum theory field was also regarded to have roots in the conference held in Chicago in 1947 (Klein, 1992; Kliebard, 1977; Tyler, 1977). As seen, there is a huge impact of American scholars and studies on the field of curriculum and the development of the concept of curriculum theory. Because of these reasons, in this study the historical perspective of the curriculum theory was examined within the American and Turkish contexts. In addition, in order to see and analyze how curriculum theory was addressed in the studies from a broader perspective, both the national and international research on the curriculum theory was examined.

Method

This study is in the form of a literature review, which was prepared by examining the studies on the concept of curriculum theory in the literature. As a result of the examinations in the literature, both national and international articles and theses were taken into consideration. To review the studies on curriculum theory, key words, such as "curriculum theory", "curriculum orientation", "curriculum ideologies" were used, and a literature review was conducted based on articles and theses published in ScienceDirect, Jstor, Google Scholar, Proquest and the National Thesis Center of the Council of Higher Education. When the studies were examined; the year and the country of publication, the title, the purpose, the sample of the studies, data collection instruments, the data collection processes, findings and the implications of the studies were taken into account.

Conceptual Framework

What is Curriculum?

Before elaborating on the concept of curriculum theory, first of all, the word curriculum and then the concept of theory should be explained (Beauchamp, 1982). The concept of "curriculum" has been defined in many different ways like the word "education" (Demirel, 2005; Dewey, 1986; Durkheim, 1956; Ertürk, 2016; Sönmez, 2015; Tyler, 2014). For this reason, the terminology of the word

curriculum has a quite chaotic structure (Beauchamp, 1972; Ellis, 2015; Goodlad,1979; Jackson, 1992, Walker, 1982).

Mızıkacı (2017) stated that curriculum terminology should be evaluated at two extremes in terms of curriculum and currere concepts. Curriculum corresponds to listing and ordering items one by one in Arabic, while the word currere has a post-positivist meaning that expresses action rather than passivity. Currere has evolved from the meaning of running to the metaphor of the path followed (Ellis, 2015). The curerre meaning of the curriculum has a rich background, and it has been affecting the field of curriculum (Bintz & Dillard, 2007).

Considering the different definitions of the curriculum before and after positivism, different terminological structures can be found for the word curriculum. Dewey (1902) accepted the standardized curriculum definitions but stated that the curriculum should start from the child. He also stated that the teacher should establish a link between the child and the curriculum. Therefore, Dewey defined the curriculum as a composition of planned experiences. In 1918, Bobbit made a more comprehensive definition and stated that in addition to planned experiences, unplanned experiences should also be included. Bobbit (1918), emphasizing adult life skills in the definition of the curriculum, defined the curriculum as a structure that includes a series of actions and skills that children and young people need to acquire in order to do the jobs making up the adult life well. Kliebard also expanded Bobbit's definition by identifying unplanned experiences as hidden and null curriculum (Kridel, 2010). While Taba (1932) defined the curriculum as the whole of experiences at school, Tyler (1975) described the curriculum as the whole of student experiences at school, both planned and unplanned.

One of the narrow-scoped definitions of the curriculum defined by very different perspectives and viewpoints belongs to Phenix (1962). He described curriculum as content or subject area learned at the school. A definition in the same direction belongs to Squires (1990), and he defined the curriculum as “what is taught”. Dealing with the curriculum as opportunities, Saylor and Alexander (1974) defined the curriculum as a structure encompassing all learning opportunities provided by the school. In the same direction, according to Oliva (1988) curriculum is the series of experiences that the student encounters at school, the discipline, subject, and materials taught at schools, that is, it is everything planned by the school. Bilbao, Luncido, Lringan, & Javier (2008) also defined the curriculum not only as learning experiences at school, but as all learning experiences in the society. Ornstein & Hunkins (2016) considering the curriculum as a system and making a definition close to Oliva’s explained the curriculum as a structure in which objectives, subject area, learning experiences, and evaluation techniques are planned.

When the definitions of the curriculum in Turkish literature were analyzed, it can be found that Varış (1996, p.14) defined the curriculum as all the activities of an educational institution provided for children, youth, and adults towards the realization of objectives of the National Education and the institution. It can be also concluded that Ertürk (2016) used the Turkish word “yetişek” for curriculum and described it as a systematic mechanism for teaching-learning processes which aim at educating students in a certain period of time. It can also be stated that according to Demirel (2006), the curriculum is a written document or an action plan in which strategies are set to achieve desired goals and behaviors.

When looking at the various definitions of the curriculum in the literature, it is possible to see that the concept of curriculum has been handled as what is taught in schools, a subject area, content, a set of materials, everything planned by the school, and a set of experiences gained by students in a school (Marzooghi, 2016). Although there are curriculum definitions from different perspectives in the literature, it can be easily seen that there has been a constant effort to make a better and single definition. When the definitions are examined, it is clear that some of the definitions focus on the experiences of the students, some of them take the competencies required for preparation for adult life to forefront; while some definitions consider the curriculum as a system, some deal with the word

curriculum as a content. Bintz & Dillard (2007) stated that the curriculum was defined as a lived experience, as a tool to prepare students for life, as a system, as a plan for a specific subject area, as a content, as an activity or opportunity, as a tool helping teachers to make decisions on teaching, and as a belief system by various researchers in the literature. These definitions different from each other are undoubtedly due to the fact that both education and curriculum have a changeable structure in line with the current needs of the society. The various definitions of the curriculum in the literature (Bellack & Kliebard, 1977; Kliebard, 1989; Oliva, 1977; Portelli, 1987; Rasco, 2016; Schubert, 1986) were interpreted positively as the different meanings of the curriculum concept is considered to feed the area of curriculum and curriculum studies, and there is also an opinion that these different definitions indicate the problems waiting to be solved in the curriculum area, so this situation is regarded to create awareness of these problems (Goodlad, 1979; Jackson, 1992; Posner, 1995; Tanner & Tanner, 1975). For this reason, it has been stated that the effort to reach a uniform and the most accurate definition is in vain (Goodlad, 1979; Rasco, 2016; Varış, 1996).

What Is Theory?

In an effort to answer the question "What is curriculum theory?" as Beauchamp (1982) also stated it was necessary to clarify in what sense and how the word "theory" was used in the concept of curriculum theory. In the dictionary of Turkish Language Society, the word theory has been defined in different ways. According to the dictionary, theory has been described as an abstract information handled practice-free; collection of thoughts or opinions on a particular subject, and a set of rules and laws that explain many systematically organized events which are the basis of science. In the Oxford dictionary, theory has been defined as a set of formal ideas intended to explain why something happens or exists, a set of principles which belongs to a particular topic, and an idea or thought that is believed to be true but not proven. Beauchamp (1982), on the other hand, defined theory as an integrated structure of assumptions and general assertations from which a set of testable hypotheses on a particular topic could be logically deduced.

When the different definitions of theory were analyzed, it was seen that the theory has a wide range of terminology just like the concept of curriculum. Theory has been conceptualized, applied and discussed in many different ways (Beauchamp, 1972; Nestel & Bearman, 2015). As Beauchamp (1972) states there may be differences in the definitions of the theory, but the word theory gains a meaning specific to the field in which it is theorized. For this reason, the word theory within the concept of curriculum theory has evolved into a meaning specific to the field of curriculum.

Curriculum Theory

When looking at the history of the concept of curriculum theory, it is necessary to draw attention to the conference (Klein, 1992; Kliebard, 1977; Tyler, 1977) held at the University of Chicago in 1947. After the conference Herrick and Tyler wrote the article "Toward Improved Curriculum Theory" in 1950 (Klein, 1992). With this study, the concept of curriculum theory started to attract more attention. In the article and the conference, it was emphasized that curriculum development would be incomplete without curriculum theories, and the importance of curriculum theories was dwelt on (Klein, 1992; Kliebard, 1977).

Macdonald (1971) stated that curriculum theory is one of the least understood concepts in the curriculum area, but it basically means examining what kind of a learning environment to have. Beauchamp (1982) defined curriculum theory as a set of propositions which add meaning to a school's curriculum acting in relation as a whole. McCutcheon (1982) also considered curriculum theory as a set of analysis, interpretation and understanding of curriculum phenomenon. Curriculum theory is defined in the Encyclopedia of Curriculum Studies as an interdisciplinary curriculum study that deals with the curriculum in historical, sexist, political, racial, international, post-modern, autobiographical, and religious dimensions (Kridel, 2010). For this reason, curriculum theory, which is closely related to

our views on what is true and important about ourselves and our world, actually extends to our individual, social and cultural depths (Walker & Soltis, 2004).

When Schiro (2020)'s book was examined, it was seen that he also used the concepts of ideology, philosophy, belief, vision, and perspective while referring to the terminology of curriculum theory. He used the concept of curriculum ideology instead of the concept of curriculum theory and explained the word ideology that he used intensely as "a community of ideas, a comprehensive view, a way of looking at things, or a world view that represents people or groups who believe that the world should be organized and function" (Schiro, 2020, p.10).

When viewed from this respect, the conceptual structure of the word "curriculum theory" has a chaotic structure like the sub-words composing it. As Walker (1982, p. 62) states curriculum theory is many things to many people. In the literature, curriculum theory has been expressed in the same way with concepts, such as curriculum beliefs, educational value orientations, curriculum ideologies, curriculum orientations, but no information has been found in the literature as to the fact that these expressions have different meanings from each other (Cheung & Wong, 2002; Schiro, 2012; Yılmaz, 2021).

Schiro (2020) stated that curriculum ideology was related to the effort made when people deal with the curriculum and question the problems of it. Cheung & Wong (2002) who used the expression curriculum orientations for the concept of curriculum theory, on the other hand, referred to this concept as a collective set of beliefs about elements, such as curriculum objectives, content, instructional strategies, and evaluation.

Classification of the curriculum theories

The views of curriculum theorists and the reflections of these different curriculum theories on teaching-learning processes differ from each other (Huebner, 1975; Macdonald, 1971; Morris & Hamm, 1976). Curriculum theories handled in different ways and named differently have been in an effort to create a system of thought about the curriculum. Although put in different categories by different theorists, it will be seen that the different curriculum theories express the same ideas in terms of meaning and content when examined in detail (Huenecke, 1982).

The first classification for curriculum theories that will be examined in this study is Eisner and Vallance's (1974). Eisner & Vallance (1974) identified academic rationalism, technology, cognitive processes, self-actualization, and social reconstruction-relevance theories. Academic rationalism curriculum theory is the most traditional one and emphasizes students' commitment to Western cultural elements. It is important for the students to have access to great ideas and objects. Technology curriculum theory, on the other hand, focuses on predetermined goals. For this theory, it is important to ensure systematic planning and effective teaching. Cognitive processes theory, on the other hand, argues that students' mental processes should be improved, and according to the proponents of this theory, the focus should be on the "how" rather than "what" of the curriculum. The other two curriculum theories in Eisner & Vallance's (1974) classification are "the self-actualization curriculum theory", which sees education as a process that ensures individual freedom, and "the social reconstruction-relevance theory", which sees social needs more important than the individual's needs.

In McNeil's (1977) curriculum theory classification, there are academic, technological, humanist, and social reconstructionist curriculum theories. According to humanist curriculum theory, it is important to provide students with fundamentally useful experiences. Social reconstructors, on the other hand, focuses on improving social values and developing critical thinking processes with the help of the curriculum. Theorists advocating the technological curriculum theory, on the other hand, consider predetermined and measurable goals important. According to advocators of the academic curriculum theory, students should learn the details of a discipline.

Posner's (1995) curriculum theories can be analyzed in five groups as traditional, experiential, disciplines (structure of the disciplines), behavioral and constructivist curriculum theories. Traditional curriculum theory emphasizes the necessity of transferring cultural heritage. Experiential theory, on the other hand, focuses on all of the student's intramural and extramural experiences. According to the disciplines curriculum theory, students should learn the fundamentals of the discipline. Behaviorist curriculum theory advocates that what students can do should be decided at measurable levels, and the performance of them should be measured periodically. In constructivist curriculum theory, the curriculum starts with what students already know. Students build their own knowledge themselves, and this knowledge is used in meaningful activities.

According to the intellectual traditionalists, the first curriculum theory of Schubert (1996), primary sources and textbooks must be reached in order to generate ideas. Secondly, social behaviorist curriculum theory thinks that the behaviors of students and teachers should be observed, and thus the answer to how the student can learn better can be found. Experientialists, on the other hand, focus on student experiences, and finally, critical reconstructionists emphasize the importance of students' taking an active role against racial, class, and cultural differences in schools and reorganizing society.

Ornstein & Hunkins (1998) grouped curriculum theories as "technical and scientific" and "nontechnical/nonscientific". Technical and scientific curriculum theories are behaviorist, managerial, system, and academic curriculum theories. In the category of non-technical and non-scientific curriculum theories, there are humanist and reconceptualist/postmodern curriculum theories.

Kliebard (2004) stated that "the humanist curriculum theory" focused on the idea of providing liberal education for all. It focuses on teaching academic subjects, the power of reason, and adherence to traditions. According to Kliebard's (2004) "child study curriculum theory", the curriculum should be arranged in accordance with the child's natural development by taking the child's interests and needs into account. Thirdly, "social efficiency curriculum theory" emphasizes that the curriculum should equip students with future competencies in society and prepare them for their future roles. Finally, "the social meliorist theory" gives importance to social change and social justice concepts. It emphasizes addressing the problems in the society.

The three curriculum theories identified by Ellis (2004) are "knowledge-centered/academic", "learner-centered", and "society-centered" curriculum theories. According to "the knowledge-centered curriculum theory", students should receive liberal education, and an academic education should be prioritized. "The learner-centered curriculum theory" focuses on the interests and needs of students. "Society-centered curriculum theory", on the other hand, thinks that problems of the community should be discovered and solved through curriculum.

According to "the scholar academic curriculum theory of Schiro" (2012), children should learn the accumulated knowledge of culture, and an effort should be made to understand an academic discipline in depth. "Social efficiency theory", on the other hand, emphasizes the importance of preparing students for their future roles in order to grow up properly as adults of the future. "The learner-centered curriculum theory" advocates that the natural development of students should be ensured by considering their intellectual, social, emotional, and physical features through the curriculum. Finally, "social reconstruction curriculum theory" thinks that awareness should be created about social problems and injustices arising from racial, sexual, social, and economic inequalities. Through the curriculum, a fairer society structure should be provided.

Null (2016) classified curriculum theories as liberal, systematic, existentialist, radical, pragmatic, and deliberative theories. According to "the liberal curriculum theory", it is considered important to raise intellectually and morally complete individuals, and the development of the mind should be ensured through curriculum. "Systematic curriculum theory", on the other hand, focuses on accountability in student performance, standardized tests, and the roles that students should fulfill as adults in the future. "The existentialist curriculum theory" particularly attaches importance to

students' gaining emancipatory experiences and setting out on an inner journey of liberation. "Radical curriculum theory" focuses on social change and reconstruction. "The pragmatic curriculum theory", on the other hand, attaches importance to the students' gaining meaningful experiences through the curriculum. Finally, "deliberative curriculum theory", concerned more with curriculum-making process, focuses on finding practical solutions to the problems of the curriculum through deliberation.

Considering the different classifications of the curriculum theories, it can be seen that the views, aims, and principles advocated by different curriculum theories converge on the same points despite being named differently from each other. For example, according to technological, social efficiency, behavioral, social behaviorist, managerial, system, and systematic curriculum theories, objectives of the curriculum should be determined as observable skills, the curriculum shaping people's behavior should be designed, performance standards should be determined, and the skills that will prepare students for future life should be provided. Although named differently from each other, self-actualization, humanist, experiential, constructivist, learner-centered, pragmatic, and existential curriculum theories all prioritize organizing curriculum around the needs and interests of individuals, acquiring first-hand experience, focusing on the nature of the child, and the autonomy of the students. The principles of social reconstruction, critical reconstruction, social meliorism, and society-centered, and radical curriculum theories have the idea that education has the necessary power to restructure the society, it is possible to raise individuals who can understand the problems of the society, offer solutions to these problems, and approach to community problems critically. Academic rationalism, academic disciplines, intellectual traditionalists, scholar academic, humanist, knowledge-centered, and liberal curriculum theories see the main purpose of the school as acculturation of students in the world of knowledge, consider the curriculum as a reflection of the disciplines, and think that the development of the mind and teaching the disciplines in detail are important (Eisner & Vallance, 1974; Ellis, 2004; Kliebard, 2004; Mcneil, 1977; Null, 2016 Ornstein & Hunkins, 1998; Posner, 1995; Schiro, 2012; Schubert, 1996).

Another important point in the classification of curriculum theories is about the deliberative curriculum theory included in Null's (2016) classification. This curriculum theory has taken its place in the curriculum theory classification as a theory which has principles about the process of curriculum making not about the teaching-learning process. In contrast to the curriculum theories named differently, but corresponding to similar principles, Kliebard's (2004) humanist curriculum theory has the same principles like liberal education-oriented curriculum theories although its name connotates learner-centered theories. In Table 1, the different and same points of the curriculum theories can be examined in more detail, and the theories discussed in this study can be seen as a whole picture.

Table 1. *Curriculum Theorists and Their Curriculum Theory Classifications*

Eisner & Vallance (1974)	**Mcneil (1977)**	**Posner (1995)**	**Schubert (1996)**	**Ornstein & Hunkins (1998)**	**Kliebard (2004)**	**Ellis (2004)**	**Schiro (2012)**	**Null (2016)**
Technology & Cognitive Processes	Technological	Behavioral	Social Behaviorist	Behavioral & Managerial & Systems	Social Efficiency		Social Efficiency	Systematic
Self-Actualization	Humanist	Experiential & Constructivist	Experientialists	Humanist	Child Study	Learner-Centered	Learner Centered	Existentialist & Pragmatic
Social Reconstruction Relevance	Social Reconstruction		Critical Reconstruction-alists	Reconceptualist /Postmodern	Social Meliorist	Society-Centered	Social Reconstruction	Radical
Academic Rationalism	Academic	Structure of the disciplines/Disciplines & Traditional	Intellectual Traditionalists	Academic	Humanist	Knowledge-Centered & Academic	Scholar Academic	Liberal
								Deliberative

Reflection of the Curriculum Theories on American and Turkish Education Systems

In the early 1900's, the curriculum field was launched in the USA with developments in scientific research methods, psychology, the child studies movement, industrial efficiency, and the progressive movement influencing the education between 1918-1949 (Ornstein & Hunkins, 2016). In this period, curriculum started to be seen as a planning instead of just ordering the courses and defining the time allocated to the them. Taylor, examining the working conditions in the factory was influenced by scientific management theory and stated that efficiency and productivity would increase by paying the workers taking their own output and productivity into account. Along with Taylor's views, the idea of efficiency and production influenced by business and industry also had an impact on the views of Bobbit and Charters.

The most fundamental consequence of this situation in terms of the curriculum field was that Bobbitt combined Taylor's approach with curriculum development. Bobbit wrote the book "The Curriculum" with the idea of activity analysis (Posner, 2004; Null, 2016). In the USA, Franklin Bobbitt (1918) emphasized the need to set the goals of the curriculum clearly, as he thought the age of science demanded precision and clarity (Kelly, 2004). He described a range of tasks that children and young people must do and experience in order to develop skills that would be required in their future lives (Ornstein & Hunkins, 2016). Charters, like Bobbitt, adopted activity analysis steps, but he updated that practice to teacher training. He examined teacher education curriculum contents and teacher activities between 1925 and 1928. At the end of that examination, a mastery list was created in which 1001 teacher traits were listed (Null, 2016).

Considering the ideas of Bobbit, Charters, and Taylor, an approach attracts attention that instructional efficiency is at the forefront, predetermined learning goals are taken into account, goals and student-teacher behaviors are clearly listed, and the curriculum content is sequentially arranged. It is possible to see the reflections of technological, systematic, social efficiency, and social behaviorism curriculum theories in the views and practices of those curriculum researchers.

During this period, John Dewey's work at the University of Chicago Laboratory School from 1894 to 1904 drew the attention into his ideas on education for democracy, community participation in learning, student empowerment, and applied problem solving. Dewey persistently argued that education was based on the continuous restructuring of experiences that emerge through student interest and active inquiry (Ellis, 2004).

Kilpatrick (1918), who had similar ideas with Dewey, introduced "the Project Method" to the curriculum field. The curriculum should be organized around social activities and group work in classroom and school. He argued that the learner should take part in curriculum planning. At this point, Kilpatrick differs from Dewey, who puts more emphasis on the teacher. While reading, writing, arithmetic skills, and learning academic disciplines are important in traditional education, Kilpatrick argues that the purpose of education is to complete the child's development in social context (Ornstein & Hunkins, 2016).

Bobbit and Charters were at the University of Chicago, while Tyler was a graduate student at the same university, and he was Charters' assistant. Thus, Tyler was also heavily influenced by the behaviorist ideas of Bobbit and Charters. Tyler's four main curriculum components (objectives, learning experiences, organization of methods, and evaluation) were influenced by the ideas of Bobbitt and especially Charters (Bellack, 1969; Ornstein & Hunkins, 2016). Tyler's approach is actually a combination of behaviorism (focusing on goals) and progressivism (considering student needs) (Null, 2016; Ornstein & Hunkins, 2016;).

The Eight-Year Study, marking curriculum field in the USA between 1932-1940, was carried out as a comparison of progressive schools and their curriculum from traditional schools and their curriculum. According to the results of the study, progressive methods were found to be at least as successful as

traditional methods (Ellis, 2004; Ornstein & Hunkins, 2016). The Eight-Year Study paved the way for Tyler's (1949) book "The Basic Principles of Curriculum and Instruction" (Ornstein & Hunkins, 2016). As it can be understood, the period between 1918-1930 was a period that can be thought as the culmination of the effect of progressive, learner-centered, and humanist curriculum theories (Ellis, 2004). According to the Hadow Report published in 1931, it was stated that the primary school curriculum should not be considered as knowledge, content, and product to be acquired, in contrast, it should be considered in terms of activity and experience emphasizing the process (Kelly, 2004).

After the rise of progressive ideas in curriculum, Counts, at the conference held by Progressive Education Association in 1932, criticized the progressive approach quite harshly in his speech titled "Dare the school build a new social order?" (Counts, 1978; Null, 2016). He stated that the progressive education detaches the child from the real life, and it doesn't contribute much to the sociality of the child (Counts, 2013). With those views, Counts stated that the progressive approach didn't serve any social purpose, and child-centered education supported classism rather than fighting against it, which caused the conference to be canceled (Null, 2016). Counts argued that schools could be used either to eliminate social inequalities or to reform culture and society. When viewed from this aspect, Count's ideas have roots in critical reconstruction, social meliorists, society-centered theory, and radical curriculum theories.

By the middle of the 20th century, there was an atmosphere of panic in American education when Russia launched its satellite Sputnik into space during the cold war between America and Russia in 1957 (Kridel, 2010; Null, 2016). With this event, the country made an effort to develop a curriculum that focused on science and technology (Kelly, 2004). Thus, this event led to a decrease in the influence of the humanist, experiential, learner-centered curriculum theory views in the United States (Tanner & Tanner, 1975).

Since the mid-1960s, there had been a period in which the theoretical legitimacy of the field had been questioned (Bümen & Aktan, 2014). In those periods, the influence of economists and politicians on the curriculum grew significantly, and an education approach that focused on student achievement and test scores instead of critical and independent thinking began to dominate the field (Ornstein & Hunkins, 2016). For those reasons, the 1970s was a period when the field of curriculum went through a paradigm shift, and the field was reconceptualized (Pinar, Reynolds, Slattery, & Taubman, 2004). Schwab stated in 1969 the curriculum field was moribund, and it could not continue with the current methods and principles. He also said that new and more effective principles and methods should be sought by giving more weight to practice (Bümen & Aktan, 2014; Null, 2016; Pinar, 2004 et al.; Schwab, 1969). The reconceptualization movement, whose most important advocator was William F. Pinar, emerged in the USA in the 1970s and opposed the traditional curriculum development approach (Bümen & Aktan, 2014).

When all these developments are examined from the perspective of curriculum theories, the understanding of curriculum development made with predetermined goals and prescriptive methods and based on social efficiency, social behaviorist, and systematic curriculum theories, was born in 1918 and died in 1969. An effort to understand curriculum with the reconceptualization movement started in 1970 (Bümen & Aktan, 2014; Pinar et al., 2004).

The reconceptualization movement, shaped by the thoughts of Michael Apple in the 1970s, argues that the curriculum should be understood as a political, racial, phenomenological, postmodern, biographical, aesthetical, religious, organizational, and universal text (Bümen & Aktan, 2014). Apple has written actively in the curriculum field since the early 1970s and has criticized American education and its curriculum heavily. He stated that American schools had inequal and classist behaviors towards minority groups, and education in the country wasn't organized according to the needs of those groups. For this reason, the need for radical curriculum theories emerged in educational institutions and curriculum field in the United States (Null, 2016).

After mentioning “the social reconstruction curriculum theory approach” advocated by Apple, the curriculum approach of the Brazilian educator Paulo Freire with radical and social reconstruction view of the curriculum like Apple and how and in what way his ideas affected the curriculum area should be addressed. In the “Pedagogy of the Oppressed” that he wrote in the 1970s, he discussed terms like dialogue, banking concept, and consciousness. He stated that the banking model controls students' thinking and actions and limits their creativity. Instead of the corrupt banking model in education, educators should implement teachings based on dialogues (Null, 2016; Ornstein & Hunkins, 2016). Freire's critique of that dominant education model led to an education aware of social problems and a more democratic approach (Ornstein & Hunkins, 2016).

In the 1980s, it can be said that the “Back to Basics Movement” started in curriculum field in the United States (Ornstein & Hunkins, 2016). As its name signifies, along with the view that retracted the curriculum understanding to the systematic, social efficiency, and social behaviorist curriculum theories the reflections of “the Back to Basics Movement” were as follows. In 1983, NCEE published a report called “A Nation at Risk”. It was stated that the country was under economic threat, and the current education system, and curriculum were responsible for that situation. The poor test scores compared to other countries made it necessary for the curriculum to wend its way towards perfectionism and more challenging academic courses (Posner, 2004). The next “Back to Basics Movement” was the establishment of clearly defined National Goals for Education created in 1990 and reorganized in 1994 and 1998 in the hope of putting the country among internationally competitive ones (Ornstein & Hunkins, 2016; Porter, 1990).

The “No Child Left Behind” (NCLB) movement emerged in 2001 aimed to increase the student success and close the proficiency differences among students via tests done yearly (Darling-Hammond, Noguera, Cobb, & Meier, 2007). According to this approach, curriculum should be written precisely just like writing a prescription, and there should be no ambiguities in it. This movement argued that when the curriculum was kept under control, same effect on students’ academic success could be ensured (Null, 2016). The aim of providing equal education rights for the disadvantaged students with the help of standardized tests, evaluation, and accountability methods were expressed as the aims of the movement (Hursh, 2004). In relation to all that information, the ever-increasing performance evaluations and accountability requirements in education seemed to be made for the benefit of minority groups, but in fact, they took the curriculum understanding back to systematic approaches.

The intellectual, periodic and social background elements determining the structure of the curriculum studies affect the decisions about the curriculum (Mızıkacı, 2019). In this regard, understanding of the curriculum in Turkey should not be considered as disconnected from the developments in the other countries. When looked at the historical framework of curriculum development, with the proclamation of the Republic, the question “What knowledge is of most worth?” was answered quite differently within the effect of positivism and secularism (Aktan, 2013). A nation that had just come out of the war in the 1920s was trying to rise again, and education and curriculum studies were of great importance.

Efforts to make curriculum in Turkey started after the proclamation of the Republic, but its transformation into a systematic structure corresponds to the 1950s (Akınoğlu, 2005; Demirel, 1992; Orakçı, Durnalı, & Özkan, 2018). With the proclamation of the Republic, the curriculum began to be considered as a more political text. Since curriculum studies done in that period were mostly aimed at reconstructing the society, it can be said that those curricula were a kind of social engineering projects (Bümen & Aktan, 2014). In this context, it can be said that because of aforementioned feature of the curricula in the first years of the Republic, they were mostly made with the understanding of radical, social reconstruction curriculum theories.

The 1924 curriculum was the curriculum prepared as a project considering the needs and conditions of a newly established country and remained in practice for two years (Gözütok, 2013b). John Dewey’s

visit to Turkey in 1924 and his report on Turkey's education were the government's important projects for the newly recovering country's education and curriculum. The reflections of his recommendations could be easily seen in the primary school curriculum and teacher training. In general, the ideas of teacher-centered instruction were more visible in the 1924 curriculum (Aktan, 2003).

The 1926 curriculum prepared for the first time in accordance with the broad fields design, is accepted as a progressive curriculum (Aslan, 2000; Beyaztaş). The ideas of Dewey were more visible in 1926 curriculum as the main target of the primary school curriculum was mentioned to bring up good people by connecting the students to their environment. In addition, the relation between schools and the community was very strong in the 1926 curriculum because it was thought that the schools were seen as a form of reconstruction (Aktan, 2013). Likewise, in the 1936 curriculum; the points, such as putting the student and his/her environment at the center, acting on the interests of the students, gaining the knowledge and skills appropriate to their needs, and the cooperation taking an important place in the curriculum (Beyaztaş, et al., 2013; Türe, 2013) can be accepted as some clues to learner-centered and progressive curriculum theories. Aktan (2013) also stated that 1936 curriculum focused on the nationalist ideology, and he also mentioned that the pragmatism idea seen in the curriculum wasn't a democratic but a more ideological one.

With "the Village Primary School Curriculum Project", which was put into practice in the 1939-1940 academic year, practical lessons about village life were included in the curriculum of village schools, and steps were taken to make the contents of some lessons suitable for village life. The Village Institutes emerged with the idea of training teachers who would implement the new village school curriculum (Gözütok, 2013b).

During the post-war period, the 1936 curriculum in practice during the Word War II couldn't answer to the needs of that period as it was based on the single-party ideology (Aktan, 2013). Considering the 1948 curriculum, the transition to multi-party system coinciding with those years cannot be ignored. The 1948 curriculum gave importance to democratic processes (MEB, 1948). Aktan (2013) also commented that discourse of democracy substituted for the ideological focus in the 1936 curriculum. In addition, he stated that in the 1948 curriculum the themes like social, individual, human affairs, and economic life were seen important, which weren't seen in the 1924, 1926 and 1936 curricula. The 1948 curriculum included alternative measurement methods, and gave importance to practical knowledge and skills. For such reasons, it can be said that the 1948 curriculum also had reflections of the progressive and pragmatist perspectives (Aktan, 2013; Beyaztaş, et al., 2013). However, it could be also said that the 1948 curriculum was based on knowledge teaching as the number of subjects and units for each course were increased, and there was a loaded content (Gözütok, 2013b).

The World War II could be regarded as a turning point for Turkish curriculum studies. The curriculum concepts from Continental Europe especially from Germany were holding the stage during the early years of the Republic, but after 1945, German curriculum thought was replaced with USA ideas on curriculum (Aktan, 2013). Watson Dickerman, John J. Rufi, Kate V. Wofford, Lester Beals, Ellsworth Tompkins, Roben J. Maaske visited Turkey in 1950s and effected Turkish education and wrote reports on civic education, primary education, secondary education, teacher education, and village schools' education (Şahin, 1996). In 1950's and 1960's the educators, such as Selahattin Ertürk and Fatma Varış were sent to the USA for their graduate studies, which paved the way for the USA impact on Turkish curriculum and a perspective highlighting curriculum development, curriculum assessment, and teaching methods (Aktan, 2013; Bümen, 2020).

After the 1950s, the curriculum understanding in the form of courses and a list of contents left its place to the curriculum development approach (Demirel, 1992; Gözütok, 2013b). Pilot studies carried out in Bolu and İstanbul in 1953-1954, and the pilot school curriculum implemented in Istanbul Atatürk Vocational High School for Girls in 1954-1955 academic year were important steps in the curriculum development studies (Akınoğlu, 2005; Gözütok, 2013).

The 1968 curriculum, on the other hand, was put into practice in order to be tested and developed as a draft curriculum in 1962 for six years. Although the 1968 curriculum was considered important in terms of reflecting novelties, such as group work, research, examination, and independent learning on the curriculum, it was unsuccessful due to the inadequacy of the practices and the deficiencies in the revision of the curriculum (Gözütok, 2013b). As it was discussed earlier, 1970 was the year of the reconceptualization movement. However, Aktan (2013) stated that the reconceptualization paradigm in the curriculum field in 1970s was not realized in curriculum studies in Turkey focusing on technical and scientific approaches and the idea of curriculum development rather than understanding the curriculum.

In the 1980s, a search for a model began in curriculum development studies in Turkey (Akınoğlu, 2005; Demirel, 1992). Some steps were taken for the standardization and continuity in curriculum development (Gözütok, 2013b). After 1980, instead of collectively developing a curriculum in primary education, subject area-based curricula were developed (Beyaztaş, et al., 2013). In the 1990s, Assessment, Evaluation and Curriculum Development Specialization Commissions were established (Demirel, 1992; Gözütok, 2013b). That period were years when consistency and standardization could not be achieved in curriculum development field (Gözütok, 2013b).

Before analyzing the curriculum theories in 1998 curriculum, it will be useful to mention the background political events in order to see how the curriculum was shaped. It was stated that the political parties represented for the first time between 1968-1998, the 1980 military coup, and the 1982 constitution were important political events (Mızıkacı, 2013). The positive aspects of the 1998 curriculum were that it was made in accordance with the curriculum development model and had a piloting (Şahin, 2013). The curriculum with aims and behavior statements was the product of the behaviorist approach. However, with the behavioral approach in the curriculum, the knowledge/culture transfer necessary for the predetermined desired citizenship was made, and it was detected that the affective domain was covered at a high rate (ERG, 2005). In this respect, although the effects of social efficiency, systematic, and social behaviorist curriculum theories are seen in the curriculum, it can be interpreted that keeping knowledge and culture transfer at the forefront also reflects the liberal curriculum theory.

In 2004, the Ministry of National Education started to work on the innovation of the primary education curriculum (Beyaztaş et al., 2013). It was stated that the goal statements of the 1924, 1926, 1936, 1948, 1962, 1968, 1998 curricula were written with a behavioral approach, whereas the objectives were in the form of achievement expressions with the effect of the constructivist approach in the 2005 curriculum (Akınoğlu, 2005; Beyaztaş et al., 2013). Gözütok (2013b) mentioned that the curricula carried out in the Republican period before 2000 were developed with the influence of the pragmatic philosophy and constructivism movement, but while the existence of those movements could be mentioned theoretically, the practices were not in that direction. Orakçı, et al. (2018) stated that the 2005 curriculum included many components maintaining both personal and social development of the students. In opposition to this view, Beyaztaş et al. (2013) stated that the view that the elements of progressivism and constructivism only existed in 2005 curricula was wrong, and that perspective was already present in the curricula developed since the proclamation of the Republic. In addition, it was stated that there were some problems in the elements that allowed students to construct knowledge actively in terms of achievements, teaching- learning processes, and evaluation. Akinoglu (2005), basically having the same idea with Orakci et. al (2018), stated that the 2005 curriculum had elements that could not get rid of the influence of the behavioral approach. Mızıkacı (2019) stated that constructivism, which entered into the curriculum field by embellishing it with an official and contemporary discourse through 2005 curriculum, actually deepened the current curricular problems and became one of the reasons for today's program erosion. In addition, the fact that for the first time in our country's curriculum development history, the curriculum was prepared without consulting the curriculum development faculty members was criticized (Gözütok, 2013a, 2013b).

With the 4+4+4 system implemented in the 2012-2013 academic year, compulsory education was increased to 12 years (Gözütok, 2013a; MEB, 2012). There was no existing pilot scheme for the new structure, and it was implemented gradually in the 2012 – 2013 academic year (Gözütok, Ulubey, Akçatepe, Koçer, & Rüzgâr, 2014). The new system was highly criticized for not having a scientific rationale, lowering the age for participation in primary school to 60 months, leading to participate in an open elementary or high school (Gözütok, 2013a).

In 2017 curriculum, the competencies and skills available in "the European Qualification Framework Reference" were adapted to the conditions of Turkey and the needs of the society. The updates were made regarding the competencies and skills for students in the form of "the Turkish Qualifications Framework", and they were included in the curriculum. Since there was no information on how to associate "Turkish Qualifications Framework" with the curriculum, it was stated that the qualifications were in the form of proforma amendment (Coşkun, 2017).

The history of the USA and Turkey curriculum development has been examined in this study, and it has been seen that the field of curriculum development has been in constant motion and change. Social events, political events, economic crises, competitions among countries, wars and conflicts among countries, national crises are reflected in educational practices and curriculum studies and history. Therefore, these changes in the educational understanding of the country will definitely have an impact on the curricula developed. Since these changes have been directed by the dominant ideology, orientation, and intellectual infrastructure, curriculum theories have had an important place at the focus of curriculum events.

International and National Studies on Curriculum Theories

When the foreign literature on curriculum theories was examined, it was seen that the studies (Babin, 1978; Cunningham, Johnson & Carlson, 1992; Schiro, 1992; Lee, Adamson & Luk, 1995; Ryu, 1998, Cheung, 2000; Cheung & Wong, 2002, Crummey, 2007; Reding, 2008; Foil, 2008; Jenkins, 2009; Mahlios, Friedman-Nimz, Rice, Peyton, & O'Brien, 2010; Salleh, Hamdan, Yahya, & Jantan, 2015; Alsalem, 2018) were done mostly with the teachers, and they mostly aimed to reveal the curriculum theories adopted by the teachers. Among the studies, there were also studies aiming to investigate the curriculum theories of teacher candidates and school administrators, though in a small number. In those studies, "A Curriculum Orientation Profile" developed by Babin (1978) and "Curriculum Orientation Inventory" developed by Cheung (2000) and revised by Cheung & Wong (2002) were generally used. It was also observed that the studies were generally based on McNeil (1977) and Eisner's (1974) curriculum theory classifications.

It was concluded that the studies in Turkey (Eren, 2010; Geçitli, 2011, Bay, Gündoğdu, Ozan, Dilekçi, & Özdemir, 2012 Yeşilyurt, 2012; Abakay, Şebin, & Şahin, 2013; Tanrıverdi & Apak, 2014; Türe, 2017) were mostly done with teacher candidates. When the studies were examined, it was seen that the studies focusing on curriculum theories in our country have been carried out recently. In those studies, the Curriculum Orientation Inventory, which was developed by Cheung & Wong (2002) and adapted into Turkish by Eren (2010), was used. Eisner & Vallance (1974)'s curriculum theory classification was used in almost all of the studies.

Discussion, Conclusion and Implications

In this review study, the conceptual structure of curriculum theories, different curriculum theories, how these theories reflected on curriculum development processes in Turkey and the USA, and international and national studies on curriculum theories were examined by reviewing the literature. Examples of the definitions of curriculum, curriculum theories, and the variability in those definitions were presented. Discussions about definitions take time and energy, but they also address important

curricular issues (Ornstein & Hunkins, 2016). From this point of view, it can be concluded that different definitions and chaotic terminology actually feed the field.

Each view, trend, vision, concept represented by the curriculum definition includes a certain socio-political perspective about education, knowledge, social changes, students, and school (Tanner & Tanner, 1975). This point of view leads us to curriculum theories. Curriculum theories include various classifications in the literature, and within these classifications, there are overlapping theories of different theorists. In some curriculum theories the content of the teaching is seen as more important than the learning process, didactic teaching and learning approaches are used, providing information and intellectual development that will ensure the development of societies is important. In others, the curriculum is regarded as a way to change the society, the skills of solving real-life problems are tried to be gained, and the critical analysis of social problems and inequalities is important. Curriculum theories also ranges widely from the theories that allow students to realize themselves, provide meaningful experiences, and focus on their interests and needs to a theoretical understanding in which the curriculum is planned systematically and clearly defined goals manage the process, and instructional effectiveness and performance tests are prioritized.

Each curriculum represents a choice and stance on how to approach students' education (Posner, 2004). Therefore, many of the curricula and educational reforms developed signify a stance, perspective and choice towards the curriculum and teaching-learning process. In the light of this information, in the present study, it has been tried to shed light on how the curriculum theories directed the process in the USA and Turkey, and the ideological reflections on the curricula were presented with examples.

In this review study, studies on curriculum theory in national and international literature were also examined. It can be interpreted that the awareness of curriculum theories began earlier abroad. Studies abroad generally aimed to reveal the curriculum theories of teachers, and studies in Turkey generally of teacher candidates. The research method and measurement tools used in the studies on curriculum theories were generally the same. For this reason, it is thought that curriculum theories, which are thought to be one of the most important research topics that will feed the intellectual basis of the curriculum area, will provide more fruitful results for the curriculum area by having different study groups, methods and measurement tools in the studies. In addition, as few studies were found dealing with curriculum theories and foreign sources were generally used during this review study, so it is considered important to have studies addressing this issue in Turkey. Curriculum theory studies that support deep questioning and critical thinking in the field of curriculum are also considered important for the future of the field.

As Aktan (2013) stated there has been no macrocurricular approach in curriculum field, which means curriculum studies lack the macrocurricular problems in their research. Instead, technical-scientific-rationalist microcurricular perspectives have been used in the field. Macrocurricular perspective focusing on gender discrimination, ideology, and curriculum history etc. should be the topic of education and the field of curriculum. Taking this into account, with studies questioning the theories of curriculum and thinking infrastructure behind the curricula and curriculum studies, the field can keep itself away from the risk of coming to a deadlock.

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TÜRKÇE GENİŞ ÖZET

Eğitim Programı Kuramı: Bir Derleme Çalışması

Giriş

Eğitim programı, bir eğitim sistemine yön veren ve toplumda yetiştirilmek istenen bireyleri tanımlayan eğitimin anayasasıdır. Program geliştirmeye ilişkin alınan kararlar tüm öğretim sürecini etkileyecek önemli ipuçları verir. Programlar hazırlanırken "hangi bilgi en değerlidir, ne öğretmeliyiz (Spencer, 1884); neden bir şeyi öğretmeyi diğerine tercih etmeliyiz, hangi bilgiye kim ulaşabilir, programın farklı parçalarından bir bütün elde etmek için bu parçalar arası nasıl ilişki kurulmalıdır" (Kliebard, 1977) gibi sorular program geliştirme süreçleri açısından yanıtlanması gereken önemli sorulardır. Ayrıca ne öğretilmeli ve kime öğretilmeli, hangi koşullarda öğretilmeli, hangi amaç bağlamında öğretilmeli, program kararları alırken hangi süreçler kullanılmalı (Null, 2016); programlarda yer alan bilginin doğası kaynağını didaktik öğretilerden mi, bireysel anlamlandırmalardan mı, yetenek ve yeterliklerden mi yoksa kültürel ve ahlaki bakış açılarından mı almaktadır gibi derin sorgulamalara ihtiyaç vardır. Bu sorulara bulunan yanıtlar ise bizi eğitim programı kuramlarına götürmektedir (Null, 2016).

Bu çalışmada eğitim program kavramını tanımlamadan önce eğitim programı ve kuram sözcüklerinin kavramsal yapıları üzerinde durulmuştur. Eğitim programı kavramı tanımlanırken tanımlardan bazıları öğrencinin deneyimlerini, bazıları yetişkin hayatına hazırlık için gerekli olan yeterlikleri ön plana alırken bazı tanımlar programın tüm ögelerini göz önünde bulundurarak programı bir sistem olarak tanımlamakta, bazıları ise programı yalnızca içerik olarak ele almaktadırlar (Bilbao ve diğ., 2008; Bobbit, 1918; Demirel, 2006; Dewey, 1902; Ertürk 2016; Kliebard, 1989; Oliva, 1988; Ornstein & Hunkins, 2016; Phenix, 1962; Squires, 1990; Saylor & Alexander, 1974; Taba, 1932; Tyler, 1975; Varış, 1996). Bu tanımlar incelediğinde eğitim programına ilişkin alanyazında çok fazla tanım olduğu görülmekte (Bellack & Kliebard, 1977; Kliebard, 1989, Oliva, 1977; Portelli, 1987, Rasco, 2016, Schubert, 1986) ve bu durum da eğitim programı kavramının kaotik yapısına işaret etmektedir.

Eğitim programı kuramı kavramını tartışmadan önce kuram kavramı da incelenmiş ve çok farklı tanımlamalar olduğu sonucuna ulaşılmıştır (Beauchamp, 1982; TDK, 2021; OXFORD, 2021). Beauchamp (1972)'ın da belirttiği gibi kuram kavramına ilişkin farklı tanımlar mevcuttur ancak kuram kavramı, kuramın geliştirildiği alana özgü olarak kendine has bir anlam kazanmaktadır. Eğitim programı kuramı kavramındaki kuram sözcüğü de tam olarak böyle bir süreçten geçmiştir.

Eğitim programı kuramından ilk kez Chicago Üniversitesinde 1947 yılında düzenlenen konferansta ve ardından yazılan "Toward Improved Curriculum Theory" makalesinde bahsedilmiştir (Klein, 1992; Kliebard, 1977; Tyler, 1977). Beauchamp (1982), eğitim programı kuramını bir okulun programına anlam katan ilişkisel bir bütün içinde hareket eden önermeler bütünü olarak tanımlarken McCutcheon (1982) da aynı bakış açısıyla eğitim programı kuramını program olgusunun bir dizi analizi, yorumlanması ve anlayışı olarak ele almıştır.

Alanyazın incelendiğinde, Eğitim Programı Kuramı (Curriculum Theory) kavramının program inançları (curriculum beliefs), eğitimsel değer yönelimleri (educational value orientations), program

ideolojileri (curriculum ideologies), program yönelimleri (curriculum orientations) gibi kavramlarla aynı şeyi ifade eden farklı kavramlarla ele alındığı görülmüştür (Cheung & Wong, 2002; Schiro, 2012; Yılmaz, 2021).

Eğitim programı kuramları farklı program kuramcıları tarafından farklı şekillerde sınıflandırılmış ve isimlendirilmiştir. Bu çalışmada Eisner & Vallance (1974), Mcneil (1977), Posner (1995), Schubert (1996), Ornstein & Hunkins (1998), Kliebard (2004), Ellis (2004), Schiro (2012) ve Null (2016)'un eğitim program kuramları sınıflandırmasına yer verilmiş ve açıklamalar yapılmıştır. Araştırmada, eğitim programı kuramlarının eğitime ve eğitim programı çalışmalarına nasıl yansıdığını betimlemek için yurt dışı ve yurt içindeki program tarihçesine kronolojik sırayla yer verilmiş ve program tarihi için önemli olaylar farklı eğitim programı kuramları ile ilişkilendirilmiştir.

Eğitim programı kuramının yurt içi (Eren, 2010; Geçitli, 2011, Bay, Gündoğdu, Ozan, Dilekçi, & Özdemir, 2012 Yeşilyurt, 2012; Abakay, Şebin, & Şahin, 2013; Tanrıverdi & Apak, 2014; Türe, 2017) ve yurt dışı (Babin, 1978; Cunningham, Johnson & Carlson, 1992; Schiro, 1992; Lee, Adamson & Luk, 1995; Ryu, 1998, Cheung, 2000; Cheung & Wong, 2002, Crummey, 2007; Reding, 2008; Foil, 2008; Jenkins, 2009; Mahlios, Friedman-Nimz, Rice, Peyton, & O'Brien, 2010; Salleh, Hamdan, Yahya, & Jantan, 2015; Alsalem, 2018) araştırmalarda nasıl ele alındığını betimlemek için bu konuyu ele alan araştırmalar ve tezler incelenmiş ve yapılan araştırmalara ilişkin bazı çıkarımlarda bulunulmuştur.

Yukarıdaki bilgiler doğrultusunda, eğitim programı kuramlarının kaotik olan kavramsal yapısını sorgulamak, eğitim programı kuramlarını detaylı incelemek, eğitim program çalışmaları ile kuramlarını ilişkilendirmek ve araştırmalara nasıl yansıdığını ortaya koymak amacıyla gerçekleştirilen bu araştırmada, eğitim programı kuramları konusunda yapılmış olan çalışmalar incelenmiştir. Bu amacı gerçekleştirmek için "eğitim programı kuramı nedir, eğitim programı kuramları nasıl sınıflandırılmaktadır, eğitim programı kuramları ile program tarihi nasıl ilişkilendirilebilir ve eğitim programı kuramlarına ilişkin nasıl araştırmalar yapılmaktadır?" sorularına yanıt aranmıştır.

Yöntem

Eğitim programı kuramı kavramının çalışıldığı araştırmaların incelenmesi yoluyla oluşturulmuş bu çalışma bir alanyazın derleme çalışmasıdır. Alanyazında yapılan incelemeler sonucunda, yurt içinde ve yurt dışında yapılan çalışmalar dikkate alınmıştır. Çalışmalar incelenirken araştırmaların başlığı, çalışmaların yapıldığı yıl ve ülke, araştırmaların çalışma grubu, amacı, araştırmalarda kullanılan veri toplama araçları, veri analizi süreçleri, araştırmaların bulguları, sonuçları ve önerilerini içeren bir analiz yapılmıştır. Çalışma kapsamında olacak araştırmalar ScienceDirect, Jstor, Google Scholar, Proquest ve Ulusal Tez Merkezi veri tabanlarında 'Eğitim Programı Kuramı', 'Eğitim Programı İdeolojisi' ve 'Eğitim Programı Yönelimleri' kelimeleri kullanılarak taranmıştır

Ayrıca yurt dışında 1900'lerin başından itibaren program alanını gerek alanda çalışan Amerikalı eğitim programcıları gerekse yapılan çalışmalar açısından yoğun bir şekilde etkilemiş olması gerekçesi ile Amerika'da ve Türkiye'de eğitim programı kuramlarının bu iki ülkedeki eğitim sistemlerini ne şekilde etkilediği bu alanda yapılan literatür çalışması ile ortaya konulmaya çalışılmıştır.

Tartışma, Sonuç ve Öneriler

Bu derleme çalışmasında eğitim programı kuramlarının kavramsal yapısı, farklı program kuramları, bu kuramların program çalışmalarına etkisi ve program kuramları ile ilgili yurt içi ve yurtdışında yapılan çalışmalar alanyazın taraması yapılarak incelenmiştir.

Eğitim programı kuramının kavramsal yapısı ele alınmış ve alanyazın incelemeleriyle bu kavrama ilişkin kaotik bir yapının bulunduğu saptanmıştır. Eğitim programı kuramı, program yönelimleri, program ideolojileri gibi farklı şekillerde ele alınan eğitim programı kuramları ve bu kuramlara ait

sınıflandırmalar incelendiğinde farklı adlandırmalar olsa da kuramların ilkelerinin aynı şeyleri ifade ettiği sonucuna varılmıştır. Program kuramları arasındaki bu benzerliği ortaya koymak için farklı kuramcıların farklı sınıflandırmaları geniş bir tablo içerisinde sunulmuştur. Eğitim programları alanına yön veren önemli olayların kronolojik sıra ile incelemesi yapılmış ve alan için dönüm noktaları sayılabilecek bu olaylarda farklı eğitim programı kuramlarının yansımaları görülmüştür.

Eğitim programı kuramlarının çalışıldığı yurt dışı ve yurt içi araştırmalar incelendiğinde ise yurt dışı literatürüne göre program kuramlarına yönelik farkındalığın çok daha geç kazanıldığı yorumu yapılabilir. Yurt dışı çalışmaları genel olarak öğretmenlerin program kuramlarını betimlemek için yapılmış, yurt içi çalışmalar ise yoğunlukla öğretmen adaylarının program kuramlarının araştırılması üzerine yoğunlaşmıştır.

Bu çalışmada eğitim programı kuramlarının ele alındığı ulusal yayınların çok sınırlı olduğu görülmüştür. Eğitim programı kuramlarını ele alan daha çok çalışmanın ülkemiz alanyazınına kazandırılması önemli görülmektedir. Eğitim Programları ve Öğretim alanının düşünsel temellerini ve art alanını besleyeceği düşünülen eğitim programı kuramını inceleyen çalışmalar hem araştırmacılara bu konuda veri sağlayabilir hem de alanyazındaki boşluğun doldurulmasına yardımcı olabilir.

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The Proliferation of Lesson Study for English Language Teachers: A Meta-Synthesis Study

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Abstract

Although studies on the lesson study experiences of English language teachers have increased in Turkey in recent years, there is still a need for further studies on integrating the model into the context. This study examined qualitative research on the lesson study conducted with English language teachers in Turkey. It was aimed to reach a synthesis to ensure the proliferation of the model. The common databases were searched with particular keywords, and specific inclusion criteria were used. Selected studies were scored with a checklist to evaluate quality, and eight studies (six articles and two doctoral dissertations) that received the required score were included in the research. The analysis followed the development of the first and second-order themes, interpreting and synthesizing. The common findings in the studies show that the lesson study provides significant contributions to English language teachers despite the difficulties in the process. The synthesis includes the initiatives at the individual and institutional dimensions. It is concluded that English language teachers' pedagogical design capacity and collaboration skills should be strengthened at the individual dimension. At the same time, administrator, mentor/facilitator support should be provided, and policy changes should be made in teacher education at the institutional dimension. We also recommend examining how the model can be adapted to Turkey's cultural-educational context, teacher autonomy, and identity.

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Introduction

Lesson study, originating in Japan, is one of the professional development (PD) models providing job-embedded and active involvement for teachers, and it has recently gained popularity in many countries. Based on Vygotsky's (1978) Sociocultural Theory, lesson study entails teachers working together with their colleagues to seek solutions to educational problems (Shabani, 2016). In this

process, teachers collaboratively design instruction, implement, observe, discuss lessons, and give feedback to make lessons more effective (Dudley, 2015; Lewis, 2000; Lewis, Perry, & Hurd, 2009). Alternatively, teachers make a nexus between theory and practice, analyze their classroom practices in depth based on theory, be reflective and work collaboratively (Orland-Barak & Maskit, 2017).

The lesson study begins with defining a problem that teachers have identified collaboratively (Dersforges, 2015). Then, research is conducted on teaching materials and suitable methods for the subject (Takahashi & Yoshida, 2004). A research lesson (usually three) is designed for the problem. In research lessons, other teachers take on the role of the observer while a teacher is teaching (Dudley, 2015). In the observation phase, which is the essence of lesson study (Doig & Groves, 2011), teachers record what students say, how they use the materials, and where they have difficulties (Lewis, Perry, & Hurd, 2004). Finally, there is a discussion about the research lesson. While the discussions usually involve the lecturers' and observing teachers' meetings, an outside educator or researcher may also attend these meetings (Lewis, 2000).

Even though lesson study has a well-established history, it relatively newly finds an echo in Turkey in other educational settings. Eraslan (2008) discusses it for the first time in the context of Turkey, and he states that the model contributing to the PD of teachers should be used in Turkey as well. The model generally focuses on mathematics education (i.e., Özdemir Baki & Işık, 2018). There are, however, examples in primary school education (Ayra & Köstereliоğlu, 2021; Gözel, 2017), art education (Hiçyılmaz & Aykan, 2020), and preschool education (Tepetaş & Tezcan, 2020). Besides, its use is becoming more widespread among English language teachers (e.g., Bayram & Canaran, 2019; Gök, 2016; Orhan, 2020) and teacher candidates (Demirbulak, 2011; Yalçın Arslan, 2019). All these studies are within the scope of graduate theses or scientific articles; no attempts by the Ministry of National Education (MoNE) have been found. In other words, the lesson study is not a formal model recommended by the MoNE in Turkey.

There are also findings related to PD in lesson study research conducted with English language teachers. For example, lesson study is effective in the easy implementation of the changes made in English curricula by teachers, and it also contributes to their cognitive, social, and emotional development (Zhang, Yuan, & Liao, 2019). In addition, it allows the teachers to observe the classroom from both the perspectives of a researcher and students, enabling them to implement changes in teaching successfully (Tasker, 2014). Teachers interacted to gain new teaching methods and techniques (Purwanti & Hatmanto, 2019). Likewise, peer observation and peer feedback contribute to the PD of English language teachers by supporting the course design (Nami, Marandi, & Sotoudehnama, 2016).

Although studies on lesson study providing PD of English language teachers in Turkey have increased rapidly in recent years, many problems have been pointed out. For instance, teachers implementing the research lesson have difficulty in arranging the lesson hours, preparing the lesson plans (Yüzbaşıoğlu, 2016), and designing the curricular elements (aims, contents, teaching-learning process, and evaluation) appropriately (Orhan, 2020). Moreover, they cannot think independently from the textbooks (Uştuk & Costa, 2021). There are also problems such as lack of administrative support (Bayram & Canaran, 2020), the misconception of the lesson study model (Bayram & Bıkmaz, 2018), and teachers' inability to handle criticism (Karabuğa & İlin, 2019). It seems demanding to implement lesson study effectively in the PD of English language teachers until these problems are resolved.

For the lesson study to be used effectively in the PD of English language teachers, there is a need for further studies on integrating the model into the context in Turkey, beyond putting forward its positive aspects (Bayram & Canaran, 2020). Therefore, it may be helpful to discuss and examine previous studies comprehensively. For seeing beyond the meanings of prior findings, meta-synthesis studies are carried out. A meta-synthesis study conducted to reach a new or improved understanding

of the phenomenon under investigation may reveal new insights about the current state of the phenomenon (Paterson, 2012). By comparing the findings obtained from qualitative studies, in-depth and holistic information about the researched phenomenon can be obtained (Gümüş, 2018). Through meta-synthesis, the real reasons behind the difficulties experienced in the lesson study used in the PD of English language teachers can be uncovered, and new solutions that can help the model proliferate can be found. Although the meta-synthesis on lesson study is examined in the international context in Turkey (Serbest, 2014) and mathematics teachers' experiences (Kıncal & Beypınar, 2015), no meta-synthesis on English language teachers has been conducted. This study aims to produce a synthesis to proliferate the model by examining the studies on lesson study used as a PD of English language teachers in Turkey. In this context, the following questions were formulated:

1. According to previous qualitative studies, what are the common points about lesson study experiences of English language teachers?
2. What is the final synthesis to ensure the proliferation of lesson study as a PD for English language teachers?

Method

The meta-synthesis was adopted to examine the studies on English language teachers' lesson study experiences in the study. Meta-synthesis is defined as the synthesis of findings in qualitative research reports related to a particular topic or focuses for reaching a new or improved understanding of the phenomenon under study (Paterson, 2012; Sandelowski & Barroso, 2007; Thorne, Jensen, Kearney, Noblit, & Sandelowski, 2004). The synthesis produces interpretive results through comparison, integration, and distillation of meanings, concepts, and theories across qualitative studies (Erwin, Brotherson, & Summers, 2011; Finfgeld, 2003; Saini & Shlonsky, 2012; Zimmer, 2006). There are different views on carrying out meta-synthesis (Erwin et al., 2011; Finfgeld, 20003; Howell-Major & Savin-Baden, 2010; Noblit & Hare, 1999; Polat & Ay, 2016; Sandelowski & Barroso, 2007). In this study, the steps (Erwin et al., 2011) followed are: (a) formulating research questions, (b) reviewing the literature, (c) identifying studies to be included, (d) using analysis techniques for meta-synthesis, and (e) presenting the synthesis. Below, these steps are explained in detail.

Formulating Research Questions

It is vital to select the research questions initially to determine how the research is carried out in meta-synthesis (Erwin et al., 2011). The fact that the professional development needs of English language teachers in Turkey cannot be adequately met (Uztosun, 2018) and that numerous problems have been pointed out in the previous lesson study findings show that new solutions are needed. Therefore, research questions were formed for creating a synthesis to proliferate the model in the PD of English language teachers in Turkey.

Reviewing the Literature

After formulating the research questions, a literature review was conducted. In this process, the start date has not been determined, and all studies until June 2021 have been examined. The keywords (see Table 1) were searched in the National Thesis Center of the Council of Higher Education. The databases (EBSCO, Elsevier, ERIC, Mendeley, SCOPUS, Springer, Taylor & Francis, Web of Science) at the Ege University Library, and Google Scholar. First, the keywords related to the lesson study were scanned, then these keywords combined with English language education and English language teachers were searched. The searching process was carried out by both researchers separately, and a total of 111 studies conducted in Turkey were reached.

Table 1. *Keywords Used in Searching Databases*

Keywords related to lesson study	*Keywords related to English language education*	*Keywords related to the professional development of English language teachers*
lesson study, lesson study model, research lesson, research lesson model	English as a foreign language, English language teaching, English teaching	EFL teacher, EFL instructor, English language teacher, teacher education, PD

Identifying Studies to be Included

Identifying studies to be included was carried out in three stages. In the first stage, a table with the title, method, participants, and data collection tools of the studies was prepared. All lesson study research conducted in Turkey was included in the table for not missing any study, and those not relevant to English language education were excluded. In the second stage, the inclusion criteria were determined (Table 2), and after reading the full texts of the remaining studies, the studies not meeting the criteria were excluded. In the third stage, the studies were evaluated in terms of quality. The including process is presented in Figure 1.

Table 2. *Inclusion Criteria*

Criteria	*Inclusion*	*Exclusion*
Language	English and Turkish	Studies in other languages
Time	… - June 2021	-
Context	Studies conducted in Turkey	Studies conducted in other countries
Research design	Qualitative	Quantitative, systematic analyses, reviews, mixed methods
Participants	English language teachers and lecturers	Pre-service English language teachers and other subject teachers
Type of document	Articles, theses not converted into articles	Theses converted into articles
Quality of the study	Studies with a score of 11-15 from the checklist (Erwin et al., 2011)	Studies with a score of 1-10 from the checklist (Erwin et al., 2011)

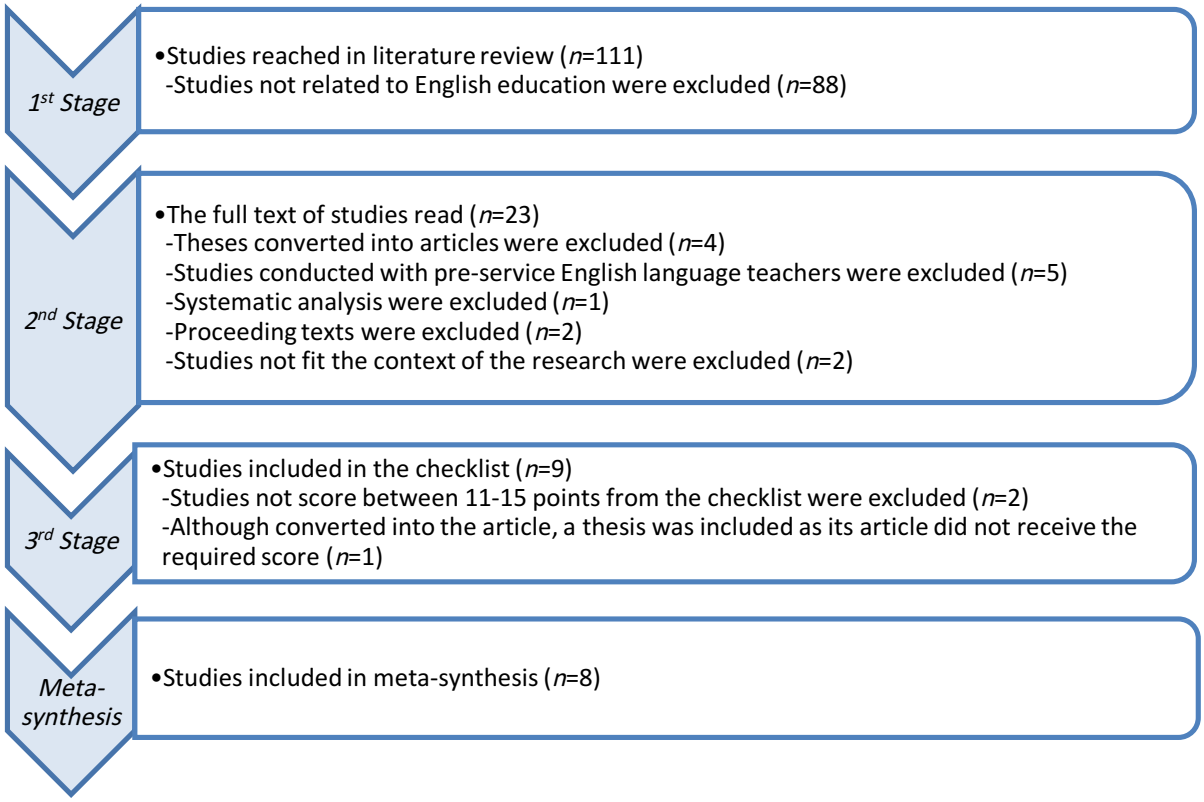

Figure 1. The Process of Including Studies in Meta-synthesis

As seen in Figure 1, in the second stage, articles were included first since they were subjected to editorial and reviewer evaluations. In other words, the theses that were converted into articles were excluded. However, since a doctoral thesis (Orhan, 2020) was not converted into an article, it was also included in the research. The studies conducted with pre-service English language teachers (Altınsoy, 2020; Coşkun, 2017; Demirbulak, 2011; Ökmen & Kılıç, 2021; Yalçın Arslan, 2019), systematic analyzes (Uştuk & Çomoğlu, 2019), proceeding reports (Gök, 2016; Songül, Delialioğlu, & Özköse Bıyık, 2018) were excluded. Studies that did not fit the research context were also excluded. One was online lesson study research (Songül, 2019), and the other was conducted with one participant (Karabuğa & İlin, 2020).

In meta-synthesis, a judgment must be made about the quality of each study to be included (Erwin et al., 2011). In the third step, a checklist adapted by Erwin et al. (2011) was used to identify the quality of the studies. The checklist is expected to score according to the indicators of the clarity of the research problem and the purpose of the study, the type of the method, the relevance of the findings, the quality of the discussions, and suggestions. If the score range obtained from the checklist is 11-15, it is classified as good quality, 6-10 as medium quality, and 1-5 as low quality.

Therefore, firstly, the items in the checklist were taken into a table and arranged so that the indicators were put in the row and the studies were put in the column. The studies were then scored independently by the researchers. Finally, the average of the scores was calculated, and seven studies with a score between 11-15 were included. However, an article produced from a doctoral dissertation did not receive the required score. Then the doctoral dissertation of this article was scored, and it was included in the study as it received sufficient points. As a result, a total of eight studies, including six articles and two doctoral theses, were included in the meta-synthesis.

Although there is no exact number regarding the sample size of qualitative meta-synthesis, the number varies between 3 and 292 depending on the scope of the subject (Finfgeld, 2003). However, it is generally recommended to include between 8 and 12 studies in the sample (Polat & Ay, 2016). The most crucial variable in determining the sample is the saturation of the coding categories (Finfgeld, 2003). So, the eight samples (studies) in the research might be sufficient for meta-synthesis to provide data saturation as there are 304 codes and 55 categories in them. The main features of studies included in the meta-synthesis are presented in Table 3.

Table 3. *Main Features of the Studies Included in the Research*

Author	*Purpose*	*Method*	*Participants*
Yüzbaşıoğlu (2016)	To determine the effectiveness of the lesson study model for PD of teachers	Action research	13 English language teachers
Coşkun (2017)	To increase lecturers' awareness of PD and to help facilitate the integration of lesson study into both curriculum and PD	Action research	Three English language lecturers and 18 students
Bayram and Bıkmaz (2018)	To investigate how the lecturers implement the lesson study, what the difficulties are, and its reflections on PD	Phenomenology	Three English language lecturers
Karabuğa and İlin (2019)	To shed light on the feasibility of the lesson study, the difficulties experienced and observed by English language teachers, the process of designing lesson study, and whether lesson study benefits teachers.	Case study	Five English language teachers
Bayram and Canaran (2019)	To determine how English language teachers make lesson study and the effect of lesson study on their PD	Holistic single case study	Three English language lecturers
Bayram and Canaran (2020)	To investigate the lesson study process and how English language teachers interpret it	Multiple case study	20 English language lecturers
Uştuk and Costa (2021)	Exploring how lesson study can contribute to the development of transformative pedagogy for PD	Ethnographic study	Four English language lecturers
Orhan (2020)	To examine the social sharing organization activities of English language teachers in the context of lesson study and the changes related to this process.	Single case study	Three English language teachers

Using Analysis Techniques for Meta-synthesis

Different analysis techniques can be used in meta-synthesis studies (Erwin et al., 2011; Sandelowski & Barroso, 2007). This study followed the three-phased process proposed by Howell-Major and Savin-Baden (2010). The first phase is analysis, in which the first-order themes are developed. Firstly, it is necessary to determine the common findings in the studies included in the research (Howell-Major & Savin-Baden, 2010). A data set was created in the Excel file to present and compare the findings of the studies. The names of the researchers who carried out the studies are written in column A, direct quotations of the participants of the studies are added as notes in column B.

Similarly, the comments made by the researchers who conducted the studies as direct quotations were added as notes in column C. The codes and categories found in studies were also written in

columns D and E, respectively (Figure 2). Thus, the first-order themes were developed based on the codes and themes in the studies.

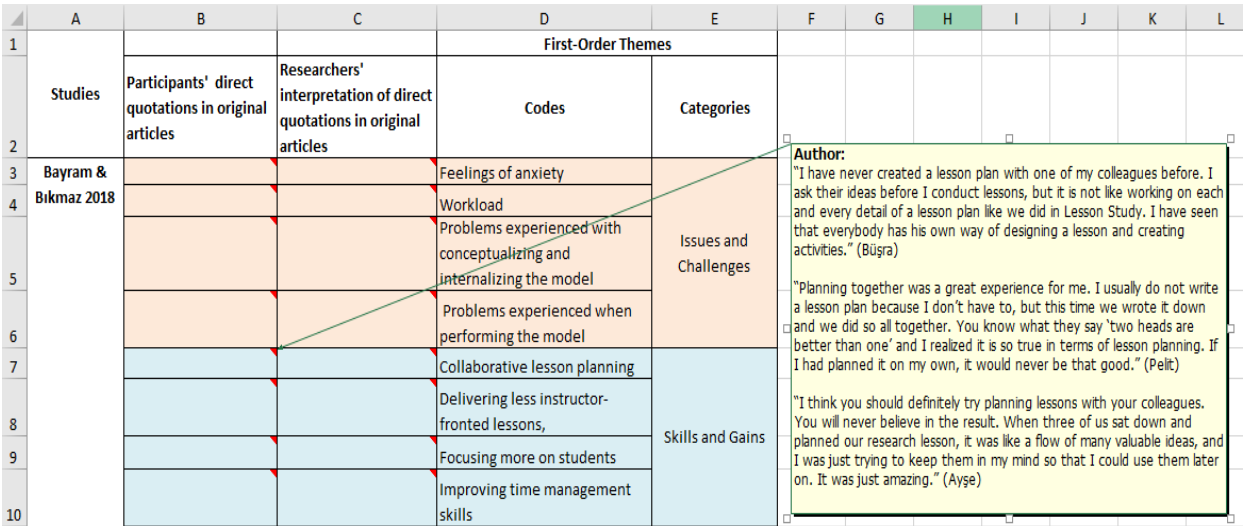

Figure 2. Developing the First-Order Themes

The second-order themes are obtained in the second phase by aggregating the first-order themes. It involves rereading the first-order themes and integrating similar meanings (Howell-Major & Savin-Baden, 2010). The second-order themes were revealed by constantly comparing the existing codes and categories by reading the studies at different times over four months. In the third phase, the findings of the studies, the first and second-order themes are read repeatedly, and the third-order themes are developed. Moreover, this stage involves critical thinking and inductive analysis, which requires searching for subtexts hidden under the themes and building bridges between themes and concepts (Howell-Major & Savin-Baden, 2010). The synthesis is accomplished by utilizing the bridges established between the findings (Erwin et al., 2011). The final synthesis will be the justifications for the value of the meta-synthesis; therefore, it should be made clear that the synthesis is greater than the parts that compose it (Walsh & Downe, 2005). With the third-order themes developed by the researchers, synthesis has been reached to proliferate the lesson study for PD of English language teachers. The first, second, and third-order themes are presented in Figure 3.

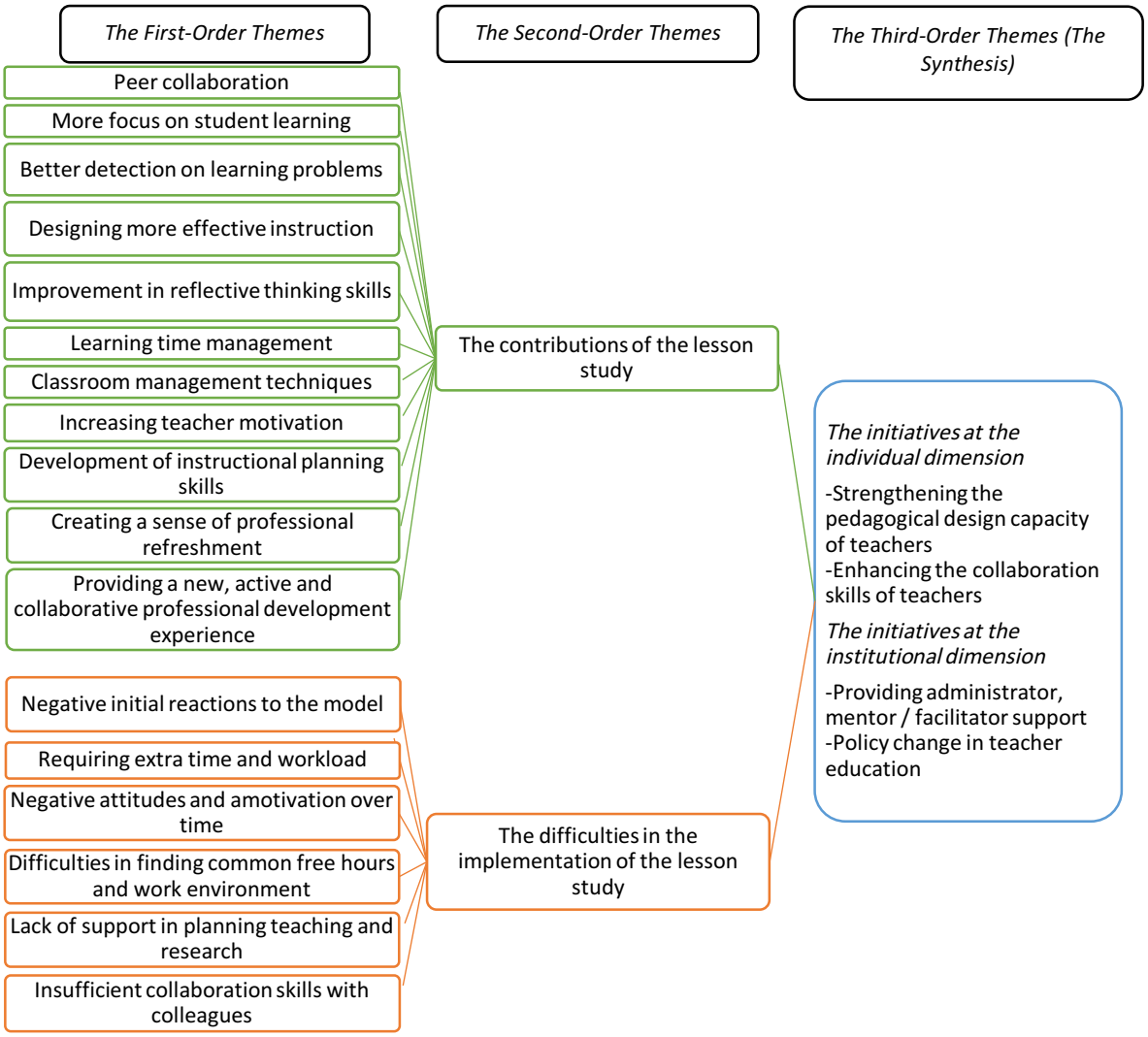

Figure 3. The First, Second, and Third-Order Themes

Results

Findings Related to the First Research Question

The findings relating to the standard points about lesson study experiences of English language teachers were gathered under the headings of “the contributions of the lesson study” and “the difficulties in the implementation."

The Contributions of the Lesson Study

The results displayed that there were many contributions to the lesson study. One of the most outstanding contributions of the lesson study is that it offers teachers a collaborative working environment (Bayram & Canaran, 2020). Teachers, who often plan their lessons alone, design research lessons by exchanging ideas with their colleagues. It has been remarked that feedback from colleagues is significant in gaining different perspectives (Karabuğa & İlin, 2019).

Another contribution of the lesson study is that the teachers have the opportunity to experience getting immediate feedback, and they have more focused on student learning (Bayram & Bıkmaz, 2018; Bayram & Canaran, 2019; Karabuğa & İlin, 2019; Yüzbaşıoğlu, 2016). Regarding this result, Teacher 10 expressed: "Lesson study teaches you to step by step to be student-oriented. Through

student observations, interviews, and video recordings, you have solid evidence of what students think about a particular lesson, and you get to understand them better." (Bayram & Canaran, 2020, p. 671). The observations also enabled teachers to see whether the lesson they designed was working or not (Bayram & Canaran, 2019; Yüzbaşıoğlu, 2016). In addition, the fact that teachers observed from different locations provided a better detection of the problems during the lesson. Thus, teachers could better design the next research lesson (Coşkun, 2017).

Meetings with peers provided teachers to hold a mirror to their teaching (Karabuğa & İlin, 2019). The teachers who previously considered only the content in the textbook instead of the curriculum experienced the lesson plan and material preparation (Uştuk & Costa, 2021). Thus, teachers examined the lessons thoroughly and became reflective (Bayram & Canaran, 2020; Uştuk & Costa, 2021). This positively affected teachers' curriculum development (Orhan, 2020), time management (Bayram & Bıkmaz, 2018), classroom management skills (Karabuğa & İlin, 2019), and motivation (Bayram & Canaran, 2019):

> Instead of just following the coursebook like a robot, various lessons and alternatives that are content-wise and time-wise realistic could be planned. Probably we could also overcome the timing problem at this institute by lesson study. We have problems covering the schedule because we do not use the time wisely, which was probably the biggest realization about my institution in lesson study. [Oya] (Uştuk & Costa, 2021, p. 10)

Lesson study enabled teachers to realize the mistakes they made in the first lesson and correct them in the following course (Coşkun, 2017). For instance, teachers who had difficulty writing goals in the first lesson could express the objectives clearly in the third research lesson (Orhan, 2020). Another example is that while the activities in the first lesson ended late or early as planned, they were completed on time in the following courses (Bayram & Bıkmaz, 2018). Similarly, teachers stated that they improved in the following courses: "The second lesson was better since, after the previous lesson's weaker points, the lesson study group developed the second lesson. Some mistakes made by the first lesson were corrected." [Teacher 1] (Coşkun, 2017, p. 158). The lesson study provided a colleague group giving feedback to help teachers who were left alone with their students in the classroom (Bayram & Bıkmaz, 2018; Karabuğa & İlin, 2019). It becomes a PD opportunity in terms of refreshing the teaching methods and techniques learned during the undergraduate period:

> I find the lesson study beneficial. These types of studies are kind of professional development. In this way, teachers can learn a lot from each other. Teachers' methodological knowledge is expected to become out-of-date after a certain period, and students' profiles change every year. Therefore, lesson study is an excellent way to improve ourselves professionally. [Teacher 3] (Coşkun, 2017, p. 158)

The goal of PD activities is that students learn better and more permanently (Guskey, 2002). In this respect, lesson study allowed teachers to evaluate whether students have learned or not (Bayram & Bıkmaz, 2018). Moreover, it ensured teachers to evaluate their teaching as they take responsibility and participate actively (Karabuğa & İlin, 2019). In other words, teachers were able to identify the strengths and weaknesses of their teaching by reflective thinking:

> Although I enjoyed the meeting we held today, I also realized what was missing. I saw that I entered the class automatically with the habit and experience of years, but when I had to put planning and application on the subject I was talking about, I saw how stuck I could get. I believe that this study will also develop me professionally. [Seçin Teacher] (Orhan, 2020, p. 181)

Unlike the seminar and course model, lesson study provided an opportunity for English language teachers who seek collaborative PD activities (Bayram & Canaran, 2020). Besides, the PD has become

from the bottom up, and teachers ignited the fuse of PD (Uştuk & Costa, 2021). Therefore, teachers have started to look warmly to practices that will contribute to their PD:

> There was an openness to each other. For example, when a teacher comes to our classes and wants to attend my class, I can look more positively now. I would not have reacted before, but now I believe in the necessity of this a little more. I can tell my peer I have a problem with this issue. How do you teach? Can I see? For example, I can say. [Participant 7] (Yüzbaşıoğlu, 2016, p. 139)

In the light of these findings, the studies revealed that the lesson study model contributed to English language teachers in extensive ways. It positively affected the teachers' collaboration with their colleagues and their reflective thinking skills. It also provided an opportunity to review their practices in the classroom. Teachers were able to identify the problems in the teaching much more accessible and design student-focused teaching. Hence, teachers who also improved in time management played an active role in student learning, their motivation increased, and their perspectives towards PD changed positively, unlike other PD practices. In this way, teachers experienced a sense of professional refreshment.

The Difficulties in the Implementation of the Lesson Study

Examined studies indicated that there were some difficulties while implementing the model. Teachers not accustomed to a PD model other than the course and seminar did not react positively when the lesson study was introduced. Some teachers were not interested (Uştuk & Costa, 2021), while others intimidated them (Bayram & Canaran, 2019). Additionally, teachers confused the lesson study with other PD practices (Bayram & Canaran, 2020) and misconceptualized the model (Bayram & Bıkmaz, 2018). Therefore, understanding the model also required time:

> The most challenging aspect was that it was a new concept for me. I did not hear about it before. First, it needed much time and effort to grasp it, be a team member, and design it. [Teacher 3] (Karabuğa & İlin, 2019, p. 66)

Another difficulty was that the model required prolonged time and effort (Bayram & Bıkmaz, 2018; Bayram & Canaran, 2020; Coşkun, 2017; Karabuğa & İlin, 2019; Orhan, 2020; Yüzbaşıoğlu, 2016). Everything should be planned so that there is no problem in the implementation (Bayram & Canaran, 2019). This situation, combined with the heavy workload, required teachers to give up their free time (Bayram & Bıkmaz, 2018). Hence, teachers complained about this issue:

> We have got a lot of other duties to fulfill. You know it is not only about teaching for 20 hours a week. You do, maybe, 10 hours of other stuff, which leaves us with insufficient time to do lesson study. [Ayşe] (Bayram & Bıkmaz, 2018, p. 321)

The time taken for lesson preparation was overloading the teacher, which negatively affected their perspective to model. (Karabuğa & İlin, 2019). Teachers completing the planning phase in the first research lesson stated that the process became increasingly difficult for the second and third research lessons (Orhan, 2020). Specific points not talked about during the planning phase caused problems in the implementation (Yüzbaşıoğlu, 2016). For example, regarding the completion time of the activities, there were differences between the planned and actual time (Orhan, 2020; Yüzbaşıoğlu, 2016). Therefore, it was hard to find a willing teacher who would make such an effort for a single lesson (Coşkun, 2017), and it did not seem possible for every lesson (Bayram & Canaran, 2020):

> We analyze an an-hour-long lesson plan and modify it so many times to make it look perfect. I do not think it is worth all the hassle. It is impossible to do the same thing for all the lesson plans we need to teach. So, I do not think lesson study is a sustainable model. [Teacher 13] (Bayram & Canaran, 2020, p. 672)

There were difficulties with teachers' meetings, arranging meetings for teachers, and synchronizing the hours of the teachers who teach and observe. There was even a disagreement with the school administration (Yüzbaşıoğlu, 2016):

> In the simplest term, we had the problem of coming together. Because we all have classes at different times, everyone has a different life personally. That is why we had difficulty finding an ordinary day or time. We also had a hard time finding a convenient environment because we were looking for a quiet place at school where we could focus. There were problems like this. We had trouble arranging the lessons. We tried to coincide with an hour when we were completely free. It has been quite a problem for us as well. [Participant 11] (Yüzbaşıoğlu, 2016, p. 137)

In addition, the teachers had difficulties planning the objectives, content, learning experiences, and evaluation (Orhan, 2020) and determining the research problem (Bayram & Bıkmaz, 2018). Therefore, teachers stated that they needed a mentor or a consultant teacher experienced in the model that they could get support from in the process (Bayram & Canaran, 2019). Teacher 1 also expressed their concern by stating: "I guess we should have had a person from whom we could get advice on issues such as finding a research question, data collection tools, and data analysis. Without such support, I have always felt we were doing something wrong." (Bayram & Canaran, 2020, p. 673).

Another problem was that teachers were worried about conducting their lessons before their colleagues (Bayram & Bıkmaz, 2018; Coşkun, 2017). Furthermore, some teachers dominated the meetings and were uncomfortable reporting their criticisms to offend their peers, which stood out as difficulties (Karabuğa & İlin, 2019).

> It is sometimes challenging to criticize peers (which is entirely normal because you do not want to offend other teachers). After conducting one of the lessons, I did not receive the feedback I wanted (e.g., some negative points about my teaching). [Teacher 1] (Karabuğa & İlin, 2019, p. 66)

In summary, the findings displayed some difficulties in implementing the lesson study. When the model was first introduced to the teachers, they reacted adversely. Besides, teachers perceived implementations as extra workload, time, and effort may be a first and foremost difficulty in the implementation phase. The teachers' motivation regarding the implementation of the model decreased in time. Another difficulty was experienced in the organization of the meetings and observations. Insufficient support for teachers in planning research and teaching also made it challenging to implement the model. Poor collaborative skills and lack of experience also seemed to cause difficulties in practice.

Synthesis

The answers to the second question are discussed under the headings of “the initiatives at the individual dimension” and “the initiatives at the institutional dimension” (see Figure 3).

The Initiatives at the Individual Dimension

The synthesis of initiatives at the individual level includes the titles of "strengthening the pedagogical design capacity of teachers" and "enhancing the collaboration skills of teachers" for proliferating the lesson study in the PD of English language teachers.

Strengthening the pedagogical design capacity of teachers

The first of the individual initiatives based on the findings is to strengthen the pedagogical design capacity of teachers. The findings displayed that teachers had difficulties in preparing a lesson plan by benefiting from the curriculum (Bayram & Bıkmaz, 2018; Coşkun, 2017; Orhan, 2020; Uştuk & Costa, 2021; Yüzbaşıoğlu, 2016). Moreover, teachers who perceived the textbook as part of a curriculum even

stated that taking the book as a basis was a compulsion (Orhan, 2020; Uştuk & Costa, 2021). The teachers realized that they should arrange the lessons according to the interests and needs of the students with the lesson study (Bayram & Bıkmaz, 2018; Bayram & Canaran, 2019; Coşkun, 2017; Karabuğa & İlin, 2019; Yüzbaşıoğlu, 2016). Therefore, all these difficulties point to a problem related to the pedagogical design capacity of teachers.

Brown (2009) describes the pedagogical design capacity as a teacher's capacity to use curricular resources consciously to achieve the objectives of the teaching. Curricular resources, defined as “a genre of materials and tools, including, but not limited to textbooks, designed to guide, support, and enhance teaching and learning in schools” (Remillard, 2018, p. 70), act as mediators between teachers and the curriculum. Hence, the teacher-curriculum relationship is interactive; because while the pros and cons of the curriculum affect the teacher, the teacher's perceptions and decisions affect the curriculum (perhaps even change). Brown (2009) expresses this interactive relationship as "perceive" and "mobilize” and defines "a teacher's capacity to perceive and mobilize existing resources in order to craft instructional episodes" as "Pedagogical Design Capacity" (Brown, 2009, p. 29). Using curricular resources is a skill to be developed rather than a simple task (Remillard, 2018), and the pedagogical design capacity allows teaching to be seen as a design activity. The deliberate and conscious use of the curriculum is only possible if the teacher's pedagogical design capacity is robust (Leshota & Adler, 2018). Accordingly, pedagogical design capacity is significant in teaching planning and adaptation skills.

Consequently, it is necessary to strengthen the pedagogical design capacities of teachers to overcome the difficulties they experience during the lesson study. Moreover, a teacher with a solid pedagogical design capacity can carry out instructional design successfully by benefiting from curricular resources consciously (Brown, 2009). Some studies use the "backward design" (Westwood Taylor, 2013) and PD programs based on different teacher roles (Penuel & Gallagher, 2009) to strengthen the pedagogical design capacity of teachers. In addition, some studies present the pedagogical design capacity of teachers (Schipper, Van der Lans, De Vries, Goei, & Van Veen, 2020) and teacher candidates (Beyer & Davis, 2012) developed after lesson study. Teachers who adopt the curriculum (Davis, Beyer, Forbes, & Stevens, 2011) less adhere to the curriculum and more design their lessons (Amador, 2016) have a high pedagogical design capacity. Hence, teachers should be allowed to adapt within the framework of the official curriculum and should be supported by being autonomous in instructional design.

Additionally, in terms of teacher education, pedagogical design capacity can be supported by providing opportunities for teachers to experiment and think about teaching (Knight-Bardsley & Mcneill, 2016). Thus, studies can be conducted to strengthen the pedagogical design capacity of teachers who will participate in the lesson study of English language teachers. For instance, backward design (Wiggins & McTighe, 2007) and understanding by design (Altun & Yurtseven, 2020; Wiggins & McTighe, 2011) for PD activities can lay a solid foundation for the knowledge and skills required in lesson study. Similarly, PD for differentiated instruction (Avcı & Yüksel, 2018; Tomlinson, 2005) may also serve to consider individual differences more in instructional design. Even by integrating these two approaches (Tomlinson & McTighe, 2006), PD, including practical and follow-up studies, can be organized to design lessons, especially by benefitting the curriculum. Consequently, the lesson study model can proliferate with robust pedagogical design capacity teachers.

Enhancing the collaboration skills of teachers

Collaboration between teachers, the basic building block of the lesson study, is a concept that makes the model effective and creates a problem. Therefore, it has been suggested to enhance the collaboration skills of teachers as the second synthesis at the individual dimension. According to the studies, there were some interpersonal disagreements during the lesson study, since teachers had not participated in a collaborative PD activity before (Bayram & Bıkmaz, 2018; Coşkun, 2017; Karabuğa &

İlin, 2019; Orhan 2020). This situation displays that teachers should be supported in terms of collaboration skills.

Grimsæth and Hallas (2016) suggest that teachers participating in the lesson study should have a common understanding of collaboration and its results. Additionally, they state that collaboration should be examined in depth in the countries where the model will be implemented since the concept of collaboration is very different in Japan. Perry and Lewis (2009) note that the teachers determining the rules together enable them to reinforce collaboration by perceiving that everyone's opinion was valuable. They also remark that teachers who start working with groups would become experts in collaboration skills over time. Therefore, ensuring teachers work with groups in both pre-service teacher education and PD in Turkey will develop collaboration skills. Lewis (2002) also argues that teachers who isolate themselves from their colleagues and collaborate cannot effectively teach. Thus, teachers should participate in out-of-school activities such as festivals, school trips, and sports competitions to improve this skill. Consequently, if the necessary conditions for enhancing collaboration skills are not provided, it does not seem possible to the lesson study as a commonly used model.

The Initiatives at the Institutional Dimension

The synthesis of initiatives at the institutional level includes the titles of "providing administrator, mentor/facilitator support" and "policy change in teacher education" for proliferating the lesson study in the PD of English language teachers.

Providing administrator, mentor/facilitator support

In the studies, there are some problems with the administrators in arranging the weekly course schedules of the teachers in a way allowing meetings and observations (Bayram & Bıkmaz, 2018; Bayram & Canaran, 2019; Bayram & Canaran, 2020; Yüzbaşıoğlu, 2016). Similarly, teachers having difficulties also need mentor or facilitator support in the lesson study (Bayram & Bıkmaz, 2018; Bayram & Canaran, 2019; Bayram & Canaran, 2020; Orhan, 2020). Hence, initiatives should provide the administrator, mentor/facilitator support to proliferate the lesson study.

Chokshi and Fernandez (2004) state that administrators could support the lesson study by adjusting schedules and providing financial support. The school administrator should also assume the role of a leader, ensure that the model is sustainable, and transfer it to others (Perry & Lewis, 2009). Saito (2012) remarks that the administrators who do not understand the purpose and meaning of the lesson study made negative comments, which discouraged the teachers; however, the administrators understanding the model see the positive aspects of the lesson study and make it familiar in other schools. Therefore, administrators should create a positive synergy for teachers to work collaboratively and be a part of the process when necessary (Muller & Hutinger, 2008). Lee and Madden (2019) emphasized that especially principals must be involved in every step of the lesson analysis. Bieda, Cavanna, and Ji (2015) state that the lesson study is implemented more successfully with the experienced mentor. Mentors can also guide teachers to evaluate and shape the teaching (Chichibu, 2016).

Additionally, facilitator support is valuable as it ensures harmony between the teachers in lesson study (Mynott, 2018). Facilitators can stimulate to reduce teachers' prejudices and reassure teachers concerned about collaboration to participate in the lesson study (Lewis, 2016). Therefore, the administrators need to be supportive, and it is essential to provide mentor or facilitator support for proliferating the lesson study.

Policy change in teacher education

The findings display that the model needs to be included in the education policy for proliferating the lesson study in Turkey; otherwise, teachers would not be willing to do lesson study (Bayram &

Bıkmaz, 2018; Bayram & Canaran, 2020; Coşkun, 2017; Yüzbaşıoğlu, 2016). Therefore, lesson study, not practiced much in Turkey apart from academic studies (graduate theses and scientific publications), should be included in education policies starting from national policy documents (strategic plans, vision documents, progress plans).

Doig and Groves (2011) state that the teaching profession in Japan is open to peer observation and interpretation, and therefore the lesson study is successful. According to Fujii (2014, p. 3), "lesson study is like air, felt everywhere because it is implemented in everyday school activities". However, the teaching paradigm in Turkey is not like this. In other words, a school system in which teachers observe, give feedback, and criticize each other traditionally does not exist. Hence, a policy change should allow teachers in Turkey to monitor/evaluate their lessons by other teachers and make an instructional design in collaboration. However, another emphasized issue is Japan's determination in education policy. Accordingly, there was no change in the decisions taken about education for at least 20 years (Lewis, 2002). In addition, lesson study is seen as a part of continuous PD in Japan (Murata, 2011). Policymakers also participate in lesson study and change policy per the model in Japan (Lewis & Lee, 2018).

Similarly, Perry and Lewis (2009) remark that the lesson study lasting for four years in a school district in America spread all over the country at the end of the fourth year. Rock and Wilson (2005) state that the budget is taken to cover the experts' costs, hire substitute teachers, and pay the teachers for the reports they prepare, which lead to the initiation of the PD work in their lesson study with the university-school partnership. Maeda and Ono (2019, p. 56) note that schools should adopt "active leadership," They do not stop trying to find solutions to their educational problems. The government should support facilitating the lesson study as an educational innovation. Therefore, for the lesson study to become prevalent in Turkey, the model should be included in medium and long-term strategic plans. The administrative decisions should not be changed frequently, the practices should be monitored, and its continuity should be ensured with moral and material support. In summary, the synthesis we have reached is that initiatives should be made for proliferating the lesson study at the individual and institutional dimensions. We conclude that initiatives at the individual dimension should strengthen the pedagogical design capacity of teachers and enhance teachers' collaboration skills; on the other hand, initiatives at the institutional dimension should provide administrator and mentor/facilitator support and policy change in teacher education.

Discussion, Conclusion, and Implications

The meta-synthesis aimed at proliferating the lesson study used for PD of English language teachers is presented for the first time in this study. Thus, beyond implementing the lesson study identically and expressing its contributions and difficulties, the answer to the question of how the model could be implemented effectively in Turkey must be found (Bayram & Canaran, 2020). In this study, the synthesis has been put forward to see the truth underlying the contributions and difficulties of the model and proliferating the lesson study.

The common findings of the studies reveal the contributions and the difficulties of lesson study for PD of English language teachers. Lesson study enables teachers to be aware of what they do in the teaching process (Dudley, 2014) and to be reflective (Perry & Lewis, 2009) with peer feedback (Lewis et al., 2004). Collaboration with colleagues encourages teachers to benefit from each other in teaching methods and techniques (Purwanti & Hatmanto, 2019). In addition, designing lessons (Elliott, 2019; Takahashi & Yoshida, 2004) positively affects their other PD (Doig & Groves, 2011; Lewis et al., 2004). The common findings of the qualitative research display that the contributions of the lesson study to the teachers confirm the previous studies conducted internationally.

Similarly, the typical findings of the studies are consistent with previous research in terms of the difficulties in implementing the model. For instance, teachers attribute different meanings to lesson

study, making it difficult to understand the model (Chokshi & Fernandez, 2004; Fujii, 2014; Zhang et al., 2019). During the implementation of the model, there are problems in bringing teachers together (Müldür & Çevik, 2020). Furthermore, the model requires working in collaboration with colleagues (Boran & Tarım, 2016; Müldür & Çevik, 2020), and teachers shape the teaching differently (Zhang et al., 2019), while more experienced teachers dominate (Zhang et al., 2019), and make the process difficult. Besides, the preparation of the lesson study, entailing a lot of time and effort, has reduced the motivation level of the teachers (Müldür & Çevik, 2020). Similar problems in the literature serve as a hoist in reaching the synthesis and shed light on this research for solving repetitive problems.

For the lesson study to become a prevalent model in Turkey, it is concluded that initiatives should be made both at the individual and institutional dimensions. Teachers' difficulties in preparing a lesson plan, perceiving the textbook as a curriculum, and needing support in designing instruction indicate that their pedagogical design capacities need to be strengthened. It does not seem possible for curriculum to come to life in classrooms unless teachers understand that the curriculum should be based instead on the content of the textbooks (Çetinkaya & Tabak, 2019). Teachers with high pedagogical design capacity know the characteristics of curriculum resources (Remillard, 2018) and can use them consciously (Brown, 2009; Leshota & Adler, 2018). To achieve this, teachers need to put their pedagogical knowledge into practice (Jukic Matić, 2019; Knight-Bardsley & Mcneill, 2016), adapt the curriculum (Davis et al., 2011), and know how to use curriculum resources (Amador, 2016). Moreover, PD for backward design (Westwood Taylor, 2013; Wiggins & McTighe, 2007), understanding-by design (Altun & Yurtseven, 2020; Wiggins & McTighe, 2011), and differentiated instruction (Avcı & Yüksel, 2018; Tomlinson, 2005) can pave the way for strengthening the pedagogical design capacity. Blending these PDs (Tomlinson & McTighe, 2006) can also be helpful.

Another initiative at the individual dimension is to enhance the collaboration skills of teachers. Although collaborative PD activities are the most effective way in the PD of teachers, collaborative activities remain at 21% in Turkey (OECD, 2019) is quite thought-provoking. Similarly, teacher observation and feedback play a key role in teacher collaboration; however, 59% of teachers in Turkey have never done such a practice before (OECD, 2020). Emphasizing that collaboration is significant in PD, Darling-Hammond, Hyler, and Gardner (2017) stress that every school can implement collaborative practices in its way. Hence, steps should be taken to support teacher participation in collaborative PD activities in their schools. Finally, it is suggested that there should be positive interdependence among teachers. Each teacher should be evaluated individually to support teachers in working collaboratively to internalize and apply the new knowledge in the long term (Johnson & Johnson, 2017).

In initiatives at the institutional dimension, on the other hand, the support of administrator, mentor/facilitator, and a policy change in teacher education is needed for proliferating the lesson study. The organization of non-teaching times, the existence of a "Research Steering Committee" in each school, the annual meetings held with the groups, and the rooms allocated to the teachers for lesson study, a routine in Japanese education, have been the facilitators of the model (Lewis & Takahashi, 2013). Administrator support is fundamental for teachers to participate in PD, and it is difficult for PD activities not supported by administrators to be successful (Eroğlu & Donmuş Kaya, 2021; İlğan, 2013). Therefore, administrators should motivate teachers sufficiently to ensure their PD (Aydın et al., 2021; Gözler & Özmen, 2008). Furthermore, in research conducted by the OECD (2019), administrators state that mentoring is essential in the performance of teachers and students. However, only 15% of newly qualified teachers (1-5 years) in Turkey have mentors (OECD, 2019). In this respect, administrators bridge the gap between teachers wanting to be a mentor and teachers needing mentor support. Expressing mentoring as a part of PD, Hudson (2013) asserts that mentors can guide teachers about teaching methods, techniques, and materials. Mentors can help teachers with the subjects they need, and thus improvement can be achieved in teaching (Onchwari & Keengwe, 2008). So, a facilitator in teacher workgroups provides their PD by presenting their knowledge and skills to the group (Sierra Piedrahita, 2007). Becuwe, Tondeur, Pareja Roblin, Thys, and Castelein (2016)

also highlight that a facilitator can support teacher groups in paperwork, communication by structuring the process and collaborating with teachers.

Furthermore, the national education policy should include the lesson study model. No PD activity becomes permanent without government policy (Abazoğlu, 2014). Seleznyov, Goei, and Ehren (2021) warn that if the lesson study, as a borrowed policy, is not handled carefully, local stakeholders may show considerable resistance, and the model may have limited longevity. Therefore, there is a need for a long-term (Lewis, 2002; Perry & Lewis, 2009) teacher education policy allowing peer observation (Doig & Groves, 2011) and accepting lesson study as an extension of PD (Murata, 2011). Consequently, there can be initiatives to develop collaboration skills in pre-service teacher education. Furthermore, it is beneficial to consider covering the costs of the participants and giving additional payments (Rock & Wilson, 2005).

It can be considered a limitation that this study only covers lesson study research conducted with English language teachers in Turkey. Therefore, it may be valuable to examine studies implemented internationally or with teachers from different branches in future meta-synthesis. In addition, how the pedagogical design capacity of teachers affects the performance in the lesson study can be examined. Similarly, how teachers perceive collaboration skills and reflect on the lesson study can be discussed. What is more, how administrators impact lesson study might be examined in Turkey? Several findings from international lesson study research display there are generally significant adaptations of the model when applied in countries other than Japan (Seleznyov et al., 2021). For example, the Research Lesson Study in the UK (Dudley, 2013), the Collaborative Lesson Research in the USA (Takahashi & McDougal, 2016), the Learning Study in Hong Kong and Sweden (Holmqvist Olander & Nyberg, 2014), and the Chinese lesson study (Huang, Fang, & Chen, 2017) are among these adaptations. In order to develop the Turkish lesson study model (Turkish adaptation), long-term research should be carried out in different courses and grade levels through research projects supported by TUBITAK. In other words, it is valuable to examine how the model can be adapted to Turkey's educational-cultural context, teacher autonomy, and identity. Research that will expand the synthesis presented in this study can guide the adaptation of the model within the Turkish educational context, while the initiatives to proliferate the lesson study in the PD of teachers can gain momentum.

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TÜRKÇE GENİŞ ÖZET

İngilizce Öğretmenleri için Ders İmecesinin Yaygınlaşması: Bir Meta-Sentez Çalışması

Giriş

Türkiye'de İngilizce öğretmenlerinin mesleki gelişimini sağlayan ders imecesi üzerine yapılan çalışmalar son yıllarda hızla artsa da süreçle ilgili birçok soruna işaret edilmektedir. Örneğin, araştırma dersini uygulayan öğretmenle gözlem yapan öğretmenlerin ders saatlerinin ayarlanamaması, uygun ders planının tasarlanamaması (Yüzbaşıoğlu, 2016), program ögelerinin uygun bir şekilde hazırlanamaması (Orhan, 2020), ders kitabından bağımsız düşünememe (Uştuk & Costa, 2021), yönetimsel desteğin yetersizliği (Bayram & Canaran, 2020), ders imecesi modelinin yanlış kavramsallaştırılması (Bayram & Bıkmaz, 2018), öğretmenlerin eleştiriyi kaldıramaması (Karabuğa & İlin, 2019) gibi sorunlar öne çıkmaktadır. Bu sorunlar çözüme kavuşturulmadan ders imecesinin İngilizce öğretmenlerinin mesleki gelişiminde etkili bir şekilde uygulanması zor görünmektedir.

Bu bağlamda, önceki çalışmalardan elde edilen bulgulardaki anlamların ötesini görebilmek adına meta-sentez çalışmaları yapılmaktadır (Paterson, 2012). Meta-sentez sayesinde İngilizce öğretmenlerinin mesleki gelişiminde kullanılan ders imecesinde yaşanan zorlukların arkasında yatan gerçek nedenler ortaya çıkarılarak modelin yaygınlaşmasına yardımcı olabilecek yeni çözüm yolları bulunabilir. Türkiye'de İngilizce öğretmenlerinin ders imecesi deneyimleri üzerine bir meta-senteze rastlanmadığından bu çalışmada modeli yaygınlaştırmaya yönelik bir sentez üretmek hedeflenmiştir. Bu bağlamda, şu sorulara yanıt aranmıştır:

1. Daha önce yapılmış nitel araştırmalara göre, İngilizce öğretmenlerinin ders imecesi deneyimleriyle ilgili ortak noktalar nelerdir?
2. İngilizce öğretmenlerinin mesleki gelişiminde, ders imecesinin yaygınlaşmasını sağlamaya yönelik son sentez nedir?

Yöntem

Çalışma, meta-sentez yöntemi ile yürütülmüştür. Meta-sentez, incelenen görüngü (fenomen) hakkında yeni veya gelişmiş bir anlayışa ulaşmak için belirli bir konu veya odakla ilgili olan nitel araştırma raporlarındaki bulguların sentezi olarak tanımlanmaktadır (Paterson, 2012). Meta-sentez sürecinin yürütülmesinde Erwin ve diğerlerinin (2011) önermiş olduğu adımlar takip edilmiştir. Araştırma soruları oluşturulduktan sonra, anahtar kelimeler veri tabanlarında taratılmış ve Türkiye'de yürütülmüş olan toplam 111 çalışmaya ulaşılmıştır. Bu çalışmalardan, araştırmanın bağlamına uyan, dâhil etme ölçütlerini karşılayan ve kontrol listesinden gerekli puanı alanlar araştırmaya dahil edilmiştir. Altısı makale ve ikisi doktora tezi olmak üzere toplam sekiz çalışma meta-senteze alınmıştır. Çalışmaların analiz edilmesinde Howell-Major ve Savin-Baden (2010) tarafından önerilen üç aşamalı süreç takip edilmiştir. Son olarak, İngilizce öğretmenlerinin mesleki gelişimde kullanılan ders imecesi modelinin yaygınlaşmasını sağlamaya yönelik senteze ulaşılmıştır.

Bulgular

Birinci araştırma sorusuna yanıt olarak elde edilen bulgular "ders imecesinin katkıları" ve "ders imecesinin uygulanmasındaki zorluklar" başlıkları altında toplanmıştır. Bulgulara göre ders imecesi; İngilizce öğretmenlerinin işbirliği içinde çalışmasını, yansıtıcı düşünmesini, zamanı etkili kullanmasını, öğretim tasarımını öğrenci odaklı hale getirmesini sağlamıştır. Diğer yandan, öğretmenlerin modeli yoğun iş yükü ve zaman gerektiren bir çalışma olarak görmesi nedeniyle verdiği olumsuz tepkiler, motivasyon düşüklüğü, toplantı ve gözlemlerin düzenlenememesi gibi birtakım zorluklar yaşanmıştır.

Çalışmada ulaşılan sentez, "bireysel boyuttaki girişimler" ve "kurumsal boyuttaki girişimler" başlıkları altında ele alınmıştır. Bireysel boyuttaki girişimlerde, ilk olarak "öğretmenlerin pedagojik tasarım kapasitesinin güçlendirilmesi" önerilmiştir. Bunu sağlamak için, sondan başa doğru tasarım, anlamaya dayalı tasarım, farklılaştırılmış öğretim gibi konularda mesleki gelişim etkinliklerinin yapılması ve öğretmenlere öğretim programını sınıfa uyarlamada destek olunması gerektiği söylenebilir. İkinci olarak "öğretmenlerin işbirliği becerilerinin artırılması" önerilmiştir. Bunu sağlamak için, Türkiye'deki öğretmen işbirliği anlayışının gözden geçirilmesi, zümrelerde grup çalışmalarının teşvik edilmesi ve öğretmenlerin festival, okul gezisi, spor müsabakası gibi okul dışı faaliyetlere katılması düşünülebilir.

Kurumsal boyutta ise ilk sentez olarak "yönetici, mentor/kolaylaştırıcı desteğinin sağlanması"na yönelik girişimler önerilmiştir. Yöneticilerin, öğretmenlerin ders programlarını ayarlaması, modelin sürdürülebilirliğini sağlaması ve okulda olumlu bir sinerji oluşturması bakımından; mentor/kolaylaştırıcının ise yol gösterici olması ve öğretmenler arasındaki uyumu sağlaması bakımından destekleyici olabileceği söylenebilir. İkinci olarak "öğretmen eğitiminde politika değişikliği"ne ihtiyaç duyulduğu sonucuna varılmıştır. Türkiye'de ders imecesinin yaygınlaşması için modelin ulusal politika belgelerinde (stratejik planlar, vizyon belgeleri, kalkınma planları vb.) yer alması, alınan yönetsel kararların sıklıkla değiştirilmemesi, uygulamaların izlenerek maddi ve manevi desteklerle sürekliliğini sağlayacak bir politika değişikliği gerekmektedir.

Tartışma, Sonuç ve Öneriler

Bu çalışmada modelin katkıları ve zorluklarının altında yatan nedenler irdelenerek ders imecesinin yaygın bir model haline getirilmesini sağlamak amacıyla bir sentez ortaya konulmuştur. İncelenen nitel araştırmaların ortak bulguları, ders imecesinin öğretmenlere sağladığı katkıların yurt dışında yapılan çalışmalarla (Doig & Groves, 2011; Dudley, 2014; Elliott, 2019; Lewis vd., 2004; Perry & Lewis, 2009; Takahashi & Yoshida, 2004) benzer olduğunu göstermektedir. Modelin uygulanmasında yaşanan zorluklar açısından da uluslararası ve ulusal araştırmaların doğrulandığı görülmektedir (Boran & Tarım, 2016; Chokshi & Fernandez, 2004; Fujii, 2014; Müldür & Çevik, 2020; Zhang vd., 2019). Alanyazında benzer sorunlara işaret edilmiş olması, bu çalışmada senteze ulaşmada bir kaldıraç görevi görmüş, tekrarlı sorunların çözümüne yönelik arayışımıza ışık tutmuştur.

Ders imecesinin Türkiye'de yaygın bir model haline gelebilmesi için bireysel ve kurumsal boyutta girişimler sentezi ortaya koyulmuştur. Bireysel boyuttaki girişimlerde, öğretmenlerin pedagojik tasarım kapasitelerinin güçlendirilmesi ve işbirliği becerilerinin artırılması gerekmektedir. Pedagojik tasarım kapasitesi yüksek olan öğretmenler, program kaynaklarının (basılı ve dijital tüm eğitim materyalleri) özelliklerini bilir (Remillard, 2018) ve onları bilinçli bir şekilde kullanabilir (Brown, 2009; Leshota & Adler, 2018). Bunu sağlamak için; öğretmenlerin sahip olduğu pedagojik bilgiyi uygulamaya dökmesi (Knight-Bardsley & Mcneill, 2016; Jukic Matić, 2019), programı uyarlaması (Davis vd., 2011) ve program kaynaklarını nasıl kullanılacağını bilmesi (Amador, 2016) gerekmektedir. Diğer yandan, işbirliğine dayalı mesleki gelişimin faaliyetlerinin öğretmenlerin mesleki gelişiminde en etkili yol olduğu ifade edilmesine rağmen, Türkiye'de işbirlikli faaliyetlerin %21'de kalması (OECD, 2019) ve öğretmenlerin %59'unun böyle bir faaliyeti daha önce hiç gerçekleştirmemesi (OECD, 2020) oldukça düşündürücüdür. Oysa

mesleki gelişimde çok önemli görülen (Darling-Hammond vd., 2017) işbirliği için, öğretmenler arasındaki olumlu karşılıklı bağımlılık ve her öğretmenin bireysel olarak değerlendirilmesi önerilmektedir (Johnson & Johnson, 2017).

Kurumsal boyuttaki girişimler için ise yönetici, mentor/kolaylaştırıcı desteği ve öğretmen eğitiminde politika değişikliği önerilmiştir. Yönetici desteği, öğretmenlerin eğitime katılmasında oldukça önemli olup yöneticiler tarafından desteklenmeyen mesleki gelişim faaliyetlerinin başarılı olması güçtür (Eroğlu & Donmuş Kaya, 2021; İlğan, 2013). Mentorlar da öğretmenlerin ihtiyaç duyduğu konularla ilgili yardımcı olabilir ve bu sayede onların öğretim sürecinde gelişme sağlanabilir (Onchwari & Keengwe, 2008). Benzer şekilde, öğretmen çalışma gruplarında kolaylaştırıcı rolü olan birinin sahip olduğu bilgi ve becerileri gruba sunarak onların mesleki gelişimini sağladığı ifade edilmektedir (Sierra Piedrahita, 2007). Öte yandan hiçbir mesleki gelişim faaliyeti devlet politikasında yer almadan kalıcı bir hale gelmemektedir (Abazoğlu, 2014). Seleznyov ve diğerleri (2021), ödünç alınmış bir politika olan ders imecesinin dikkatlice ele alınmaması durumunda, yerel paydaşların önemli ölçüde direnç gösterebileceği ve modelin ömrünün kısa olabileceği uyarısını yapmaktadır. Dolayısıyla ders imecesini, mesleki gelişimin bir uzantısı olarak gören (Murata, 2011) ve uzun vadeli (Lewis, 2002; Perry & Lewis, 2009) bir öğretmen eğitimi politikasına ihtiyaç vardır.

Bu çalışmanın sadece Türkiye'deki İngilizce öğretmenleriyle gerçekleştirilen ders imecesi çalışmalarını kapsaması bir sınırlılık olarak düşünülebilir. Dolayısıyla ileride yapılacak meta-sentez araştırmalarında, farklı branşlardaki öğretmenlerle yürütülmüş çalışmaların incelenmesi yararlı olabilir. Ayrıca araştırmanın sonuçlarından hareketle, öğretmenlerin pedagojik tasarım kapasitesinin ders imecesindeki performansı nasıl etkilediği, öğretmenlerin işbirliği becerilerini nasıl algıladığı ve bunun ders imecesine yansımaları ele alınabilir. Yöneticilerin ders imecesi sürecini nasıl etkilediğini inceleyen ulusal çalışmalar yapılabilir. Uluslararası ders imecesi çalışmalarından elde edilen bazı bulgular, Japonya dışındaki ülkelerde uygulandığında modelde genellikle önemli uyarlamalar olduğunu gösterdiğinden (Seleznyov vd., 2021), modelin Türkiye'nin eğitsel-kültürel bağlamı, öğretmen özerkliği ve kimliği açısından nasıl uyarlanabileceğinin araştırılmasında da çok yarar vardır.

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Problems and Practices Experienced by Preschool Teachers in Inclusive Education‡

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Abstract

This research study was conducted in order to determine the problems that preschool teachers experience in the inclusive education processes and to define the educational practices of teachers for students who benefit from inclusive education. The study was designed as qualitative research and purposeful sampling was used. In the study, semi-structured interviews were conducted with 20 preschool teachers working with disadvantaged children in different provinces of Turkey. In forming the questions in the semi-structured interview form, the relevant literature was scanned and the opinions of field experts were consulted. The data were analyzed by content analysis technique. Results of the study showed that preschool teachers do not feel professionally competent in inclusive education and they do not receive enough practical training in undergraduate education. It has been observed that teachers have some problems with children, families, administrators, and legislation in the learning and teaching process regarding inclusive education. In addition, it has been observed that the teachers make various practices for children, families, and the educational environment in order to create an inclusive education environment. It is thought that teachers should be supported in terms of knowledge and practice in inclusive education through in-service trainings and prospective teachers should be offered opportunities to work with children from different disadvantaged groups during undergraduate education.

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Introduction

One of the fundamental rights of all individuals, guaranteed by national and international legal regulations, is the right to education. With the Universal Declaration of Human Rights (1948), the

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United Nations [UN] Convention on the Rights of the Child (1989), the "(Revised)" European Social Charter (2007) and the UN Convention on the Rights of Persons with Disabilities (2009), the necessity of guaranteeing the right to education among all children without on gender, language, religion, and race discrimination is clearly stated. Considering the national legislation, 10th and 42nd articles of the Turkish Constitution emphasized that everyone is equal before the law and that no one can be deprived of the right to education and training (Türkiye Cumhuriyeti Anayasası [TCA/Turkish Constitution], 1982). In the 12th and 46th articles of the Primary Education and Education Law No. 222, it is clearly stated that every child should benefit from education at the age of compulsory education and children in the disadvantaged group will receive special education and training (İlköğretim ve Eğitim Kanunu [İEK/Primary Education and Education Law], 1961). Again, in the 4th, 7th and 8th articles of the Turkish National Education Basic Law numbered 1739, it is stated that every child has the right to education and that special measures should be taken to raise children in need of special education and protection (Milli Eğitim Temel Kanunu [MEK/Turkish National Education Basic Law], 1973). In addition, in Article 15 of the 5378 Special Education Law, it is stated that "the education of the disabled cannot be prevented for any reason"(Engelliler Hakkında Kanun [EHK/ Law on the Disabled], 2005); in the 12th article of the Decree Law No. 573 on Special Education, it is stated that "The education of individuals in need of special education is carried out with their peers in accordance with individual education plans prepared by using appropriate methods and techniques in schools and institutions of all types and levels" (Özel Eğitim Hakkında Kanun Hükmünde Kararname [ÖEHKHK/Decree on Special Education], 1997).

It is emphasized that every child should have the right to education at national and international level, but unfortunately, research shows that some children experience negative conditions. These children have problems even with accessing basic resources and services. They either cannot benefit from education, which is their basic right, or they have difficulties in accessing education (Burcu, 2017). The children who have the most difficulties in accessing education are; refugees who have a low socioeconomic level, those who live in rural areas or war zones far from the center, those who have to come from different countries, female children, children of different ethnic origin, and those who are in need of special needs (Stubbs, 2008). Children in this group are called disadvantaged children. Investing in the disadvantaged students who are deprived of education will reflect on society as positive results with higher education achievement, less unemployment, and sustainable development. Therefore, in order to make the human resources of countries more efficient, an equitable education system must be designed and implemented first (Eğitim Reformu Girişimi [ERG/Turkish Education Reform Initiative], 2014). To achieve this end, inclusive education policies have started to be implemented in some countries around the world (United Nations International Children's Emergency Fund [UNICEF] and United Nations Educational, Scientific and Cultural Organization [UNESCO], 2007).

Inclusive education is an education system that ensures equal education for all individuals (Aktekin, 2017). While inclusive education is a concept that is confused with the terms of mainstreaming education and special education (Milli Eğitim Bakanlığı Özel Eğitim ve Rehberlik Hizmetleri Genel Müdürlüğü [MEBÖERHGM/Ministry of National Education General Directorate of Special Education and Guidance Services], 2013), today, it has turned into a structure that includes many issues, including individual differences as well as gender-based inequalities, immigrants, refugees, asylum seekers, cultural, and social differences (Çelik, 2017). In this context, inclusive education is defined as providing equal access to educational opportunities by eliminating the discrimination factor (Aktekin, 2017; Çelik, 2017; Department of Education and Training [DET], 2004; Florian, Young, & Rouse, 2010; UNESCO, 2005).

The aims of inclusive education are to ensure the participation of all individuals in education and to increase learning and to remove discrimination. It is to design the education system to respond to all differences and to improve school environments (Booth & Dyssegaard, 2008). With inclusive

education, the relationship between school and community is strengthened and education is recognized as an important element for society. It is aimed to develop schools for both the students and the staff. Inclusive education aims to benefit the whole school. When teachers take on the task of making their classes and schools more inclusive, they become more skilled and better practitioners. In this context, they help to overcome any barrier that prevents access to education and participation (Mariga & McConkey, 2014).

There are some factors that hinder the implementation of inclusive education. Teacher's beliefs, expectations, and attitudes, curriculum, teaching methods, and evaluation process can be counted among these factors (MEB ÖERHGM, 2013). To eliminate these factors, it is necessary for teachers to have the necessary competencies in inclusive education, to ensure that they receive quality education in these subjects, to establish a link between academic knowledge and practical knowledge in teacher education, to avoid discrimination among students, and to work on interdisciplinary cooperation (Demirel-Kaya, 2019; ERG, 2016a; Navarro, Zervas, Gesa, & Sampson, 2016).

Teachers are key players in organizing educational environments to meet the diverse needs of students and provide them with equal educational opportunities. This situation requires teachers to be equipped with the competence to provide inclusive education (Navarro et al., 2016). For the formation of an inclusive education system, not all responsibility is left to the teacher; collaboration of other stakeholders of education such as students, teachers, parents, school administrators is also of great importance (ERG, 2016a; Flem, Moen, & Gudmundsdottir, 2004). Therefore, active participation and support of school administrators in the inclusive education process is also critical. There is a significant increase in the level of awareness regarding the concept of inclusion in schools that receive administrative support in inclusive education practices (Ali, Mustapha, & Jelas, 2006).

An important component of inclusive education is parents. Because there is no success in inclusive education in a structure where parents' support and active participation cannot be provided (ERG, 2016b). In inclusive education, it is important to make some arrangements in the educational environment. In this context, the use of appropriate technology and customized materials, the preparation of flexible programs, small group educational applications, the use of special and alternative models for students in assessment and evaluation, and the arrangement of school buildings for students, etc. studies can be done (DET, 2004).

Among the objectives of UNESCO's Education for All Movement are to extend early childhood education to include disadvantaged children and to ensure that children have access to free, compulsory and qualified basic education (ERG, 2016a). In this context, it would be appropriate to start inclusive education practices from the pre-school education stage. When the literature is examined, it is seen that there are some studies conducted to determine teachers' and teacher candidates' views on inclusive education (Akbulut, Yılmaz, Karakoç, Erciyas, & Akşin-Yavuz, 2021) and it can be seen that preschool teachers are aware of the importance of inclusive education and have positive opinions about inclusive education (Cengiz-Şayan, 2020; Erol-Sahillioğlu, 2020; Kahriman-Pamuk, & Bal, 2019). In addition, in the preschool period, there are studies that examine the opinions of teachers about the problems experienced by children who do not speak Turkish (Atasoy-Çiçek, 2017), immigrant children (Avcı, 2019; Aydın & Kurtulmuş, 2018; Dicle, 2020; Güven, Efe-Azkeskin, & Yılmaz, 2018; Mercan-Uzun & Bütün, 2016) and children who benefit from inclusive education (Akkaya & Güçlü, 2018; Dikici-Sığırtmaç, Hoş, & Abbak, 2011; Doğu, 2017; Erbaş & Çoruk, 2021; Gök & Erbaş, 2011; Özaydın & Çolak, 2011). However, no study has been found in the literature to determine the problems experienced in the education of all children (with low socioeconomic level, living in rural areas, girls, refugees, children with special needs, etc.) who are within the scope of inclusive education in the preschool period.

For this purpose, answers to the following questions were sought:

1. What are the problems that preschool teachers experience in the inclusive education process?

2. What are the practices of preschool teachers in the inclusive education process?

Method

Research Model

This study, which was carried out to determine teachers' views on the problems experienced in inclusive education in the preschool period, was designed in the phenomenology pattern, which is one of the qualitative research methods. Phenomenology is a research design that gives us the opportunity to examine in-depth phenomena that we are aware of, which are not completely foreign to us, but that we cannot fully grasp (Yıldırım & Şimşek, 2018).

Study Group

In phenomenology, the data are obtained from the person or persons who have experienced the phenomenon in question and who can express their experiences about this phenomenon (Yıldırım & Şimşek, 2018). The study group of this research consisted of pre-school teachers working in official independent kindergartens and nursery classes in various provinces of Turkey in the 2020-2021 academic year. The aim of reaching preschool teachers working in different provinces of Turkey is to determine the similarities and differences in the problems and practices in different provinces. Voluntary or easily accessible teachers working in different provinces were reached by making use of the easily accessible case sampling method (Yıldırım & Şimşek, 2018) in order for speed and practicality in the research. Due to difficulties in reaching teachers during the Covid-19 pandemic process, 20 volunteer preschool teachers were reached. The personal information of the teachers participating in the research is presented in Table 1.

When Table 1 is examined, 19 of the teachers participating in the study group are women and 1 of them is a male participant. 7 of the teachers participating in the research work in independent kindergarten and 13 in nursery class. It is seen that 3 teachers' experience fall between 1-5 years, 10 between 6-10 years, 5 between 11-15 years, 1 between 16-20 years and 1 has been working for 21 years and over. It is observed that 19 of the teachers completed their education at the undergraduate level and 1 at the Master level. It is observed that the participants did not take any courses for inclusive education in pre-service training and they all work with children in the disadvantaged group. In addition, it is found that 9 of the participants attended in-service training and 11 of them did not attend any in-service training for inclusive education.

Table 1. *Demographic Information About Preschool Teacher*

Variable		*N*
Gender	Female	19
	Male	1
Type of Institution	Independent Kindergarten	7
	Nursery Class	13
Professional Seniority	1-5 years	3
	6-10 years	10
	11-15 years	5
	16-20 years	1
	21 years and over	1

Table 1 (Cont.)

Education Level	Undergraduate Degree	19
	Master	1
	Doctorate	
Taking Courses for Inclusive Education Pre-service	Yes	0
	No	20
Working Status with Children in Disadvantaged Group	Yes	20
	No	0
In-service Training on Inclusive Education	Yes	9
	No	11

Data Collection Instruments

The data of the study were collected through the "Personal Information Form" and "Semi-Structured Teacher Interview Form" developed by the researchers. In order to increase the quality and credibility of the research, three different faculty members who are experts in the fields of pre-school education, assessment and evaluation, and special education were consulted about the content validity of the interview questions created by the researchers. After the expert opinion, the pilot application of the interview form was made. The pilot application was carried out with five preschool teachers. Necessary adjustments were made according to the expert opinions and pilot applications, and the interview form was finalized. In the personal information form, there are seven questions about the gender of the participants, the type of institution they work, the years of professional seniority, and the level of education etc. There are six questions in the semi-structured teacher interview form. The questions in the semi-structured interview form are included in the inclusive education process of preschool teachers. It includes titles on the problems experienced by children, families, learning-teaching process, administrators and legislation, and the practices of teachers towards inclusive education.

Data Collection Process

After the data collection tools were developed, the necessary ethical permission was obtained for the research. Prior to the interview, the participants were informed about the purpose of the study and it was stated that their personal information would not be shared with third parties. The interviews were conducted online by making an appointment with the preschool teachers. The interviews lasted between 30-45 minutes. At this stage, in order to prevent data loss, the interviews were recorded with a voice recording device with the permission of the participants. The recorded data was later turned into a written document in computer environment.

Data Analysis

Research data were analyzed through content analysis. The purpose of content analysis is to reach the concepts and relationships that can explain the collected data. In this type of analysis, meaningful sections are coded within themselves, and the codes are classified into categories and themes are reached from categories (Yıldırım & Şimşek, 2018). The recordings made during the interviews with the study group were transcribed and transferred to the computer as they were. This process was

repeated for 20 preschool teachers. A separate file was opened for each question and the researchers read the answers of the study group many times and produced codes from the data and a code list was prepared. The data outside the research questions were excluded from the coding. Researchers coded the same dataset and compared coding similarities and differences. Codes with meaningful relationships were brought together to form categories. As a result of the research, 9 categories and 34 codes were reached. In the findings section of the study, codes such as "T1, T2, T3, …, T15" were used instead of their real names when quoting the participants.

Validity and Reliability Studies

In order to ensure credibility in the research, the data were converted into a written document after they were collected. Researchers have strived to remain neutral throughout the process. In addition, the opinions obtained from the participants were presented directly in the research. Expert examination was used at all stages of the study. In order to ensure transferability, the selection of the working group, the development of the data collection tool and the data collection process are described in detail. In order to ensure consistency, opinions and suggestions were received from faculty members who are experts in the field, both during the process of creating the questions in the interview form and during the coding of the data. In addition, for the reliability of the study, the same data set was coded separately by the researchers and a consensus was reached among the researchers in the coding (Huberman & Miles, 2002; Yıldırım & Şimşek, 2018).

Results

The findings of the research are presented in 2 parts taking the research questions into account. In this section, findings regarding preschool teachers' problems and their practices in the inclusive education process are included.

Findings Regarding the Problems Preschool Teachers Experienced in the Inclusive Education Process

The opinions of preschool teachers about the problems they experience in the inclusive education process are given in Table 2.

Table 2. *Problems Experienced by Preschool Teachers in the Inclusive Education Process*

Category	*Code*	*N*
Problems Experienced in the Learning and Teaching Process	Classroom management problems	16
	Problems arising from the educational environment and materials	12
	Problems with taking security measures	9
	Crowded class size problems	7
	Problems in event planning	4
	Problems in evaluation	3
	Total	51
Teacher's Occupational Inadequacy in Inclusive Education	Lack of experience in inclusive education	6
	Theoretical undergraduate education	5
	İnadequate education in special education	4
	Not working practically with a disadvantaged group in undergraduate education	1
	Total	16

Table 2 (Cont.)

Problems Encountered with Children	Immigrant children with language problems	9
	The long diagnosis process of the child	2
	Presence of undiagnosed children in the classroom	2
	Difficulty in providing individual education to disadvantaged children	2
	Children of families with low socio-economic status have problems in accessing the material	1
	Total	16
Problems Encountered with Families	Problems in cooperation with the family	9
	Problems in family participation	8
	Problems caused by the family's refusal to accept their child's situation	5
	Problems in language and communication with the family	3
	Total	25
Problems Encountered with Administrators	Lack of support for the problems faced by the teacher	5
	Administrator's failure to comply with the legislation on inclusive education	4
	The administrator's lack of awareness and knowledge about inclusive education	4
	Total	13
Problems Related to Legislation	Lack of professional staff working in different disciplines to support teachers in the inclusive education process and not being employed	3
	The lack of professional competence and supervision of special education teachers working in the Guidance Research Center	1
	Insufficient legal regulations regarding the special education type and level of the child	1
	Total	5

*The frequencies specified in the table depend on the number of opinions expressed by the teachers and do not reflect the number of teachers in the study group.

When Table 2 is examined, when the category of problems encountered in the learning-teaching process is examined, it is seen that there are six different codes related to this category. These are problems in classroom management (*f* = 16), problems arising from the educational environment and materials (*f* = 12), problems with taking security measures (*f* = 9), problems with crowded class size (*f* = 7), problems in event planning (*f* = 4) and problems in evaluation (*f* = 3). Some examples of direct quotes from teachers' views for each code are as follows:

I had a hard time in the classroom management, should I deal with my student with autism or my other students (T2)?

I can say that we have an insufficient number of inventories, even for regular students, in most of the classrooms. Therefore, it is a fact that we need inventories for our disadvantaged children (T17).

One of my children had a tendency to take all the toys and throw to his friends. At that time I had to remove all the materials. I had to organize the environment, I encountered such a problem (T15).

Due to crowded classes, it is difficult to give disadvantaged students enough time and attention (T17).

The work done and the activities prepared can be above the skills of our child who requires special education. For example, while a student with autism simply does not know the color red, you have to work with other children to achieve different achievements. Therefore, the activities you do in the classroom and the activities that the child needs may not overlap with each other sometimes (T19).

Especially, diagnosed student went to Guidance Research Center [GRC] 2 days a week and could not come to class. Our refugee students were especially coming 3 days a week. Unfortunately, I could not observe too many evaluations because we were experiencing absenteeism problems (T1).

When the category of problems experienced by teachers in the study group due to their professional inadequacy in inclusive education is examined, it is seen that there are four different codes related to this category. These are coded as lack of experience in inclusive education (*f* = 6), theoretical undergraduate education (*f* = 5), inadequate education in special education (*f* = 4), and Not working practically with a disadvantaged group in undergraduate education (*f* = 1). Teachers' views for each code can be exemplified as follows:

Of course, when we encountered disadvantaged students at the beginning of the profession, I had difficulties due to inexperience, inability to establish proper communication with the family, and lack of information (T12).

Maybe it would be different if I had been a little more experienced with my disabled student because as you know, undergraduate education is not very sufficient in terms of practice (T9).

I am not a very competent teacher in special education. Because we only had a special education course in this field at the university, and it was a theory-oriented one(T4).

An extra training could have been given to our fellow teachers who would work in the Eastern Turkey. After the universities, most of us work in Eastern Turkey, no study has been done regarding the conditions of these places (T13).

When we look at the category of problems that preschool teachers encounter with children in Table 2, it is seen that five different codes have been reached. These are Immigrant children have language problems (*f* = 9), the long diagnosis process of the child (*f* = 2), presence of undiagnosed children in the classroom (*f* = 2), difficulty in providing individual education to disadvantaged children (*f* = 2) and children of families with low socio-economic status have problems in accessing the material (*f* = 1). Examples of quotations obtained from teachers' opinions on this subject are given below.

Looking into our eyes, we don't speak each other's language. He did not understand us, we did not understand him, of course it is a problem that we do not speak different languages (T11).

When we have a student with disadvantages or a health problem, we refer him to the counseling service. It directs to GRC. However, it takes a year to get the results, so the school year is over because the process is too long (T18).

The undiagnosed student actually exhausts his teacher and other students more than the student diagnosed. Because when the student is diagnosed, you progress systematically. Since he also gets special education, we can get more successful results from the child when you communicate with the special education teacher and support what he has done in special education sessions (T18).

The children with autism and hearing impairment, I worked with had a lot of needs. Therefore, they had to be reinforced mostly by individual training and individual studies. However, while there

are studies to be carried out with twenty students in the classroom environment, there is not much time to be devoted to that child (T19).

There were children with low socio-economic status in our classes. They could not buy materials and supplies. I was trying to meet many of them myself (T14).

When Table 2 is examined in the category of problems encountered with families, it is seen that there are four different codes related to this category. These are problems in cooperating with the family (*f* = 9), problems in family participation (*f* = 8), problems caused by the family's refusal to accept their child's situation (*f* = 5), and problems in language and communication with the family (*f* = 3). Some of the opinions of teachers in this category are as follows.

The family and the school teacher cannot establish the necessary cooperation, so it is actually a problem I am experiencing (T17).

The family did not participate at all. I did not see such a thing as family involvement. They came from a distant village, maybe it had an effect too (T3).

If the family does not accept the child's situation, you cannot do anything. Anyway, they say that my child is normal so the family does not take him to the doctor or special education. Depending on these, there are situations where the teacher is insufficient (T10).

Especially in refugee families, there is a problem of communication and they do not know our language. In other words, there is a problem in the dialogue and communication between the family and the teacher (T16).

When Table 2 is examined in the category of problems encountered with the administrators, it is seen that three different codes have been reached for this category. These are the lack of support for the problems faced by the teacher (*f* = 5), the administrator's failure to comply with the legislation on inclusive education (*f* = 4) and the administrator's lack of awareness and knowledge about inclusive education (*f* = 4). Some of the opinions of teachers in this category are as follows.

As far as I have heard in the institutions where I work or around me, none of the administrators support their teachers. They register for the school, then they do not follow the inclusive education process. How the teacher communicates with that child or the teacher maybe has trouble with the parent. Even when there are problems, the administration does not attempt to help the teacher (T6).

As a problem with the administrators, normally two mainstreaming students are allowed in a ten-person class or only one in a class of twenty, this is written in the regulations, but frankly, this is not followed very much (T15).

School administrators should also be made aware of inclusive education. Many school principals are unaware of how important inclusive education is. They should also support the teacher (T16).

When the category of problems related to legislation is examined in Table 2, it is seen that three different codes related to this category have been reached. These are the lack of professional staff working in different disciplines to support teachers in the inclusive education process not being employed (*f* = 3), the lack of professional competence and supervision of special education teachers working in the Guidance Research Center (*f* = 1), and insufficient legal regulations regarding the special education type and level of the child (*f* = 1). The opinions of the teachers in this category are as follows:

It was very difficult for them to participate in the activities in the classroom because they expected a lot of individual attention. So I needed someone to get extra help (T19).

There is a kindergarten teacher and a special education teacher in the classrooms of special education kindergartens. But there are no special education teachers in kindergartens providing normal education (T10).

Unfortunately they can work with teachers who graduated from different departments in special education institutions because there is a lack of special education teachers, I think this is a problem (T5).

Diagnosis process takes a lot of time during legal assessments. While the students we refer to GRC should be given part-time mainstreaming, children with extreme levels are given full-time mainstreaming, which makes it difficult for the teacher in the classroom (T20).

Findings Regarding Preschool Teachers' Practices in the Inclusive Education Process

Table 3 includes views on preschool teachers' practices in the inclusive education process.

Table 3. *Preschool Teachers' Practices in the Inclusive Education Process*

Category	*Code*	*N*
Applications for Children	Developing and implementing activities according to developmental appropriateness	16
	Providing emotional and psychological support to the child benefiting from inclusive education	6
	Making activities about respect for differences in the classroom	5
	Providing peer support to the child benefiting from inclusive education	2
	Total	29
Applications for Families	Informing, educating and guiding parents	4
	Parent visits	3
	Total	7
Applications for the Education Environment	Providing material support to a socioeconomically disadvantaged child	5
	Making necessary physical arrangements in the educational environment	3
	Preparing appropriate material for the needs of the child benefiting from inclusive education	1
	Total	9

*The frequencies specified in the table depend on the number of opinions expressed by the teachers and do not reflect the number of teachers in the study group.

When Table 3 is examined, looking at the category of applications for children, it is seen that there are four different codes related to this category. These are developing and implementing activities according to developmental appropriateness (*f* = 16), providing emotional and psychological support to the child benefiting from inclusive education (*f* = 6), making activities about respect for differences in the classroom (*f* = 5) and providing peer support to the child benefiting from inclusive education (*f* = 2). Some of the teachers' views in this category are as follows:

I work according to what the child needs developmentally, for example, if there is no vocabulary, I study speaking skills. If he does not have a eating habit, I am working on this (T5).

First of all, I stroke the hair of all the children during the day, but I hug the disadvantaged children more so that they feel safe and trust me. Regardless of the disadvantage, you can save that child's life with a hug (T13).

I give explanations to the children about their friends, giving them information that will enable them to think positively, maybe give them information about their friend's special situation when they are absent, and make statements that will make the children a little more understanding and loving towards him (T19).

You try to put students with good diction in Turkish next to them (T13).

When Table 3 is examined in the category of applications for families, it is seen that there are two different codes related to this category. These are informing, educating and guiding parents (*f* = 4) and parent visit (*f* = 3). Some of the teachers' views in this category are listed below:

We had very good books and cards at our school. I shared it with parents in the past years. I used to send a weekly book for my down syndrome student and for my student with language development problems. I would say you will read them every night. I gave them language cards from school. I said it will be worked at home in this way. I had this kind of dialogue with my parents (T11).

I made family interviews more often, for example I made frequent home visits. In other words, the child thinks that you are not a stranger and tries to behave closer to you when he is in closer contact with the family (T18).

Looking at Table 3 in the category of applications for the educational environment, it is seen that there are three different codes related to this category. These include providing material support to a socio-economically disadvantaged child (*f* = 5), making necessary physical arrangements in the educational environment (*f* = 3), and preparing appropriate material for the needs of the child benefiting from inclusive education (*f* = 1). Some of the views of teachers in this category are as follows:

When he is a socio-economically disadvantaged child, I try to somehow provide him with material. You know, I do not separate that student from the others because he has no material. Somehow I assure (T14).

When we have children with hyperactivity or autism, of course, you need to organize the class. You can put the materials that may harm the children on the upper shelves. There were times when we adjusted the table and chair layouts for the physically handicapped (T11).

If there was a need for material, I was preparing a material for my specially educated student (T4).

Discussion, Conclusion and Implications

The results of the study, which aimed to determine the teachers' opinions about the inclusive education process in the preschool period, are organized in two parts: within the framework of the problems preschool teachers experience in the inclusive education process and their opinions about the practices they make. In the first part of the research results, it was observed that the problems in the process of learning and teaching were the primary problems experienced by teachers in the inclusive education process. Teachers stated that they cannot meet the interests and needs of children who need more support due to situations such as special needs, being refugees, being socially-economically disadvantaged, and other children in the classroom at the same time. In addition, they stated that this situation caused them to have difficulties in their classroom management skills from time to time and that crowded classes increased the severity of this problem. This problem can be solved by having a staff to support teachers in the classroom and reducing the class size. In parallel with our research findings, 21.4% of the teachers who participated in the study by Başturan and Görgü (2020) stated that crowded class was a problem. In accordance with the National Pedagogical Standards for Primary Education in Croatia, in case there are children with special needs in classrooms, the size of the class is reduced and mobile teams consisting of experts such as teaching assistants and sign language interpreters are established and various cooperation activities are carried out in the inclusive education process (Bouillet, 2013). As can be seen, while the conditions that enable children with special needs to acquire the necessary knowledge and skills are encouraged, this law also supports the teacher by reducing the burden of the teacher in the inclusive education process. Cooperation is

inevitable for the success of inclusive education. In Turkey, all responsibility should not be left to the teacher and cooperation between stakeholders should be ensured in this process.

In the study, it was observed that because the educational environment and materials were insufficient to meet the individual needs of all children, teachers had difficulties in planning activities and arranging the educational environment to meet the needs of all children. The inclusive education environment should contain materials for individual differences. (Abercrombie, 2009). Akalın, Demir, Sucuoğlu, Bakkaloğlu, and İşcen (2014) examined the needs of preschool teachers to support the development of children with special needs in their classrooms and it was determined that preschool teachers had problems arising from the lack of knowledge to use different teaching methods and lack of materials. Similarly, in the study conducted by Tekin-Ersan and Ata (2017), preschool teachers stated that crowded classrooms, lack of assistant teachers, and insufficient physical facilities cause problems in the implementation of Individual Education Plans [IEP]. The results of these studies are similar to the findings of the study. Municipalities in Finland sponsors the early childhood education and pre-school education of all children residing in the region (European Agency for Special Needs and Inclusive Education, 2020b). In this context, also in our country support from local governments and society can be obtained for meeting the material needs of schools and pre-school education becoming widespread.

Akalın et al. (2014), in their study examining the needs of preschool teachers in supporting the development of children with special needs in their classrooms, concluded that nearly half of the teachers participating in the study felt inadequate in classroom management, coping with problematic behaviors, and evaluating children's situations. The results of these studies are parallel to the findings of the study.

In the study, it was determined that teachers lack knowledge and experience about inclusive education. Teachers stated that they received a theoretical education during their undergraduate education, they did not receive enough training in special education and that they could not gain enough experience with the children in the disadvantaged group during their teaching internship. This finding indicates that teacher training programs should be reviewed. Teacher candidates should be trained in a way to meet the needs of students in different disadvantaged groups with a practice-oriented education as well as theoretical education. When the literature is examined, it has been observed that there are studies that conclude that teachers' competencies in inclusive education are weak (Ali et al., 2006; An, Hu, & Horn, 2018; Flem et al., 2004; Florian et al., 2010; Haug, 2017; Hay, Smitt, & Paulsen, 2001). In the study conducted by Altun and Gülben (2009) with preschool teachers, it was concluded that teachers felt inadequate in the field of special education and this was due to the teachers' not getting enough training in special education in undergraduate education. Similarly, in the study conducted by Sucuoğlu, Bakkaloğlu, Karasu, Demir, and Akalın (2013) to determine the relationship between pre-school teachers' knowledge and attitudes towards mainstream education, it was concluded that preschool teachers had a lack of knowledge about inclusive education. Likewise, Ünal and Aladağ (2020) found in their study that teachers do not feel themselves competent. In the study of Ertürk, Özen-Altınkaynak, Veziroğlu, and Erkan (2014), it was determined that preschool teachers had some problems while using most of the information they received during their undergraduate education in their professional lives. All these studies clearly show the necessity of making arrangements in teacher training programs in the context of children with special needs and inclusion.

In the study, it was concluded that teachers had language problems with refugee children and their families and could not communicate because they speak different languages. It has been determined that there are many studies in the literature that indicate the language problem in inclusive education (Aykırı, 2017; Cengiz-Şayan, 2020; Ünal & Aladağ, 2020). Due to the current geographical location of our country, it is a necessity to solve the education problem of refugees. In order to solve this problem, in 2014, education of refugee children was started in Temporary Education Centers [TEC] starting from

pre-school education level. It can be said that the language problem could not be solved at the desired level since this initiative is only in provinces where refugee children are concentrated.

Teachers who participated in the study expressed the presence of undiagnosed children in the classroom and the fact that children with severe diagnoses continue their education full-time as a problem. However, the understanding of inclusive education defends the right of all children to get education and that children should not be discriminated against. The difficulty that teachers experience when there are children with special needs in their classrooms may be due to their inadequate education in their undergraduate education and the responsibility in their classrooms being solely on them. Teachers also stated that they had difficulty in providing individual education to disadvantaged children. Tiwari, Das, & Sharma (2015) support the inevitability of this problem in the study, stating that it is not possible for teachers to take care of children with special needs in overcrowded classes.

Although the cooperation between parents who best know children and teachers is an important part of supporting the development of the child (Flem et al., 2004), it was concluded that families could not cooperate with teachers adequately and did not attend family participation activities. It has been concluded that families with disadvantaged children, especially those with children with special needs, have difficulties in accepting the situation of their children and therefore do not respond positively to cooperation. Teachers stated that they had communication problems with other families as well as refugee children due to language problems and this situation negatively affected cooperation. Similar to this result, it was found in the study of Altun and Gülben (2009) that families unconsciously reject their children with special needs. In the study conducted by Tekin-Ersan and Ata (2017), it was determined that most of the teachers participating in the study could not communicate with families during the IEP process and no family was involved in the process. Durmuşoğlu (2013) stated in her study that family education and participation activities are a good opportunity for parents to get to know their children better and to strengthen communication with the child. In order for families to be more involved in the education of their children and to accept their special situation in the inclusive education process, more attention should be given to awareness raising and orientation activities in schools and families should be educated.

Some teachers in the study stated that they did not receive sufficient support from school administrators in the inclusive education process and that the administrators did not comply with the regulations on the number of mainstream students required to be in the classroom. In addition, they stated that there was a problem in the process due to the lack of knowledge and awareness of the administrators about inclusive education. The primary person responsible for meeting the needs of students in schools is school administrators (Dilekçi, 2019). Administrators have a great role to play in creating a positive climate for inclusive education at school. In the study of Valeo (2008), most of the teachers stated that school administrators do not provide leadership or support. Considering the findings, the necessity of raising the awareness of managers about inclusive education stands out. Necessary measures in this regard should be addressed urgently.

Teachers stated that there is no professional staff working in different disciplines such as special education teachers that will support them in pre-school education institutions and that people graduated from different departments work as special education teachers in GRC as problems arise from the legislation in the inclusive education process. According to the policies and regulations of countries such as Finland, Cyprus, France, the Netherlands, and Italy and Portugal, the needs of every child should be recognized and met through inter-sectoral cooperation. In addition, the student-related situations are discussed by the expert group, and this group includes school health services, psychologists, and social workers in addition to the teaching staff (European Agency for Special Needs and Inclusive Education, 2019; 2020a; 2020b; 2020c; 2020d; 2021). In Chile, students are provided with different experts and resources to support their learning and development in line with their needs (Tamayo, Rebolledo, & Besoain-Saldana, 2017). In this context, there are problems with professionals

working in the inclusive education process and multidisciplinary studies in our country. Necessary measures should be taken in this regard.

In the second part of the research results, it was determined that pre-school teachers made various practices for children, families and the educational environment within the scope of their opinions about the applications they made in the inclusive education process.

It was observed that teachers developed and implemented activities according to developmental appropriateness in the inclusive education process, provided emotional and psychological support to the child benefiting from inclusive education, engaged in activities related to respect for differences in the classroom, and provided peer support to the child benefiting from inclusive education. In an inclusive education approach, instruction must be designed to meet the unique needs of each child (Tiwari et al., 2015). In the study, teachers stated that they provided information and guidance for families and reinforced their support by visiting parents. In the educational environment, it was stated that they tried to provide material support to the socioeconomically disadvantaged child, made the necessary physical arrangements, and prepared materials in the educational environment according to the needs of their students. Considering these findings, it is seen that teachers make an effort to enable children to benefit from inclusive education. In Kırılmaz (2019)'s study, it was concluded that classroom teachers benefited from peer education and classroom collaboration to involve refugee students in the process, while Kahriman-Pamuk and Bal (2019) concluded that most teachers did not make a special arrangements on inclusive education.

It has been concluded that teachers feel inadequate about inclusive education, although they use various practices inside and outside the classroom to provide an inclusive education environment. They try to find various solutions to the problems they experience in the inclusive education process, but the fact that the training they receive before and after the service in inclusive education is not sufficient to solve the problems they encounter may have caused the teachers to feel inadequate. In addition, the differentiation of the needs of each child in the disadvantaged group may have affected the teachers' feeling of inadequacy.

Based on the results of the research, the following recommendations can be made for practitioners, administrators, policy makers and researchers:

- The research is limited to pre-school teachers working in official preschool education institutions affiliated to the Ministry of National Education in the 2020-2021 academic year. In further studies, the opinions of school administrators, guidance teachers, special education teachers and families should be taken while determining the problems experienced in inclusive education in the pre-school period.
- The research is limited to the semi-structured interview method and the items in the semi-structured teacher interview form. In further studies, data diversity should be ensured by collecting data using different data collection tools such as observations and questionnaires.
- Effective in-service training should be provided to increase teachers' awareness of inclusive education, to eliminate their inadequacies and to develop a positive attitude.
- Undergraduate programs should be rearranged so that prospective teachers have high quality internship experiences in inclusive education.
- An effective policy for inclusive education should be developed from a multi-disciplinary perspective by producing various studies and projects in cooperation with different institutions and organizations.
- Preschool education programs prepared within the framework of this policy should be revised with a holistic perspective taking the best interests of all children into consideration.
- Administrators should support teachers, emphasize the importance of school-family cooperation and family participation, and carry out joint work with them.

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TÜRKÇE GENİŞ ÖZET

Okul Öncesi Eğitim Öğretmenlerinin Kapsayıcı Eğitimde Yaşadıkları Sorunlar ve Uygulamalar

Giriş

Günümüzde kapsayıcı eğitim yaklaşımı, başta bireysel farklılıklar olmak üzere, cinsiyet temelli eşitsizlikler, göçmenler, mülteciler, sığınmacılar, kültürel ve toplumsal çeşitliliklere kadar birçok konuyu içeren bir yapıya bürünmüştür. Bu bağlamda kapsayıcı eğitim; özel gereksinimi olsun ya da olmasın, sosyal, kültürel, eğitimsel, yaşamsal aktivite ve fırsatlara tüm toplum üyelerinin eşit düzeyde erişim sağlayabilmesi, ayrımcılık faktörünün ortadan kaldırılarak eğitim olanaklarından eşit şekilde yararlanabilmesini sağlamak şeklinde tanımlanmıştır (Aktekin, 2017; Çelik, 2017; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2005).

Öğretmenler, eğitim ortamlarının öğrencilerin farklı ihtiyaçlarını karşılayabilecek ve onlara eşit eğitim fırsatları sağlayacak şekilde düzenlenmesinde kilit oyunculardır. Bu durum öğretmenlerin kapsayıcı eğitimi sağlayabilecek yeterlilikte donatılmasını gerektirmektedir (Navarro, Zervas, Gesa, & Sampson, 2016). Kapsayıcı bir eğitim sisteminin oluşması için tüm sorumluluk öğretmene bırakılmayarak, öğrenciler, öğretmenler, veliler, okul idarecileri gibi eğitimin diğer paydaşların işbirliği içinde olmalarının önemi büyüktür (ERG, 2016a; Flem, Moen & Gudmundsdottir, 2004).

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Yöntem

Bu araştırma, nitel araştırma yöntemlerinden olgu bilim deseninde tasarlanmıştır. Araştırmanın çalışma grubu, 2020-2021 eğitim öğretim yılında Türkiye'nin çeşitli illerinde resmi bağımsız anaokulları ve ana sınıflarında çalışan 20 okul öncesi öğretmeninden oluşmaktadır. Araştırmaya katılan öğretmenler amaçlı örnekleme yöntemlerinden kolay ulaşılabilir durum örneklemesi yöntemi kullanılarak seçilmiştir. Araştırmanın veri toplama araçları öğretmen kişisel bilgi formu ve yarı

yapılandırılmış öğretmen görüşme formudur. Veri toplama araçları geliştirildikten sonra araştırma için gerekli etik izin alınmıştır. Verilerin toplanması sürecinde öğretmenlerle çevrimiçi görüşmeler yapılmıştır. Araştırmanın verileri içerik analiz tekniği ile analiz edilmiştir.

Bulgular

Araştırma sonucunda okul öncesi öğretmenlerin kapsayıcı eğitim sürecinde yaşadıkları sorunlar ve uygulamalara ilişkin elde edilen bulgular şunlardır:

- Öğretme sürecinde yaşanan sorunlar, sınıf yönetiminde yaşanan sorunlar (*f* = 16), eğitim ortamı ve materyallerden kaynaklanan sorunlar (*f* = 12), güvenlik önlemi alma ile ilgili sorunlar (*f* = 9), sınıf mevcudunun kalabalık olması ile ilgili sorunlar (*f* = 7), etkinlik planlamada yaşanan sorunlar (*f* = 4) ve değerlendirmede yaşanan sorunlardır (*f* = 3).
- Mesleki yetersizlikleri sebebiyle karşılaştıkları sorunlar, kapsayıcı eğitim konusunda deneyim eksikliği (*f* = 6), lisans eğitiminin teorik ağırlıklı olması (*f* = 5), özel eğitim konusunda yeterli eğitim almama (*f* = 4) ve lisans eğitiminde dezavantajlı grupla uygulamalı çalışmamadır (*f* = 1).
- Çocuklarla ilgili karşılaştıkları sorunlar, göçmen çocukların dil sorunlarının olması (*f* = 9), çocuğun tanılanma sürecinin uzun olması (*f* = 2), sınıfta tanı almamış çocukların olması (*f* = 2), dezavantajlı çocuklara bireysel eğitim vermekte zorlanılması (*f* = 2) ve sosyo-ekonomik açıdan düşük düzeydeki ailelerin çocuklarının materyale erişim sorunlarının olmasıdır (*f* = 1).
- Yöneticiler ilgili karşılaştıkları sorunlar, öğretmenin karşılaştığı sorunlara yönelik destek olmama (*f* = 5), yöneticinin kapsayıcı eğitim ile ilgili mevzuata uymaması (*f* = 4) ve yöneticinin kapsayıcı eğitim konusundaki farkındalık ve bilgi eksikliğidir (*f* = 4).
- Mevzuatla ilgili yaşanan sorunlar, kapsayıcı eğitim sürecinde öğretmenleri destekleyecek farklı disiplinlerde çalışan profesyonel kadrolarının olmaması ve istihdam edilmemesi (*f* = 3), Rehberlik Araştırma Merkezi'nde çalışan özel eğitim öğretmenlerinin mesleki yeterliliklerinin olmaması ve denetlenmesi ile ilgili sorunlar (*f* = 1) ve kapsayıcı eğitim alan çocuğun kaynaştırma türü ve düzeyinden kaynaklı yasal düzenlemelerin yeterli olmamasıdır (*f* = 1).
- Çocuklara yönelik uygulamalar, etkinlikleri çocuğa görelik ilkesine göre geliştirme ve uygulama (*f* = 16), kapsayıcı eğitimden faydalanan çocuğa duygusal ve psikolojik destek sağlama (*f* = 6), sınıfta farklılıklara saygı ile ilgili etkinlik yapma (*f* = 5) ve kapsayıcı eğitimden faydalanan çocuğa akran desteği sağlamadır (*f* = 2).
- Ailelere yönelik uygulamalar, velileri bilgilendirme, eğitme ve yönlendirme (*f* = 4) ve veli ziyaretidir (*f* = 3).
- Eğitim ortamına yönelik uygulamalar, sosyoekonomik açıdan dezavantajlı çocuğa materyal desteği sağlama (*f* = 5), eğitim ortamında gerekli fiziksel düzenlemeleri yapma (*f* = 3) ve kapsayıcı eğitimden faydalanan çocuğun ihtiyacına uygun materyal hazırlamadır (*f* = 1).

Tartışma, Sonuç ve Öneriler

Araştırmada öğretmenlerin yaşadığı sorunların başında öğrenme öğretme sürecinde yaşanan sorunlar yer almaktadır. Öğretmenler, özel gereksinimli, mülteci, sosyal-ekonomik açıdan dezavantajlı olma vb. durumlardan dolayı desteğe ihtiyacı olan çocuklar ve sınıftaki diğer çocukların ilgi ve ihtiyaçlarını aynı anda karşılayamadıklarını belirtmişlerdir. Ayrıca bu durumun ve sınıfların kalabalık olmasının sınıf yönetimi becerilerinde zorlanmalarına neden olduğunu belirtmişlerdir. Sınıf içinde öğretmenlere destek olacak bir personelin bulundurulması ve sınıf mevcutlarının düşürülmesi bu sorunu giderebilir.

Öğretmenlerin kapsayıcı eğitim konusunda kendilerini mesleki olarak yeterli hissetmedikleri ve lisans eğitimlerinde uygulamaya dönük yeterli eğitim almadıkları belirlenmiştir. Bu bulgu öğretmen yetiştirme programlarında özel gereksinimli çocuklar ve kaynaştırma dersleri bağlamında düzenlemelerin yapılmasını gerektirmektedir.

Yapılan çalışmada öğretmenlerin mülteci çocuklar ve aileleriyle dil ve iletişim sorunu yaşadıkları, ailelerin yeterince işbirliği yapmadıkları, aile katılım etkinliklerine gelmedikleri bulunmuştur. Kapsayıcı eğitim sürecinde ailelerin bu konuda bilinçlendirilmesi ve eğitilmesi gerekmektedir.

Araştırmaya katılan bazı öğretmenler, okul yöneticilerinin yeterli desteği göstermediklerni ve sınıfta bulunması gereken kaynaştırma öğrencisi sayısında yönetmeliğe uymadıklarını belirtmişlerdir. Ayrıca yöneticilerin kapsayıcı eğitim konusundaki farkındalık ve bilgi eksiklerinin sorun oluşturduğunu ifade etmişlerdir. Bu bağlamda yöneticilerin kapsayıcı eğitim konusunda bilinçlendirilmesi gerekliliği ön plana çıkmaktadır.

Öğretmenler, kurumlarında kendilerine destek olacak özel eğitim öğretmeni gibi farklı disiplinlerde çalışan profesyonel kadroların olmamasını ve RAM'larda özel eğitim öğretmeni olarak farklı branştan mezun kişilerin çalışmasını kapsayıcı eğitim sürecinde mevzuattan kaynaklı yaşanan sorunlar olarak belirtmişlerdir. Ülkemizde kapsayıcı eğitim sürecinde bu konuda da gerekli tedbirlerin alınması gerekmektedir.

Araştırmadaki okul öncesi öğretmenlerin çocukların kapsayıcı eğitimden yararlanabilmesi için çocuklara, ailelere ve eğitim ortamına yönelik olmak üzere çeşitli uygulamalarda bulundukları tespit edilmiştir. Bu bulgular öğretmenlerin kapsayıcı eğitimde farklı uygulamalara yer verdiklerini göstermektedir.

Araştırmanın sonuçlarından yola çıkılarak öğretmenlerin kapsayıcı eğitim konusundaki farkındalıkları arttırılarak, yetersizliklerinin giderilmesi ve olumlu tutum geliştirmeleri için etkili hizmet içi eğitimler verilmelidir. Öğretmen adaylarının kapsayıcı eğitimle ilgili uygulamalı deneyimler yaşamaları için lisans programları yeniden düzenlenmelidir. Kapsayıcı eğitime yönelik etkili bir politikanın multi-disipliner bir bakış açısı ile farklı kurum ve kuruluşlarla iş birliği yapılarak çeşitli çalışma ve projeler üretilerek oluşturulması gerekmektedir. Bu politika doğrultusunda mevcut okul öncesi eğitim programları revize edilmelidir.

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Investigation of Teacher Roles in Educational Practices in the Covid-19 Pandemic: A Phenomenological Study [*]

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Abstract

In the research, it is aimed to analyze the roles of teachers teaching in distance education in the Covid-19 pandemic period and to investigate the obstacles encountered in the realization of these roles. The study was conducted phenomenological research. The criterion sampling technique is used to select participants. Participants were chosen from the teachers of Mathematics, Foreign Language, Science, Turkish and Social Studies who teach at least 15 hours or more per week in distance education. The data collection process in which data triangulation was performed included diaries kept by teachers for five days, individual interviews and focus group interviews. Transcripted data were analyzed by content analysis technique. The roles of the teachers who participated in the study were "communicator", "collaborator", "facilitator" and "learner" teacher during the distance education in Covid-19 pandemic. There are obstacles in the realization of roles in issues such as injustice / inequality in education, subject-centered program, structure of the education program, professional development, student and parent unwillingness. The features that teachers should have in the process of distance education as technopedagogical content knowledge, planning instructional activities, being able to measure distance assessment and provide student motivation.

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Introduction

Education is the most effective dynamic in resolving the existential pain of a society regarding its present and future. There are strong relationships between the achievements of the individuals in the educational processes and the fulfillment of the functions of the society. Therefore, functional education practices are essential for healthy socialization. Professionally designed and implemented training programs face some dilemmas in crisis situations, and emergency response actions are developed in these situations.

With the emergence of the Covid-19 pandemic, societies tried to adapt to the changes in social, cultural, economic and educational fields (Tzifopoulos, 2020). During the pandemic process, countries have taken various measures against emerging problems (ETF, 2020). Along with Turkey, most countries have suspended face-to-face education practices due to pandemic-related reasons and alternative education practices have come to the fore. These reflexes shown in a crisis situation are interpreted as successful; however, it is seen that there are scientific gaps in the analysis and evaluation of distance education caused by the pandemic.

When the studies on educational practices during the Covid-19 pandemic process are examined, it is seen that this process has been studied in terms of different topics. In these studies; Kaden (2020), Adıgüzel (2020), Kurnaz, Kaynar, Şentürk Barışık and Doğrukök (2020), Demir and Özdaş (2020), Ünal and Bulunuz (2020) investigated teachers' views on the pandemic process; Zawacki-Richter (2020) studied the impact of the Covid-19 pandemic on higher education; Duman (2020) and Paudel (2021) evaluated the distance education process applied during the pandemic process; Arslan and Şumuer (2020) stated the problems experienced by teachers regarding classroom management in online lessons in the distance education process; Sarı and Nayır (2020) include the problems faced by teachers during the pandemic period education process; Muthuprasad, Aiswarya, Aditya, and Jha (2021) analyzed students' perceptions and preferences regarding the online education process during the pandemic; Christian, Indriyarti and Wibowo (2021) stated the effectiveness of the tools used in the e-learning process on students; Zhang, Wang, Yang and Wang (2020) investigate the problems experienced in distance education with the pandemic and the arrangements to be made in education policies related to it; Alper (2020) examined the compatibility of teachers to distance education with the pandemic process. Studies in the literature shows that the difficulties experienced during the pandemic process, the impact of the educational practices, situation assessments of the experiences of teachers and students in the education process, and studies on education policies are included. It is seen that the transition to distance education-based education practices around the world with the pandemic has had an impact on the studies.

During the pandemic, most countries are making efforts to create distance education platforms, and countries that have distance education platforms are making efforts to update the platforms (The European Training Foundation [ETF], 2020; Organisation for Economic Co-operation and Development [OECD], 2020; Ünal & Çokyaman, 2021). Teachers and students continue their education processes with distance education as much as before the pandemic. In distance education, teachers carry out a distance education process that has its own characteristics with both individual differences, differences in their branches, and educational differences created by the conditions brought by the pandemic process. Every educational program in which the teacher is involved, no matter how excellent, is as functional as the quality of the teacher. Therefore, the examination of teacher function in distance education applications during the Covid-19 pandemic period stands out as a research topic.

The role of the teacher is defined by cultural and social events and the environment, as well as academic and professional determinants. In addition to internal effects such as self-perception in the role of the

teacher, the views and expectations of the teacher's role that emerge from other stakeholders such as students, parents, colleagues, school leaders and society are also effective (Makovec, 2018). A teacher is an education employee who has responsibilities to both her/his students and the community she/he is in, tries to deal with the feelings and needs of his students, strives to understand people correctly, has important responsibilities in improving school and teaching and raising students who meet expectations (Can, 2004). Due to these responsibilities, different role definitions were made for the teacher.

From the past to the present, the roles of teachers have been discussed in many aspects within the framework of different topics, within the scope of various competencies and characteristics. For example, teacher roles include teacher professionalism (OECD, 2001), effective teacher skills in the teaching process (Lemov, 2010; Melvin, 2011), standards for the use of technology in education (The International Society for Technology in Education [ISTE], 2017) has been discussed within the scope of 21st century teacher qualifications (Churches, 2008; Cox, 2015; Palmer, 2015).

OECD (2001) defined some of the professional professionalism of a good teacher as follows;

Expertise (A good teacher should be an important source of knowledge and understanding and be open to constant updating.)

Pedagogical knowledge (In the framework of lifelong learning, teachers should become proficient in imparting a range of high-level skills, including motivation to learn, creativity and collaboration, rather than placing too much emphasis on recall of information or performance on tests.)

Understanding technology (A key feature of teacher professionalism in our time. The teacher must have the ability to integrate technology into teaching strategies.)

Organizational competence and collaboration (Teacher professionalism should include the ability to function as part of the 'learning organization'. The ability and willingness to learn from and teach other teachers is perhaps the most important aspect of this trait.)

Flexibility (Teachers must accept that they can change throughout their careers)

Mobility (The ability to have the capacity and willingness to move in and out of other careers and experiences that will enrich their abilities as a teacher)

Openness (It is important to be able to work with parents and non-teachers in complementary ways rather than subverting other aspects of the teacher's professional role)

Lemov (2010) stated that the teaching process is a great art, that works of art are based on the mastery and application of basic skills learned individually through diligent study. By saying "teach like a champion" to teachers, he gathered 49 techniques that teachers should have in the learning process, under 7 titles. These skills appear as teacher qualifications. According to Lemov (2010), determining high academic expectations, planning for academic success, structuring and presenting the course, ensuring the participation of students in classes, creating a strong classroom culture, setting and maintaining high behavioral expectations, building character and confidence are the characteristics that teachers should have.

Melvin (2011) stated that effective teachers have some responsibilities. These are organizing environments for change, organizing physical space and materials, applying a reflective teaching model, self-regulation, holding classroom meetings for success, using technology in the classroom, modeling as a leader, practicing at recess, collaborating with parents, creating and maintaining a coherent environment. Within the perspectives of Lemov (2010) and Melvin (2011) it can be said that a strong leadership quality of the teacher should come to the fore for the functionality of the programs.

Apart from these roles, teachers, who are the most important practitioners of the education system with the intensive use of technology, have very important roles in the planning of education and training activities. The International Educational Technologies Association (ISTE) (2017) has created ISTE Standards for teachers and emphasized the importance of teachers' development in these standards, which will help students become empowered learners. These standards are;

Learner; Teachers continually improve their practices by learning from and with others, and discovering promising applications that leverage technology to improve student learning.

Leader; Teachers seek leadership opportunities to support student empowerment and success, and to improve teaching and learning.

Citizen; Teachers inspire students to contribute positively and participate responsibly in the digital world.

Collaborator; Teachers maintain and develop a culture of collaboration with both colleagues and students to improve practice, explore and share resources and ideas, and solve problems.

Designer; Teachers design authentic, student-focused activities and environments that recognize and accommodate student diversity.

Facilitator; Teachers facilitate learning with technology to support students' achievement of the ISTE Student Standards.

Analyzer; Teachers understand and use data to guide their teaching and support students in achieving their learning goals.

Considering the International Educational Technologies Association (ISTE) (2017) standards, it is seen that the perspective of the teacher coincides with the prominent teacher roles in alternative education programs such as learning teacher, designer teacher, leader teacher, guide teacher.

In some studies, the roles and responsibilities of the teacher among the 21st century teacher skills were examined. Churches (2008) stated that 21st century teachers should have adaptive, visionary / creative, collaborative, risk-taking, learner, communicator, model and leader roles. Cox (2015) underlines that teachers must be in a position that “future-proof, a master of technology in the classroom, knows how to collaborate, adapts (can adapt and adapt teaching styles to include different learning modes, adapt to curriculum and requirements, and use their imagination to teach in creative ways), lifelong learner, advocate of the profession (which keeps parents and students informed of what is going on in education and addresses issues directly)”

Palmer (2015) identified 15 characteristic features for 21th century teachers. She stated that among these characteristics, there should be teacher characteristics `who can apply student-centered classroom and personalized teaching, make students productive, learn new technologies, globalize, collaborate, open to innovations, and continue to learn`

Teaching, which is defined as a profession, has unique differences within the framework of the basic characteristics of curriculums. For example, when the philosophy of education differs, the roles and responsibilities of teachers also differ. In this regard, the need to examine possible changes in teacher roles in distance education practices during the pandemic period necessitated this research. This study differs from the researches in the literature examining the roles of teachers in distance education in that it deals with distance education in a crisis situation (Covid-19 pandemic). In the study, it was aimed to analyze the roles of teachers working in distance education applications during the Covid-19 pandemic period and sought answers to the following questions:

1. What are the roles of teachers working in distance education practices during the pandemic period and what are the obstacles to the realization of these roles?

2. What should be the characteristics of teachers working in distance education applications during the pandemic period?

Method

Research Design

The purpose of the research is examined with the post-positivist paradigm and analyzed with the phenomenology pattern, which is one of the qualitative research methods. Phenomenology defines the common meaning of individuals' experiences with a concept or phenomenon (Creswell & Poth, 2018). It is a method of inquiry in which the meaning and source of experiences are examined in depth (Manen, 2014). Phenomenology aims to analyze the interpretations of the participants about the phenomenon examined based on their experiences. Therefore, the experiences of the teachers involved in distance education applications during the Covid-19 pandemic process and their interpretations of teacher roles are presented.

Study Group

The study group was determined by the criterion sampling technique, “in which all the cases are sampled which fit a particular criterion being studied” (Cohen, Manion & Morrison, 2017). Participants were selected among Mathematics, Foreign Language, Science, Turkish and Social Studies teachers who teach at least 15 hours or more distance education per week in the 2020-2021 academic year. The demographic information of the participating teachers according to the measurement processes employed to solve the research problem is given in Table 1.

Table 1. *The demographic information of the participating teachers*

The demographic information		*Daily*	*Focus Group Interviews*	*Individual Interviews*
Gender	Woman	7	6	3
	Man	4	6	2
	Mathematics	2	3	1
	Foreign Language	2	2	1
Lesson	Science	3	3	1
	Turkish	2	2	1
	Social Studies	2	2	1

Cresswell and Poth (2018) stated that in the general characteristics of phenomenology studies, a heterogeneous group was defined in terms of size ranging from 3-4 participants to 10-15 participants. Starks and Brown Trinidad (2007) found that typical sample sizes for phenomenological studies ranged from 1 to 10 individuals; Polkinghorne (1989) recommends that researchers interview 5 to 25 people who have experienced the phenomenon (as cited in Cresswell & Poth, 2018). The size of the study group (11 people daily, 17 interviews) in this study is suitable for phenomenology studies.

Data Collection Tools

In the study, diary and semi-structured interview forms were used for data diversity. Since the interview focuses on the meanings of the individual's experiences, it is seen as an appropriate data collection tool in phenomenological studies (Kvale, 1996). In phenomenological studies, it is important to collect and explore the experiential definitions of individuals who can convey their experiences verbally or in writing (Manen, 2016). For this reason, data were collected from written experiences with diaries and from oral experiences with interviews. In addition, individual and focus group interviews were conducted using the semi-structured interview form prepared by the researchers to ensure data diversity.

In the study, a semi-structured interview form prepared by the researchers was used to collect the data. For the validity of the interview form, which was created by reviewing the literature, the evaluation of two different field experts working in the field of Curriculum and Instruction was taken. In line with the opinions of field experts, necessary corrections were made in terms of language and content, and interview form was created.

Data Collection Process

The data collection process was carried out considering the pandemic conditions, and focus group interviews and individual interviews were carried out through online applications.

In focus group interviews, all participants were simultaneously involved in the online meeting and a researcher moderated the discussion. The entire meeting was recorded.

Within the scope of the research, 2 separate focus group studies (6x2) and one-to-one interviews were conducted with 5 people on a voluntary basis.

With the aim of reflecting the experiences of the teachers in the distance education process in a sincere way, 11 teachers reflected their experiences through diaries on 5 different days.

Data Analysis

The data analysis technique is the content analysis. Written diaries and data recorded in the semi-structured interviews were converted into transcripts. In the coding of the data, each participant teacher T1, T2, T3…. coded as. At this stage, the analysis process was carried out in four stages: coding the data, finding the themes, arranging the codes and themes, defining and interpreting the findings (Yıldırım & Şimşek, 2016). Similar data were tried to be brought together by following an inductive way within the framework of certain concepts and themes. Transcripts were reviewed by the researchers and analyzed separately for coder reliability. In the analysis, first the codes were created, then categorization was made and the last themes were reached.

Validity Reliability Measures / Credibility

In the study, more than one data collection method was used by making data diversification. The recorded data has been transcribed. While the transcripts were being created, care was taken to write exactly the answers they gave to the interview questions. Findings supported by direct quotations. For coding reliability calculation in the content analysis of the data collected in the research, Miles & Huberman (1994) reliability formula was used: Reliability = Consensus / (Agreement + Disagreement). As a result of the calculation, the reliability of the coding was 77%. Reliability calculations above 70 percent are considered reliable for research (Miles & Huberman, 1994).

Lincoln and Guba (1985) suggest that long-term interaction, depth-based data collection, diversification, expert review, and participant confirmation strategies can be used to ensure the credibility

of qualitative research. In this research process, long-term interaction was made with teachers from 6 different branches, not only with focus or individual interviews, but also with teachers from as many different branches as possible by using both methods. For depth-oriented data collection, the researchers questioned whether they met the research questions by critically examining the diary and the data reflecting the sincere feelings of the teachers in depth, and the data collected both in the focus group interviews and in the individual interviews, by recording them in the process. In terms of diversity, while the researchers tried to provide data diversity with diaries and interviews in the research, it was supported to create diversity with different participants by trying to interview as many people as possible with a group of teachers from six different branches and by keeping a diary. In terms of expert examination, the researchers involved in the study bear the title of field experts. In terms of participant confirmation, it was carried out by asking whether the findings obtained from randomly selected diaries and interviews revealed the thoughts of the participants. In this research, it is seen that the necessary processes related to credibility are provided.

Ethics Committee Approval Information

An application was made to Çanakkale Onsekiz Mart University Scientific Research and Publication Ethics Committee for data collection studies within the scope of the research, and ethics committee approval was obtained with the decision of the Graduate School of Education Ethics Committee dated 30/03/2021 and numbered 06/28.

Results

The findings of the research are presented in this section. Within the scope of two research questions, in the first part, the findings regarding the roles of teachers involved in distance education practices during the pandemic period and the obstacles to the realization of these roles; in the second part, the findings about what the characteristics of the pandemic period teacher should be are given.

The Roles of Teachers in Distance Education Practices during the Pandemic Period and the Barriers in Realizing These Roles

In the study, it was seen that the roles of teachers working in distance education applications during the Covid-19 pandemic period came to the fore as communicator, collaborator, learner and facilitator. The obstacles to the realization of the teacher roles that the teachers wanted to display also differed according to the roles. The analysis of these prominent teacher roles and the evaluations of the obstacles to the realization of these roles are given in the figures below.

The role of the communicator teacher and the barriers to the realization of the role. It has been observed that different dimensions have an effect on teachers' communication in the distance education process. In the realization of the communicator role, dimensions such as the fact that communication is a natural and necessary process brought by the pandemic, it is an internal responsibility, it is seen as a solution in reaching students, it is used for the lesson, it is seen as a support for the solution of problems by communicating with parents have come to the fore. The opinions of the teachers on this subject are as follows;

A natural and necessary situation caused by the pandemic;

> *T3- "In this process, we were in contact with the school administration, other teachers, parents and students separately. Even now, this process continues intensively. Our Whatsapp groups were used extensively to ensure communication very often."*

Internal responsibility;

T7- "When I started my teaching career, I preferred not to apply the features that I did not like in my teachers. For example, we were afraid to ask questions. I didn't want to be like this with my students, I always wanted them to ask me questions. I also struggled with this in distance education."

T13- "The questions of the students who ask questions can be all week, sometimes even at very late hours, so I answer their questions in detail as much as I can, my aim is to support them as much as possible without breaking them out of the process. When I find an interested student asking questions, I try to ensure that the process is beneficial in terms of efficiency.

Reaching students for the lesson;

T1- "We all floundered at first, and then we tried to reach the children as much as we could. Because the biggest problem was reaching the children. We kept in touch by establishing social media groups to reach children."

T6- "I set up whatsapp groups to increase effectiveness. They ask questions from there, and I make a voice narration. I try to keep them calm. I'm trying to encourage. Sometimes there are students who ask questions even at 12 o'clock at night. I even answer them."

A support for solving problems by contacting the parent;

T8- "I called the families of the students who did not attend my classes. I asked them if they knew that their students did not participate, and if they did not, why did they not?."

T3- "In this process, I met with the parents mostly, we didn't even know most of the parents when we were at school, the two times a year we see at the parents' meetings. Now we are in constant communication, we have telephones, we have a social media group.

T2-"In my parent groups, I try to guide them by being informed about course announcements and assignments posted on eBay. I also post leaf tests and lecture notes on parents' phones. When his parents are informed, he solves the majority."

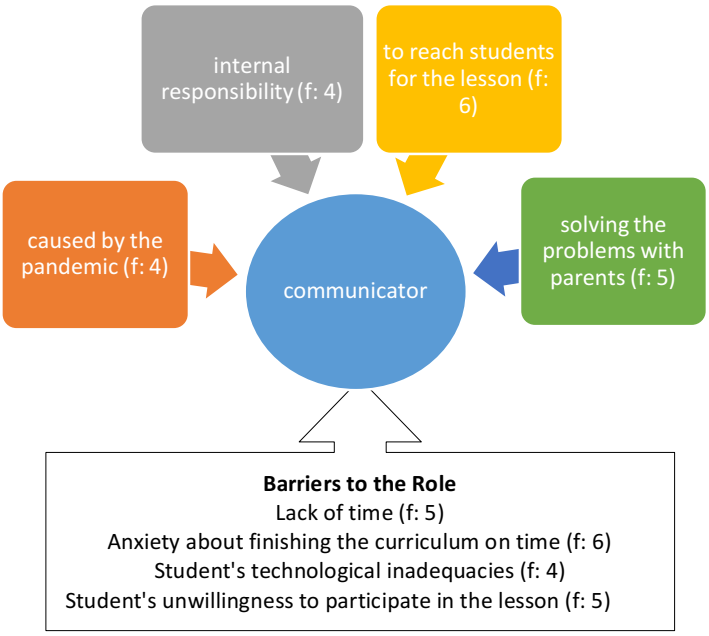

Figure 1. *The role of the communicator teacher and the obstacles to the realization of the role*

Against the realization of the role of a communicator teacher in the distance education process; it has been stated that different dimensions such as lack of time, anxiety about finishing the curriculum on time, student's technological inadequacies and the student's unwillingness to participate in the lesson are effective. Teachers' views on this subject are as follows:

T7- "The most troublesome situation of my course is the lack of time for students and teachers to express themselves, the intensity of the curriculum and the anxiety of finishing the curriculum on time"

T15- "Not being able to reach some students makes me sad. When I ask their friends, they say they have financial difficulties. Although I try to reach and support, it is difficult for us to communicate like other students."

Considering the opinions of teachers, it is seen that the role of teachers as communicator teachers in the distance education process of the Covid-19 pandemic comes to the fore. Teachers emphasized their communication skills in order to carry out the distance education process in a healthy way and to close the existing deficiencies. In this process, due to the conditions caused by the pandemic, it is seen that teachers have a responsibility of communicating with students or parents in the distance education process, in the process of reaching students more easily. However, it has been observed that teachers who want to communicate have student-based problems such as student's technological inadequacies or the unwillingness of the student. On the other hand, it has been observed that teachers who want to communicate more with their students in their classes, lack of time and the concerns of finishing the curriculum on time prevent the formation of the communication process.

The role of collaborative teacher and barriers to realization of the role. It has been observed that different dimensions have an effect on teachers having a collaborative role in the distance education process. The collaborative role was carried out in solving problems with colleagues, in the processes for parents and students, and in reflection on learning processes. The opinions of the teachers are given below.

Solving problems with colleagues;

T4- "When there was a problem with the lesson, many of our teacher friends, like me, shared their suggestions and solutions. We solved our problems in cooperation."

T13- "Platforms were created in virtual environments where teachers support each other and collaborate to do something useful for their students. I can describe this period as the period of collaborations, which I will mention as beautiful next to the sentences that start with "I wish".."

Processes for parents and students;

T9- "I am sharing the homework checklists back with the students in the distance education process. I even share many of them with their parents. In this way, when they see the pros and cons, they follow a regular homework because the excess of cons disturbs many."

T6-" Parent cooperation is also important in this process. I am writing to parents from our parent groups. I'm trying to get them involved too. Like "Please check the solutions of the assignments yourself". Because it doesn't make much sense unless it's checked. I'm throwing out their solutions, I want them to be included in the process."

Reflecting on learning processes;

T9- "Unfortunately, having to teach unilaterally during the pandemic process does not give the desired result. Therefore, I have worked on a process that can continue the education that children work in

cooperation with children. They complete the presentations of homework, experiments and activities together. In this respect, I both cooperated with the students and tried to support their cooperation in this process."

T10- "In social media groups, students offer advice and solutions to each other's questions. They learn by collaborating until I give the answer."

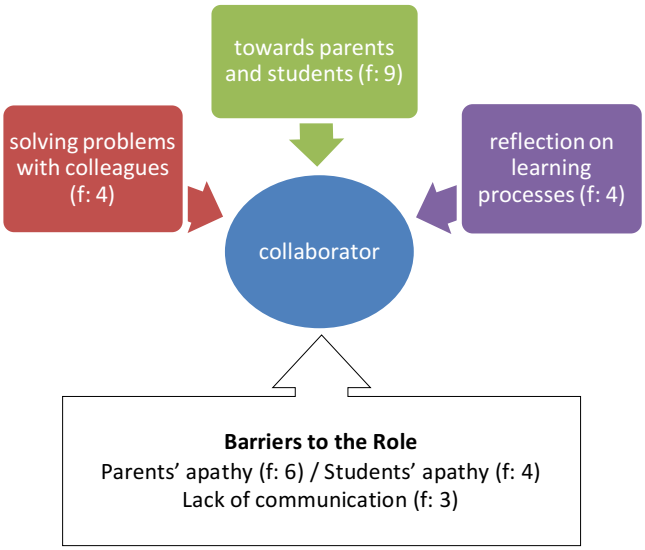

Figure 2. *The role of the collaborative teacher and the barriers to the realization of the role*

Against the realization of the role of a collaborative teacher in the distance education process; It has been stated that different dimensions such as parents' apathy, students' apathy and lack of communication are effective. The opinions of the teachers on this subject are as follows;

T17- "I tried to reach some parents, I sent a message, I tried every channel, I figured out how to use zoom, and after a while, it got tired of this. The family does not provide that environment for the student. When I couldn't reach some of them, I quit. I see myself as inadequate in this regard."

T14- "Not getting the interaction I want from the student does not satisfy me. After a while, my reluctance and the student's decrease in motivation affect the efficiency of the lesson."

T26- "During the school period, problem detection was easier and your solution alternatives were much more diverse. Now you are passive and ineffective unless you are constantly trying and communicating with the student."

T28- "...It was a pity that some of them remained silent and did not react even though I gave the right to speak. In the classroom, I could see their reactions and choose an attitude accordingly, but I felt bad because I couldn't see the unresponsive student. I wonder if the family joins forcibly, but does she go to bed? or did I just become a teenager's fun in my own way?

When we analyze the opinions of the teachers, the collaborative teacher feature of the teachers came to the forefront in the distance education process of the Covid-19 pandemic. In this process, it is understood that teachers transfer their cooperation with their colleagues, which they sometimes perform in the face-to-face education process, to the distance education process they are in, and try to find solutions to the problems they encounter by collaborating. Involving the parents, one of the stakeholders of the education process, in the distance education process, the teachers cooperated with the parents and

ensured that the processes related to the teaching process such as homework follow-up and student attendance are carried out in cooperation with their students. It has been observed that teachers with the collaborative teacher model reflect their collaborative learning skills to the education processes in the distance education process. Also, it was stated by the teachers that the difficulties experienced in establishing communication prevented cooperation regarding to parents' and students' apathy.

The role of the learner teacher and the barriers to the realization of the role. It has been stated that the role of the teacher learning in the distance education process is realized by the effect of different dimensions such as seeing learning as an internal responsibility as a part of professional development and being a necessity in the conduct of the distance education process. The opinions of the teachers are given below:

Professional Development / Internal Responsibility;

T9- "I do not consider myself very competent in technology, but for this, I try to improve myself by entering all kinds of learning environments where I can participate remotely. In this process, I used new web 2.0 tools more and more."

T13- "Being a teacher in this process makes your students feel that if you are very possessive, you should understand that they are good or bad just from their voices and try harder for them. I called some of my students a lot after class or I researched the reasons for my children not submitting their work. This process developed me both professionally and in student psychology and showed that the teacher is not just a lecturer but a guide that prepares me for life."

T23- "I constantly examine the current process and try to find the missing and wrong. Of course, my biggest and only supporters are my students. We work together as an R&D unit, discussing how we can achieve our best learning. You feel the need to be renewed and updated every day because learning that goes wrong bothers you."

Obligation for Distance Education;

T8- "This process has given me incredible things. I used to be biased to the most used technology, I would use it on a beginner level. I used it as long as it worked for me. In general, I think it is necessary to teach the lesson live instead of online. But in the end, I learned a lot of things that I didn't know before, and they contributed positively to me in this respect.

T14- "We had to learn web 2.0 tools to prepare better content in distance education. But I wish we didn't have to, if we had learned beforehand what's going on. I am happy to have learned. I improved myself a lot."

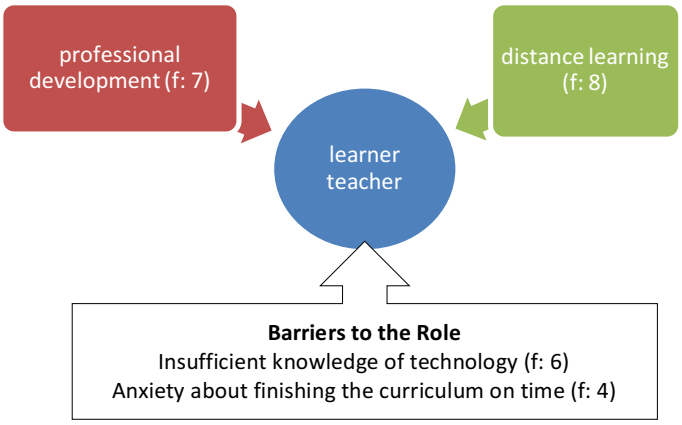

Figure 3. *The role of the learner teacher and the barriers to the realization of the role*

Against the realization of the learner teacher role in the distance education process; It was stated that the insufficient knowledge of technology and anxiety about finishing the curriculum on time were effective. The opinions of the teachers on this subject are as follows;

T19- "Sometimes I see some very nice apps while surfing the web. But since I don't know how to use them in my live lesson, I can't add them to the lesson."

T4- "My lack of technological knowledge and usage is too much, I don't know how to integrate technology into the lesson."

T17- "Our curriculum is very large. I have a hard time for finishing the curriculum on time. The feedback I get is very little even though I teach the lesson so slowly and mutually. So, instead of spending time on other things, maybe it's wrong, but I prefer to solve more questions. So i can't come up with a solution. "

T22- "I could organize competitions and events with web 2.0 tools to make the learning environment more fun, qualified and permanent during the distance education process. I have knowledge on this subject, but unfortunately, the problem of not reaching the course topics on time prevents me. Maybe more activities should be planned or the curriculum should be diluted, but there is no improvement at the time"

When we analyze the opinions of teachers, it is seen that the Covid-19 pandemic distance education process makes the role of learner teachers come to the fore. It has emerged in the opinions of the teachers that the transition from face-to-face education to distance education provides compulsory learning of the technological information necessary for the realization of distance education. It has been observed that teachers who define themselves as learner teachers have responsibilities as teachers who research what they can do to make the distance education process more effective, develop themselves and try to apply what they do not know by learning. It has been stated that the ignorance of the teachers, who do not reflect the role of the learning teacher, is an obstacle to their learning. It is seen that finishing the curriculum intensive curricula on time that are not adapted to the distance education process and the subject of learning and applying new things prevent them from being learner teachers.

The role of the facilitator teacher and the barriers to the realization of the role. It has been stated that teachers' role as facilitator in the distance education process occurs with the effect of different dimensions such as increasing student participation and student success, transferring the school environment to digital and giving feedback. The opinions of the teachers are given below:

Increasing Student Participation;

T8- "I have sent photos of the notes and events that I have written on their notebooks from the whatsapp groups for the convenience of those who cannot attend."

T5- "For those who do not understand the subject, I share the links of the lecture videos that I find on the Internet at the end of the lesson every week, since it will be difficult for me to explain the subject from the WhatsApp groups, so that those who do not understand the lesson have the opportunity to listen again."

T2- "I set up whatsapp groups to increase effectiveness. They ask me questions from there, and I make a voice narration."

Increasing Student Achievement;

T27- "Every week, I make a class-based hour to ask what they don't understand on Zoom for an hour. At that time, I answer their questions before the next lesson comes. They ask here at school, like children who ask what they don't understand during playtime."

T2- "…I try to help children as much as possible without pushing them too hard. I sent a question to those who wanted to solve a question in accordance with their level. It was kind of like individualized teaching."

T1- "In this process, I opened whatsapp groups in other classes I attended and opened a channel that would allow me to reach them. In addition, I created a youtube channel. In order for the children not to fall behind, I took a video at home with my own effords and sent these links to them."

T24- "The distance education process was most productive for students with advanced individual learning skills, but their efforts should be supported and their learning initiatives should be supported."

Transferring School Environment to virtual environment;

T27- "We are trying to transfer the school environment to the digital environment during the pandemic period. The distance education process is process-oriented, as in face-to-face learning. I am trying to make the lesson more efficient by using digital platforms effectively in distance education."

T3- "When we first started the pandemic period, I felt more responsibility. I immediately started preparing lesson videos, I shared them on youtube or whatsapp groups. In the videos, I explained how I explained in class."

Giving Feedback;

T8-"I asked them to ask me what they did not understand on whatsapp. There have always been situations where I sent a message with a voice recording and I replied in this way. I have many whatsapp student groups, they always ask questions."

T23- "Students write the questions they want to ask privately from social media tools until the time we set. As long as they focus on their lessons, I return back in the mode of providing opportunities for them."

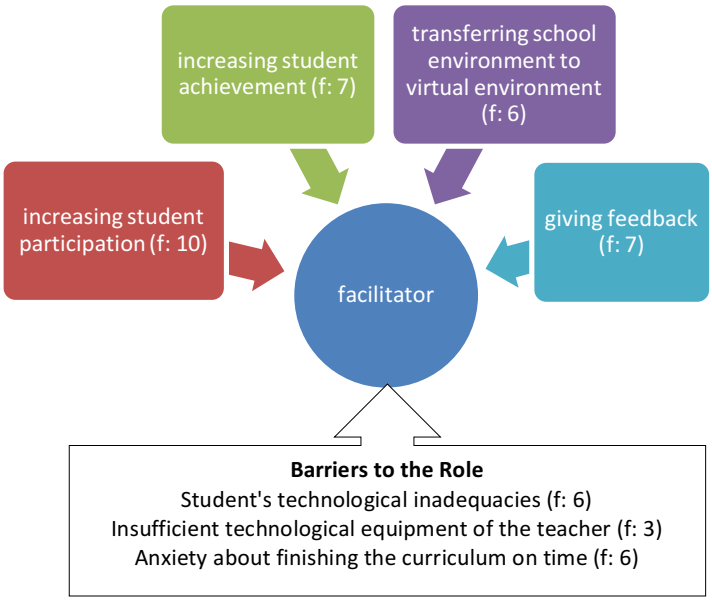

Figure 4. *The role of the facilitator teacher and the barriers to the realization of the role*

Against the realization of the facilitator teacher role in the distance education process; it has been stated that different dimensions such as student's technological inadequacies, insufficient technological equipment of the teacher and anxiety about finishing the curriculum on time are effective. The opinions of the teachers on this subject are as follows;

T23- "The impossibilities of the students are a big problem. She/he needs to check the questions I sent, again on the internet or on the IT device. This situation creates a problem for children who have siblings at home or do not have these opportunities."

T10- "I would like to reach children without technological means, but unfortunately we could not. You call her/his family for this, She/he says she/he does not have opportunities, or when there is more than one child at home, this is also a problematic situation."

T4- "I'm not good at Web 2.0. I need a training for this process to be effective."

T25- "I think I'm having trouble because of the deficiencies in technology or because I can't transfer what I know to this online environment. I have a lot of theoretical knowledge, I say yes. But I can't manage to transform some things, so I continued in a more classical way. I have a lot of technological knowledge and usage deficiencies. I think I need more knowledge of integrating technology into the classroom."

T5- "We can create more understandable and enjoyable course processes for students, but for this, the curriculum should be reduced compared to distance education. Otherwise, the topics will not be finished on time."

Teacher opinions have shown that the intensive use of technological tools in the distance education process has become an integral part of the education process. It has been stated that web 2.0 tools, especially social media tools, are used especially in the academic success of students, in their individual learning and in informing about the course processes. In this way, the education process of the student has been facilitated by technological tools. Teachers who are incapable of using these technological tools or students who do not have these technologies prevent the realization of the teacher role that technology

provides to the teacher. In addition, it has been stated that the teacher's attempt to facilitate learning by diversifying the learning process by making online applications such as competitions and interactions is prevented by the lack of time and therefore the anxiety of not being able to finish the curriculum on time.

Characteristics of Teachers Working in Distance Education Practices during the Pandemic Period

In the research, technopedagogical content knowledge, planning teaching activities, making distance measurement evaluation and providing student motivation came to the fore in terms of the responsibilities, duties or features that should be in an ideal teacher model for the teachers working in distance education during the Covid-19 pandemic period. The opinions of the teachers are given below:

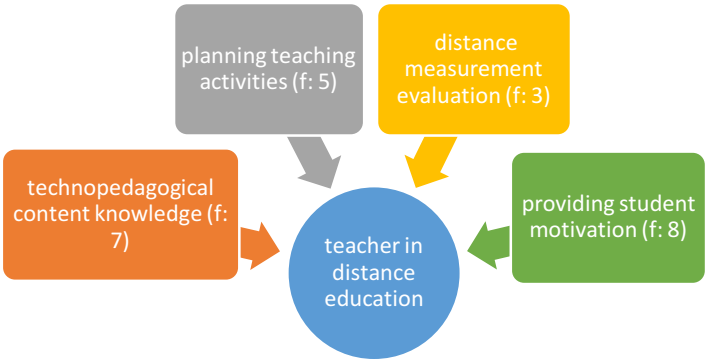

Figure 5. *Features that should be in the pandemic period teacher model*

T11- "web 2.0 tools have been my biggest savior in the process, I wish I could use these tools more often and gain practicality. It is necessary to prepare a content and know how to use technology so that distance education is effective. We need to know how to adapt it to any subject."

T2- "So in the distance education, a teacher needs to be prepared to keep kids on the screen with lots of interesting stuff. In other words, I think that something more active should be done rather than the classical teacher-board-student relationship."

T5- "As we experienced in the distance education process, our experience on how to design or do the lesson increased. In this process, it is necessary for the teacher to prepare very well before the lesson."

T7-" In the lessons, the student-teacher should interact. In this process, I realized that the most supportive thing for the motivation of the teacher is the interest of the students. Their effort to learn triggers your effort to teach."

T28- "It is difficult to clearly discern in distance education whether the subject is understood or not. It is absolutely necessary to know how to do the evaluation processes instead of the systems that they send tests and mark them in this process."

T23-" In distance education, students are unwillingly reluctant to take the course, except for exam groups. Every teacher friend of mine complains about it. We need to be able to attract students to class."

T4- "Distance education is actually an opportunity for individualized teaching. Instead of being behind the class and getting away from the lesson, it is an opportunity to make up for the deficiencies of the students at the same level. Thus, those students can be more motivated to the lesson. Teachers send activities and questions to their students according to their level, and the student is not disconnected from the process."

The opinions of the practitioners of the distance education process about the characteristics that the teachers should have in the process are important. Especially in the technology-based education process, in addition to technology and content knowledge, the processes in which students are handled pedagogically are considered important. In this process, it is stated that it is important to plan the teaching process and to ensure the motivation of the student. In addition to these, it is stated that teachers should have knowledge about what to do in distance measurement and evaluation processes, which they have not experienced before.

Discussion, Conclusion and Implications

According to the research findings, it was seen that the roles of communicator, collaborator, facilitator and learning teacher came to the fore among the teachers participating in the study during the distance education process in the pandemic period.

Effective communication skills are the method used to interact, convey an appropriate message, and this transmission, and teacher's communication skills play an important role in classroom management, pedagogy, and interaction with the classroom (Saunders & Mills, 1999). Khan, Khan, Zia-Ul-Islam and Khan, (2017) concluded in their study that teacher communication skills play an important role in students' academic success. Communication between the teacher and the students; helps students learn about their experiences, needs, readiness levels, and attitudes towards learning, and thus increase the learning rate by arranging the teaching process (Engin & Aydın, 2007). In the distance education applications that come to the forefront during the pandemic process, the communication between the teacher and the students and the interaction that emerges as a result of this communication is very important (Duman, 2020). There are also studies in the literature showing that; in order to better educate students, to establish stronger bonds with families and to develop a partnership with parents, efforts to improve and strengthen teachers' communication with parents have a positive effect (Symeou, Roussounidou, & Michaelides, 2012) and teachers' communication with parents has a positive effect on student success (Sırvani, 2007). Studies on the teacher's communication skills reveal the importance of the teacher's need to adopt communication skills in the education-teaching process.

Teachers' collaborative working methods allow many teachers to feel better about themselves and their work and provide them with opportunities to learn from each other (Johnson, 2010); it contributes positively to improving student achievement by providing teachers with opportunities to collaborate on issues related to curriculum, instruction, and professional development (Goddard, Goddard, & Tschannen-Moran, 2007); Teacher collaboration increases student achievement (Alım & Doğanay, 2016; Ronfeldt, Farmer, McQueen & Grissom, 2015), provides education and learning gaps (Wang, Wang, Li & Li, 2017), provides professional job satisfaction (Olsen & Huang, 2018) contributed to the professional development of teachers and the academic success of the school (Sertkaya, 2016). In addition, in the study conducted on the cooperation of teachers and students in and out of the classroom, it was concluded that the cooperation of teachers with their students creates a synergy inside and outside the school, and teachers prefer cooperation with their students who act as participants and facilitators (Zalyaeva, & Solodkova, 2014).

It is seen that the role of the collaborative teacher is effective both in solving problems with the stakeholders of the education process, in keeping communication channels open, and in the planning and implementation of teaching processes.

In the professional development of teachers, the learning community formed by teachers contributes to the development of teachers. It is considered important for teachers to exchange information, interact

and learn from each other based on their practice as an effective approach to teachers' professional development and how the teachers' learner community contributes to teachers' development (Chou, 2011). Studies have shown that through teachers' learning responsibilities, learner teachers improve student learning (Darling-Hammond & Richardson, 2009); psychological factors (teachers' sense of self-efficacy and internalization of school goals into personal goals) have strong effects on teachers' participation in professional learning activities (Geijsel, Sleegers, Stoel, & Krüger, 2009). Model studies in which continuous professional development and learning activities are supported (Cordingley, 2015) also show that it is important for teachers to provide professional development by learning.

With the effective use of technology in the education process, the facilitator roles of teachers have become more evident. Technology has a supportive function in changing the role of teachers. Only by carefully constructing their learning experiences will teachers be able to fully fulfill their facilitator roles (Martinez & McGrath, 2014). The teacher acts as a consultant and facilitator, creative, cultural translator, collaborator, student and school administrator in the online network environment (Xu & Wang, 2015). Considering the effects of technologies on educational processes; students' academic success increases (Çakır & Tan, 2017; Haris, Al-Bataineh & Al-Bataineh, 2016; Lopez, 2010; Xin & Sutman, 2011); it increases the interest, participation and attention (Greene & Kirpalani, 2013; Jang, 2010; Yang & Teng, 2014) and enables students to work according to their individual learning speeds (Dabbagh et al., 2016; Ellis-Behnke, Gilliland, Schneider, & Schneider, 2003; Pimmer et al., 2016; Stickel, 2009) and also increased communication, interaction and feedback between teacher and student (Avery et al., 2010; Koile & Singer, 2006; Yang & Teng, 2014) appears. It is important for the effectiveness of education that technology has become indispensable in the education process with the Covid 19 pandemic and that teachers use this technology as tools that facilitate education processes. In terms of the quality of distance education applications, which come to the fore especially during the pandemic period, it is important to provide teachers with the necessary training support on topics such as virtual classroom, presentation techniques, blending technology, content production and effective use of technology (UNICEF, 2020).

According to the research findings, the teacher characteristics that should be present in the teachers involved in the distance education process; technopedagogical content knowledge has come to the fore as planning teaching activities, making distance measurement evaluation and providing student motivation. With distance education, the face-to-face school environment is transferred to the distance education process and technology-supported education comes to the fore. Therefore, while content, pedagogy, technology, and teaching/learning contexts are each individually important, successful teaching with technology depends on constantly creating, maintaining and re-establishing a dynamic balance between all components (Koehler & Mishra, 2009). In OECD (2020) pandemic period studies, teachers' professional cooperation, providing teachers' learning, providing access to online platforms and resources for collaboration with other teachers, and teachers' support for students' learning are stated as the characteristics that teachers should have in this process. UNESCO (2020) stated that, teacher education processes should be modernized both curricularly and pedagogically; also, teachers should develop student-centered applications, use information technologies and being digitally literate as important characteristics that they should have with the pandemic. Ranellucci and Bergey (2020) stated that with the pandemic, the characteristics that should be in teachers will help in their future teaching careers, and emphasized the importance of emotional and motivational supports in teacher education, and the creation of more resilient teachers who have high self-efficacy and have the necessary tools to support student motivation.

It is an important result that teacher roles are realized in parallel with Education 4.0 and contemporary teacher profile in distance education, which is carried out as education applications during the crisis

period. It is noteworthy that the role of the traditional teacher did not come to the fore in the educational practices during the pandemic period, where constructivist approach practices were more likely to encounter the threat of traditional education practices due to the effects of the crisis period. Therefore, it can be said that teachers exhibit a professional development performance by taking initiatives outside of their defined roles and responsibilities. In the process of realizing these roles, there were some obstacles that teachers had to overcome. While the lack of time, anxiety about completing the curriculum on time, student's technological inadequacies and student's unwillingness to participate hinder the realization of the role of the communicator teacher; the realization of the collaborative teacher role is hindered by parents' apathy, students' apathy and lack of communication; student's technological inadequacies, insufficient technological equipment of the teacher and anxiety about finishing the curriculum on time prevent the realization of the facilitating teacher role; also it was stated that insufficient knowledge of technology and anxiety about finishing the curriculum on time prevented the realization of the learning teacher role. It has been observed that the obstacles in the realization of the roles of the teachers are in the issues such as injustice / inequality in education, the subject-centered program approach, the structure of the education program, professional development, student and parent apathy. Considering the results of the research, it is important that the teaching profession stands out in crisis situations in a way that reflects a contemporary teacher profile.

The research has some limitations. Due to the fact that it was a research carried out during the Covid-19 pandemic, a more diverse and wider participant group could not be reached. It would be beneficial to compare the results obtained with the results of the researches to be carried out by including different participant groups in the field of teaching. In addition, it is suggested that the results should be questioned with a quantitative research methodology, as in the hypothetico-deductive method.

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TÜRKÇE GENİŞ ÖZET

Covid-19 Pandemi Dönemi Eğitim Uygulamalarındaki Öğretmen Rollerinin İncelenmesi: Olgubilim Çalışması

Giriş

Pandemi sürecinde çoğu ülke uzaktan eğitim platformları oluşturmak için, buna sahip olan ülkeler ise bu platformları güncellemek için çaba sarf etmektedirler (ETF, 2020; OECD, 2020a). Dünya çapında ilk defa karşılaşılan bu durum uzaktan eğitim sürecini ön plana çıkarmıştır. Uzaktan eğitimde öğretmenler hem bireysel farklılıklar, hem branşa ilişkin farklılıklar hem de pandemi sürecinin getirmiş olduğu koşulların oluşturduğu eğitimsel farklılıklar ile kendine has özellikleri olan bir uzaktan eğitim sürecini yürütmektedirler. Her eğitim programı, ne kadar mükemmel olursa olsun, uygulayıcısı olan öğretmenin niteliği kadar işlevseldir. Dolayısıyla, Covid-19 pandemi dönemi uzaktan eğitim uygulamalarında öğretmen fonksiyonunun incelenmesi bir araştırma konusu olarak öne çıkmaktadır.

Geçmişten günümüze farklı konu başlıkları çerçevesinde öğretmenlerin rolleri çeşitli yeterlikler ve özellikler kapsamında birçok açıdan tartışılmıştır. Teknoloji bağlamında öğretmen standartları (ISTE, 2017), öğretimin etkili olması adına öğretmenin sahip olması gereken teknikler (Lemov, 2010), performanslarına yönelik özellikler (Melvin, 2011) gibi öğretmenlerin sahip olması gereken ve bu açıdan değerlendirilmelerini sağlayacak özellikler belirlenmiştir.

Bir meslek olarak tanımlanan öğretmenlik, eğitim programlarının temel karakteristik özellikleri çerçevesinde donanımsal farklılıklara sahiptir. Örneğin, eğitim felsefesi farklılaştığında öğretmen rol ve sorumlulukları da farklılaşmaktadır. Bu doğrultuda, pandemi dönemi uzaktan eğitim uygulamalarında öğretmen rollerindeki olası değişimlerin incelenmesi ihtiyacı bu araştırmayı gerekli kılmıştır. Araştırmada, Covid-19 pandemi dönemi uzaktan eğitim uygulamalarında görev alan öğretmenlerin rollerini analiz etmek ve bu rollerin gerçekleşmesindeki engellerin neler olduğunu belirlemek amaçlanmaktadır.

Yöntem

Covid-19 pandemi dönemi uzaktan eğitim uygulamalarındaki öğretmen rolleri post pozitivist paradigma ile incelenmekte, nitel araştırma yöntemlerinden olgubilim deseni ile çözümlenmektedir. Çalışma grubu, ölçüt örneklem tekniği ile belirlenmiştir. Katılımcılar, haftada en az 15 saat ve üzeri uzaktan eğitim dersi veren Matematik, Yabancı Dil, Fen Bilimleri, Türkçe ve Sosyal Bilgiler dersi öğretmenlerinden seçilmiştir. Veri çeşitlemesi gerçekleştirilen veri toplama sürecinde öğretmenlerin (11 öğretmen) 5 gün boyunca tuttuğu günlükler, bireysel görüşmeler (5 öğretmen) ve odak grup görüşmeleri (6 kişilik gruplardan oluşan 2 odak grup görüşmesi; 12 öğretmen) ile gerçekleştirilmiştir. Transkript haline dönüştürülen veriler, içerik analizi tekniği ile analiz edilmiştir. Puanlayıcı güvenilirliği yüksek düzeyde çıkmıştır.

Araştırma kapsamında veri toplama çalışmaları için Çanakkale Onsekiz Mart Üniversitesi Bilimsel Araştırma ve Yayın Etiği Kuruluna başvuru yapılmış, Lisansüstü Eğitim Enstitüsü Etik Kurulu 30/03/2021 tarih ve 06/28 sayılı kararı ile etik kurul onayı alınmıştır.

Bulgular

Araştırma bulgularına göre pandemi dönemi uzaktan eğitim sürecinde, çalışmaya katılan öğretmenlerde iletişimci, iş birlikçi, kolaylaştırıcı ve öğrenen öğretmen rollerinin ön plana çıktığı görülmüştür. Bu rollerin gerçekleşmesi sürecinde öğretmenlerin aşmak zorunda kaldıkları bazı engeller söz konusu olmuştur. İletişimci öğretmen rolünün gerçekleşmesine zaman yetersizliği, müfredat yetiştirme kaygısı, öğrencinin teknolojik imkansızlıkları ve öğrencinin derse katılma isteksizliği engel olurken; işbirlikçi öğretmen rolünün gerçekleşmesine veli ve öğrenci ilgisizliği ile iletişimsizliğin engel olduğu; kolaylaştırıcı öğretmen rolünün gerçekleşmesine öğrencinin teknolojik imkansızlıkları, öğretmenin teknolojik donanım yetersizliği ve müfredat yetiştirme kaygısının engel olduğu; öğrenen öğretmen rolünün gerçekleşmesine ise teknoloji bilgisindeki yetersizlik ve müfredatı yetiştirme kaygısının engel olduğu görülmüştür.

Araştırmada, Covid-19 pandemi dönemi uzaktan eğitim uygulamalarında görev alan öğretmenlerin sorumlulukları, görevleri ya da uygulamalarına yönelik ideal bir öğretmen modelinde olması gereken özellikler açısından teknopedagojik alan bilgisi, öğretim etkinliklerini planlama, uzaktan ölçme değerlendirme yapabilme ve öğrenci motivasyonunu sağlayabilme ön plana çıkmıştır.

Tartışma, Sonuç ve Öneriler

Araştırma bulgularına göre, pandemi döneminde uzaktan eğitim sürecinde araştırmaya katılan öğretmenler arasında iletişimci, iş birlikçi, kolaylaştırıcı ve öğrenen öğretmen rollerinin ön plana çıktığı görülmüştür.

Etkili iletişim becerileri; etkileşimde bulunmak, uygun bir mesajı iletmek için kullanılan yöntemdir ve öğretmenin iletişim becerileri, sınıf yönetimi, pedagoji ve sınıfla etkileşimde önemli bir rol oynamaktadır (Saunders & Mills, 1999). Khan, Khan, Zia-Ul-Islam & Khan, M. (2017), yaptıkları çalışmada öğretmenlerin iletişim becerilerinin öğrencilerin akademik başarılarında önemli bir rol oynadığı sonucuna varmıştır. Pandemi süreci dikkate alındığında uzaktan eğitim uygulamalarında öğretmenin öğrencilerle iletişimi ve bu iletişim sonucunda ortaya çıkan etkileşim çok önemlidir (Duman, 2020).

Öğrencileri daha iyi eğitmek, ailelerle daha güçlü bağlar kurmak ve velilerle ortaklık geliştirmek için öğretmenlerin velilerle iletişimini geliştirmeye ve güçlendirmeye yönelik çabaların olumlu bir etkisi vardır (Symeou, Roussounidou & Michaelides, 2012). Literatürde öğretmenlerin velilerle iletişiminin öğrenci başarısını olumlu yönde etkilediğini gösteren çalışmalar da bulunmaktadır (Sırvani, 2007).

Öğretmenlerin işbirliğine dayalı çalışma yöntemleri ile ilgili olarak çoğu öğretmenin kendileri ve çalışmaları hakkında daha iyi hissetmeleri ve onlara birbirlerinden bir şeyler öğrenme fırsat sağladığı (Johnson, 2010); öğretmenlere müfredat, öğretim ve mesleki gelişim ile ilgili konularda işbirliği yapma fırsatları sağlayarak öğrenci başarısını geliştirmeye olumlu katkı sağladığı (Goddard, Goddard & Tschannen-Moran, 2007); öğretmen işbirliğinin öğrenci başarısını artırdığı (Alım & Doğanay, 2016; Ronfeldt, Farmer, McQueen & Grissom, 2015), öğretim ve öğrenme boşluklarının giderilmesini sağladığı (Wang, Wang, Li & Li, 2017), mesleki iş doyumunu sağladığı (Olsen & Huang, 2018), öğretmenlerin mesleki gelişimlerine ve okulun akademik başarısına katkı sağladığı (Sertkaya, 2016) sonuçlarına yapılan çalışmalarda ulaşılmıştır. İş birlikçi öğretmen rolünün eğitim öğretim sürecinin paydaşları ile sorunların çözümünde, iletişim kanallarının açık tutulmasında, öğretim süreçlerinin planlanması ve uygulamalarında etkili olduğu görülmektedir.

Öğretmenlerin öğrenme sorumlulukları sayesinde öğrenen öğretmenlerin öğrenci öğrenimini geliştirdiği (Darling-Hammond & Richardson, 2009); sürekli mesleki gelişim ve öğrenme faaliyetlerinin desteklendiği model çalışmaları (Cordingley, 2015) da öğretmenin öğrenerek mesleki gelişimini sağlamasının önemli olduğunu göstermektedir.

Teknolojinin eğitim sürecinde etkin kullanımı ile öğretmenlerin kolaylaştırıcı rolleri daha belirgin hale gelmiştir. Öğretmenler, ancak öğrenme deneyimlerini dikkatlice inşa ederek kolaylaştırıcı rollerini tam olarak yerine getirebileceklerdir (Martinez & McGrath, 2014). Teknolojilerin eğitim süreçlerine yönelik etkilerine bakıldığında öğrencilerin akademik başarılarının arttığı (Haris, Al-Bataineh & Al-Bataineh, 2016; Çakır & Tan, 2017; Lopez, 2010; Xin & Sutman, 2011), öğrenme ortamında olumlu etki yaratarak öğrencilerin derse olan motivasyonunu, ilgisini, katılımını ve dikkatini artırdığı (Greene & Kirpalani, 2013; Jang, 2010; Yang & Teng, 2014), öğrencilerin bireysel öğrenme hızlarına göre çalışmasına imkan sağlayarak öğrenmeyi sağladığı (Dabbagh vd., 2016; Ellis-Behnke, Gilliland, Schneider & Schneider, 2003; Pimmer vd., 2016; Stickel, 2009;), öğretmen ve öğrenci arasındaki iletişimi, etkileşimi ve geri bildirimi artırdığı (Avery vd., 2010; Koile & Singer, 2006; Yang & Teng, 2014) sonuçlarına ulaşılmıştır. Covid 19 pandemisi ile birlikte teknolojinin eğitim süreçlerini kolaylaştıran araçlar olarak kullanması eğitimin etkililiği açısından önemlidir.

Pandemi sürecinde öğretmenlerin rollerini gerçekleştirme sürecinde eğitimde adaletsizlik/eşitsizlik, konu merkezli program yaklaşımı, eğitim programının yapısı, mesleki gelişim, öğrenci ve veli isteksizliği gibi engellerin olduğu gözlemlenmiştir. Bununla birlikte uzaktan eğitimde ideal bir öğretmen modelinde teknopedagojik alan bilgisi, öğretim etkinliklerini planlama, uzaktan ölçme değerlendirme yapabilme ve öğrenci motivasyonunu sağlayabilme gibi özellikler ön plana çıkmıştır. Uzaktan eğitimin oluşturduğu koşullar çerçevesinde öğretmenlerde olması gereken özelliklerin tanımlandığı söylenebilir. Bu çalışma sonuçlarına göre öğretmenlerin uzaktan eğitim rollerinin geliştirilme ve rollerinin önündeki engellerin kaldırılmasına yönelik önlemler alınabilir. Uzaktan eğitim sürecinde gerekli görülen özelliklere yönelik çalışmaların ise öğretmenlere mesleki gelişim sürecinde verilmesi önerilebilir.